PROJECT TEAM

OWNER
SUMMIT POWDER MOUNTAIN
ATTN: JEFF WERSELOW
3623 N. WOLF CREEK DR.
EDEN, UT 84310

ARCHITECT
R & A
4200 SEPULVEDA BOULEVARD, SUITE 100
CULVER CITY, CA 90230
PHONE: 310-730-6698
BEN.ANDERSON@R-A-A-D.COM

GENERAL CONTRACTOR
R & O CONSTRUCTION COMPANY
ATTN: SLADE OPHEIKENS
933 WALL AVENUE, OGDEN, UTAH, 84404
PHONE:801-627-1403
SLADEO@RANDOCO.COM

CIVIL
TALISMAN CIVIL CONSULTANTS, LLC
ATTN: JAMES BACKMAN, LEED AP
DESIGN SUPERVISOR
5217 SOUTH STATE ST., SUITE 200
MURRAY, UT 84107 | P: (801) 743-1332 | C: (801) 362-6218 |

MECHANICAL AND PLUMBING
CCI MECHANICAL, INC.
ENGINEERING, CONSTRUCTION & SERVICE
ATTN: BRAD SHAKESPEARE, PE
2345 CCI WAY (2570 WEST)
SALT LAKE CITY, UTAH 84119
BSHAKESPEARE@CCIMECHANICAL.COM
DIRECT: (801) 973-1211
MOBILE: (801) 419-6031

ELECTRICAL
RC HUNT ELECTRIC,
ATTN: TIM BAIRD TEMP PM
TBAIRD@HUNTELECTRIC.COM C 801.386.6759
ERIC FOGG – ENGINEER HYPERLINK
EFOGG@HUNTELECTRIC.COM
OFFICE 801-975-8844
1863 W ALEXANDER STREET, SALT LAKE CITY, UT 84119

STRUCTURAL ENGINEER
REAVELEY ENGINEERS + ASSOC.
ATTN: CRAIG WILKINSON
675 500 S #400, SALT LAKE CITY, UT 84102
PHONE: 801-486-3883
CWILKINSON@REAVELEY.COM

WET & DRY HVAC SYSTEM
CCI MECHANICAL, INC.
ATTN: PATRICK LYNCH
2345 SOUTH CCI WAY, SALT LAKE CITY, UT 84119
PHONE:801-973-1242
PLYNCH@CCIMECHANICAL.COM

KITCHEN DESIGN
COMMERCIAL KITCHEN SUPPLY
ATTN: JAMIE LARSEN
1377 W 75 N, CENTERVILLE, UT 84014
PHONE: 801-292-1611
JAME@COMMERCIALKITCHENSUPPLY.COM

SPM - PARCEL 2C BLDG

5752 N. COPPER CREST
EDEN, UT 84310

ISSUED FOR FOUNDATION PERMIT- JUNE 27, 2017

REVIEW FOR REFERENCE TO FOUNDATION PERMIT ONLY

6/26/2017 11:19:42 AM

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R&A
Architecture and Design
4200 Sepulveda Boulevard, Suite 100
Culver City, CA 90230
tel: 310.730.6698
www.r-a-a.com

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POWDER MOUNTAIN - PARCEL 2C
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Eden, UT 84310

SHEET TITLE
COVER SHEET

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

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DATE 06/27/17

SCALE

SHEET NO. A00.00

SHEET INDEX - ELECTRICAL		
SHEET NUMBER	SHEET NAME	SHEET ISSUE DATE
ES1	ELECTRICAL PLAN	06/27/17
ES2	ELECTRICAL PLAN	06/27/17

SHEET INDEX - CIVIL		
SHEET NUMBER	SHEET NAME	SHEET ISSUE DATE
C001	GENERAL NOTES	06/27/17
C101	HORIZONTAL CONTROL	06/27/17
C201	SITE AND UTILITY PLAN	06/27/17
C301	GRADING PLAN	06/27/17
C401	EROSION CONTROL PLAN	06/27/17
C402	EROSION CONTROL DETAILS	06/27/17
C501	DETAILS	06/27/17
C502	DETAILS	06/27/17
C503	DETAILS	06/27/17
C504	DETAILS	06/27/17

SHEET INDEX - ARCHITECTURAL		
SHEET NUMBER	SHEET NAME	SHEET ISSUE DATE
A00.00	COVER SHEET	06/27/17
A00.02	GRAPHIC SYMBOLS AND ABBREVIATIONS	06/27/17
A01.01	AREA CALCS & CODE ANALYSIS	06/27/17
A01.02	CODE ANALYSIS PLANS	06/27/17
A01.03	GROSS AREA PLANS	06/27/17
A01.04	AREA PLANS	06/27/17
A04.01	GENERAL NOTES	06/27/17
A04.02	WATERPROOFING NOTES - PROJECT SPECIFIC	06/27/17
A04.05	ACCESSIBILITY NOTES (PUBLIC 1)	06/27/17
A04.06	ACCESSIBILITY NOTES (PUBLIC 2)	06/27/17
A04.07	ACCESSIBILITY NOTES (HOUSING 1)	06/27/17
A04.08	ACCESSIBILITY NOTES (HOUSING 2)	06/27/17
A04.09	ACCESSIBILITY NOTES (HOUSING 3)	06/27/17
A04.10	ACCESSIBILITY DETAILS	06/27/17
A04.11	ACCESSIBILITY DETAILS	06/27/17
A04.12	ACCESSIBILITY DETAILS	06/27/17
A05.01	SURVEY PLAN	06/27/17
A05.02	SITE PLAN	06/27/17
A20.00	GRID CONTROL PLAN & SLAB PLAN	06/27/17
A20.01	LEVEL 1 & 2 LEVEL FLOOR PLANS	06/27/17
A20.02	LEVEL 3 & 4 FLOOR PLANS	06/27/17
A20.03	ROOF LEVEL & ROOF PLANS	06/27/17
A30.01	NORTH & EAST EXTERIOR ELEVATIONS	06/27/17
A30.02	SOUTH & WEST EXTERIOR ELEVATIONS	06/27/17
A40.01	BUILDING SECTIONS	06/27/17
A51.01	LEVEL 1 & 2 PAVING PLAN	06/27/17
A51.02	3 & 4 LEVEL PAVING PLAN	06/27/17
A51.03	ROOF LEVEL PAVING PLAN	06/27/17
A80.01	RCP 1 & 2 LEVEL	06/27/17
A80.02	RCP 3 & 4 LEVEL	06/27/17
A80.03	RCP ROOF LEVEL	06/27/17
A91.01	FOUNDATION DETAILS	06/27/17
A92.01	EXTERIOR DETAILS	06/27/17
A92.02	EXTERIOR DETAILS	06/27/17
A93.01	ROOF DETAILS	06/27/17
A94.01	WALL TYPES	06/27/17
A94.02	FRAMED WALLS DETAILS	06/27/17
A94.03	ACOUSTIC / FIRE RATING DETAILS	06/27/17
A95.01	DOOR DETAILS	06/27/17
A97.50	ELEVATOR DETAILS	06/27/17
A97.51	ELEVATOR CUTSHEET - NORTH	06/27/17
A97.52	ELEVATOR CUTSHEET - NORTH	06/27/17
A97.53	ELEVATOR CUTSHEET - NORTH	06/27/17
A97.54	ELEVATOR CUTSHEET - SOUTH	06/27/17
A97.55	ELEVATOR CUTSHEET - SOUTH	06/27/17
A97.56	ELEVATOR CUTSHEET - SOUTH	06/27/17
A97.60	STAIR, GUARDRAIL DETAILS	06/27/17
A98.04	CEILING DETAILS	06/27/17

SHEET INDEX - STRUCTURAL		
SHEET NUMBER	SHEET NAME	SHEET ISSUE DATE
S00.01	GENERAL STRUCTURAL NOTES	06/27/17
S00.02	GENERAL STRUCTURAL NOTES	06/27/17
S00.04	LEGENDS AND ABBREVIATIONS	06/27/17
S20.01	FOOTING & FOUNDATION PLAN	06/27/17
S22.01	LEVEL 2 FRAMING PLAN	06/27/17
S22.03	LEVEL 4 FRAMING PLAN	06/27/17
S22.05	ROOF FRAMING PLAN	06/27/17
S22.02	LEVEL 3 FRAMING PLAN	06/27/17
S22.04	ROOF LEVEL FRAMING PLAN	06/27/17
S60.01	CONCRETE SCHEDULES	06/27/17
S60.03	CONCRETE ANCHOR SCHEDULES	06/27/17
S50.01	FOOTING & FOUNDATION DETAILS	06/27/17
S50.02	FOOTING & FOUNDATION DETAILS	06/27/17
S61.01	TYPICAL STEEL FRAMING SCHEDULES	06/27/17
S61.02	STEEL COLUMN SCHEDULE AND DETAILS	06/27/17
S61.03	STEEL DECK SCHEDULES	06/27/17
S51.01	TYPICAL CONCRETE OVER STEEL DECK DETAILS	06/27/17
S51.02	TYPICAL FLOOR FRAMING DETAILS	06/27/17
S00.03	GENERAL STRUCTURAL NOTES	06/27/17
S62.01	WOOD SCHEDULES	06/27/17
S50.03	FOOTING & FOUNDATION DETAILS	06/27/17
S30.01	CONCRETE SHEAR WALL ELEVATIONS	06/27/17
S30.02	CONCRETE SHEAR WALL ELEVATIONS	06/27/17
S60.02	CONCRETE SCHEDULES	06/27/17

R&A
Architecture | Planning | Design
4765 Southside Parkway Suite 100
Salt Lake City, UT 84070
tel 801.730.5999
www.raadesign.com

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GENERAL NOTES

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: GOVERNING UTILITY MUNICIPALITY, GOVERNING CITY OR COUNTY (IF UN-INCORPORATED), INDIVIDUAL PRODUCT MANUFACTURERS, THE DESIGN ENGINEER, AND AMERICAN PUBLIC WORKS ASSOCIATION (APWA). THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CONTRACTOR TO STRICTLY FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, RETAINING WALLS AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH THE PROJECT GEOTECHNICAL ENGINEER.
3. TRAFFIC CONTROL, STRIPING & SIGNAGE TO CONFORM TO CURRENT UDOT TRANSPORTATION ENGINEER'S MANUAL AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
5. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
6. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
7. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
8. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED THOROUGHLY REVIEWED PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
9. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE OF COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
10. ANY WORK IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE PERMITS FROM THE APPROPRIATE, CITY, COUNTY OR STATE AGENCY CONTROLLING THE ROAD, INCLUDING OBTAINING REQUIRED INSPECTIONS.
11. ALL DIMENSIONS, GRADES & UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
12. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING AND BRING UP ANY QUESTIONS BEFOREHAND.
13. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER.
14. CATCH SLOPES SHALL BE GRADED AS SPECIFIED ON GRADING PLANS.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CAUTION SIGNS, LIGHTS, BARRICADES, FLAGMEN, AND ALL OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
16. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT BID AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PLANS AND SPECIFICATIONS.
17. CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY HIMSELF BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS HE MAY PREFER OF THE LOCATION OF THE CONDITIONS AND PROBLEMS OF AND AT THE SITE OF WORK. IF, DURING THE COURSE OF HIS EXAMINATION, A BIDDER FINDS FACTS OR CONDITIONS WHICH APPEAR TO HIM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PLANS AND SPECIFICATIONS, HE SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING HIS BID. SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, HE HAS RELIED AND IS RELYING ON HIS OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON HIS OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT. THE INFORMATION PROVIDED BY THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT HE HAS NOT RELIED SOLELY UPON OWNER- OR ENGINEER-FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING HIS BID.
18. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
19. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER, ENGINEER, AND/OR GOVERNING AGENCIES.
20. CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
21. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER. ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
23. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
24. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
25. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR, PRIOR TO ACCEPTANCE OF THE PROJECT. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
26. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

GENERAL NOTES CONT.

27. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THE TRUE INTENT AND PURPOSE OF THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS IN THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN PECULIAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO TIE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.
29. CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4' OR MORE. FOR EXCAVATIONS 4 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH INDUSTRIAL COMMISSION OF UTAH SAFETY ORDERS SECTION 68 - EXCAVATIONS, AND SECTION 69 - TRENCHES, ALONG WITH ANY LOCAL CODES OR ORDINANCES.
30. ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.

UTILITY NOTES

1. CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE SERVICE, GAS SERVICE, CABLE, POWER, INTERNET.
2. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING A COMBINATION OF ON-SITE SURVEYS (BY OTHERS). PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-662-4111 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION FOR EACH UTILITY. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
3. CONTRACTOR SHALL POT HOLE ALL UTILITIES TO DETERMINE IF CONFLICTS EXIST PRIOR TO BEGINNING ANY EXCAVATION. NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR SHALL VERIFY INVERTS OF EXISTING UTILITIES TO WHICH NEW UTILITIES WILL BE CONNECTED. PRIOR TO COMMENCING ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE REQUIRED PROCEDURES.
4. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY SERVICE LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT HIS EXPENSE.
5. ALL VALVES AND MANHOLE COVERS SHALL BE RAISED OR LOWERED TO MEET FINISHED GRADE.
6. CONTRACTOR SHALL CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE.
7. CONTRACTOR SHALL GROUT AT CONNECTION OF PIPE TO BOX WITH NON-SHRINKING GROUT, INCLUDING PIPE VOIDS LEFT BY CUTTING PROCESS, TO A SMOOTH FINISH.
8. CONTRACTOR SHALL GROUT WITH NON-SHRINK GROUT BETWEEN GRADE RINGS AND BETWEEN TOP OF INLET LID FRAME AND TOP OF CONCRETE BOX.
9. SILT AND DEBRIS IS TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
10. CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
11. EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DEWATERED CONDITIONS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF DEWATERING AND NO COST CHANGE WILL BE PROVIDED.
12. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
13. MAINTAIN A MINIMUM 18" VERTICAL SEPARATION DISTANCE BETWEEN ALL UTILITY CROSSINGS.
14. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
15. ALL BOLTED FITTINGS MUST BE GREASED AND WRAPPED.
16. UNLESS SPECIFICALLY NOTED OTHERWISE, MAINTAIN AT LEAST 3 FEET OF COVER OVER ALL STORM DRAIN LINES AT ALL TIMES (INCLUDING DURING CONSTRUCTION).
17. ALL WATER LINES SHALL BE INSTALLED A MINIMUM OF 60" OF COVER TO TOP OF PIPE BELOW FINISHED GRADE.
18. ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, PIPE EDGE TO PIPE EDGE, FROM THE WATER LINES. WATER AND SEWER LINES SHALL NOT BE IN THE SAME TRENCH. IN CROSSING LOCATIONS WATER LINES SHALL BE A MINIMUM OF 18" ABOVE SEWER LINES.
19. CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
20. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
21. CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.
22. THE CONTRACTOR SHALL NOTIFY NOLTE ASSOCIATES, INC. IN WRITING AT LEAST 48 HOURS PRIOR TO BACKFILLING OF ANY PIPE WHICH STUBS TO A FUTURE PHASE OF CONSTRUCTION FOR INVERT VERIFICATION. TOLERANCE SHALL BE IN ACCORDANCE WITH THE REGULATORY AGENCY STANDARD SPECIFICATIONS.
23. UNDER NO CIRCUMSTANCE SHALL THE PIPE OR ACCESSORIES BE DROPPED INTO THE TRENCH
24. WATER AND SEWER UTILITIES TO BE INSTALLED PER POWDER MOUNTAIN WATER & SEWER DISTRICT REQUIREMENTS.

LEGEND:

SYMBOL / LINETYPE	DESCRIPTION	DETAIL
	GRADING CATCH LINE	
4"W	4"ø C900 PVC WATER PIPE	APWA PLAN NO. 381, 382
6"W	6"ø C900 PVC WATER PIPE	APWA PLAN NO. 381, 382
MW	4" WATER METER	APWA PLAN NO. 523
	WATER VALVE	SEE VALVE CALLOUT
	WATER REDUCER	N/A
	WATER TEE	N/A
	FIRE DEPARTMENT CONNECTION	N/A
4"SS	4"ø SDR-35 PVC SEWER PIPE	APWA PLAN NO. 381, 382
6"SS	6"ø SDR-35 PVC SEWER PIPE	APWA PLAN NO. 381, 382
S	4'ø SANITARY SEWER MANHOLE	APWA PLAN NO. 411
	4" SANITARY SEWER CLEANOUT	N/A
	HYDROMECHANICAL GREASE INTERCEPTOR	SEE MECHANICAL PLANS
6"SD	6"ø HDPE STORM DRAIN PIPE	APWA PLAN NO. 381, 382
4"FD	4"ø PERFORATED HDPE PIPE	SEE PIPE CALLOUT
G	GAS LINE	N/A
E	ELECTRICAL CONDUIT	N/A
	ELECTRICAL PULL BOX	APWA PLAN NO. 315
	EXISTING 8"ø WATER PIPE	
	EXISTING WATER LATERAL	
	EXISTING WATER VALVE	
	EXISTING WATER LATERAL	
	EXISTING WATER LATERAL	
	EXISTING 4'ø SANITARY SEWER MANHOLE	
	EXISTING 15"ø STORM DRAIN PIPE	
	EXISTING 4'ø STORM DRAIN MANHOLE	
	EXISTING STORM DRAIN CATCH BASIN	
	EXISTING ELECTRICAL CONDUIT	
	EXISTING ELECTRICAL PULL BOX	
	EXISTING ELECTRICAL TRANSFORMER	
	EXISTING COMMUNICATIONS CONDUIT	
	EXISTING COMMUNICATIONS PULL BOX	

NOTE: LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN PLAN SET.

ABBREVIATION:

APWA	AMERICAN PUBLIC WORKS ASSOCIATION	MA	MATCH
AC	ASPHALTIC CONCRETE	MAX	MAXIMUM
&	AND	MH	MANHOLE
APPR.	APPROXIMATELY	MIN	MINIMUM
ARV	AIR RELEASE VALVE	MSE	MECHANICALLY STABILIZED EARTH
@	AT	N	NORTH
BDRY	BOUNDARY	NIC	NOT IN CONTRACT
BG	BUILDING	NTS	NOT TO SCALE
BRG	BEARING	OC	ON CENTER
BS	BOTTOM OF STAIR/STEP	OH	OVERHEAD
BVC	BEGIN VERTICAL CURVE	PC	POINT OF CURVATURE
BW	BOTTOM OF WALL	PI	POINT OF INTERSECTION
CB	CATCH BASIN	PL	PROPERTY LINE
CL OR ℄	CENTERLINE	POC	POINT ON CURVE
CMP	CORRUGATED METAL PIPE	PP	POWER POLE
COB	CLEANOUT BOX	PRC	POINT OF REVERSE CURVE
CONC	CONCRETE	PRV	PRESSURE REDUCING VALVE
DET	DETAIL	PSI	POUNDS PER SQUARE INCH
DIA	DIAMETER	PT	POINT OF TANGENT
DIP	DUCTILE IRON PIPE	PVC	POLYVINYL CHLORIDE
DIST	DISTRICT	PU&DE	PUBLIC UTILITY & DRAINAGE EASEMENT
DWG	DRAWING	PUE	PUBLIC UTILITY EASEMENT
E	ENTRY	PVI	POINT OF VERTICAL INTERSECTION
EA	EACH	PVT	POINT OF VERTICAL TANGENT
EC	EDGE OF CONCRETE	R	RADIUS
EG	EXISTING GRADE	RCP	REINFORCED CONCRETE PIPE
EP	EDGE OF PAVEMENT	REF	REFERENCE
ER	EDGE OF ROAD	ROW	RIGHT-OF-WAY
EVC	END OF VERTICAL CURVE	SS	SANITARY SEWER
ELEV	ELEVATION	SD	STORM DRAIN
ESMT	EASEMENT	SW	SIDEWALK
EX	EXISTING	SCH	SCHEDULE
FF	FINISH FLOOR	SEC	SECTION
FG	FINISH GRADE	SF	SQUARE FEET
FH	FIRE HYDRANT	STA	STATION
FL	FLOWLINE	STD	STANDARD
FT	FEET	TBC	TOP BACK OF CURB
GAR	GARAGE	TC	TOP OF CONCRETE
GB	GRADE BREAK	TEMP	TEMPORARY
HP	HIGH POINT	TG	TOP OF GRATE
HORIZ	HORIZONTAL	TS	TOP OF STAIR/STEP
ID	INSIDE DIAMETER	TW	TOP OF WALL
IE	INVERT ELEVATION	TYP	TYPICAL
INV	INVERT	VAR	VARIES
IRR	IRRIGATION	VERT	VERTICAL
L	LENGTH	W/	WITH
LF	LINEAR FEET		
LP	LOW POINT		

WEBER COUNTY

2380 WASHINGTON BLVD. #240
OGDEN, UT 84401
(801) 399-8374

ROCKY MOUNTIAN POWER

KARL SEWELL
1438 WEST 2550 SOUTH
OGDEN, UT 84401
(801) 629-4310

POWDER MOUNTAIN WATER & SEWER DISTRICT

PO BOX 270
EDEN, UT 84310
(801) 745-0812

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R&A
Architecture and Design
4700 Southpointe Boulevard, Suite 100
Culver City, CA 90230
tel: 310.739.9166
www.r-a-d.com

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POWDER MOUNTAIN
5752 N COPPER CREST
EDEN, UT 84310

SHEET TITLE
GENERAL NOTES

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO.
236

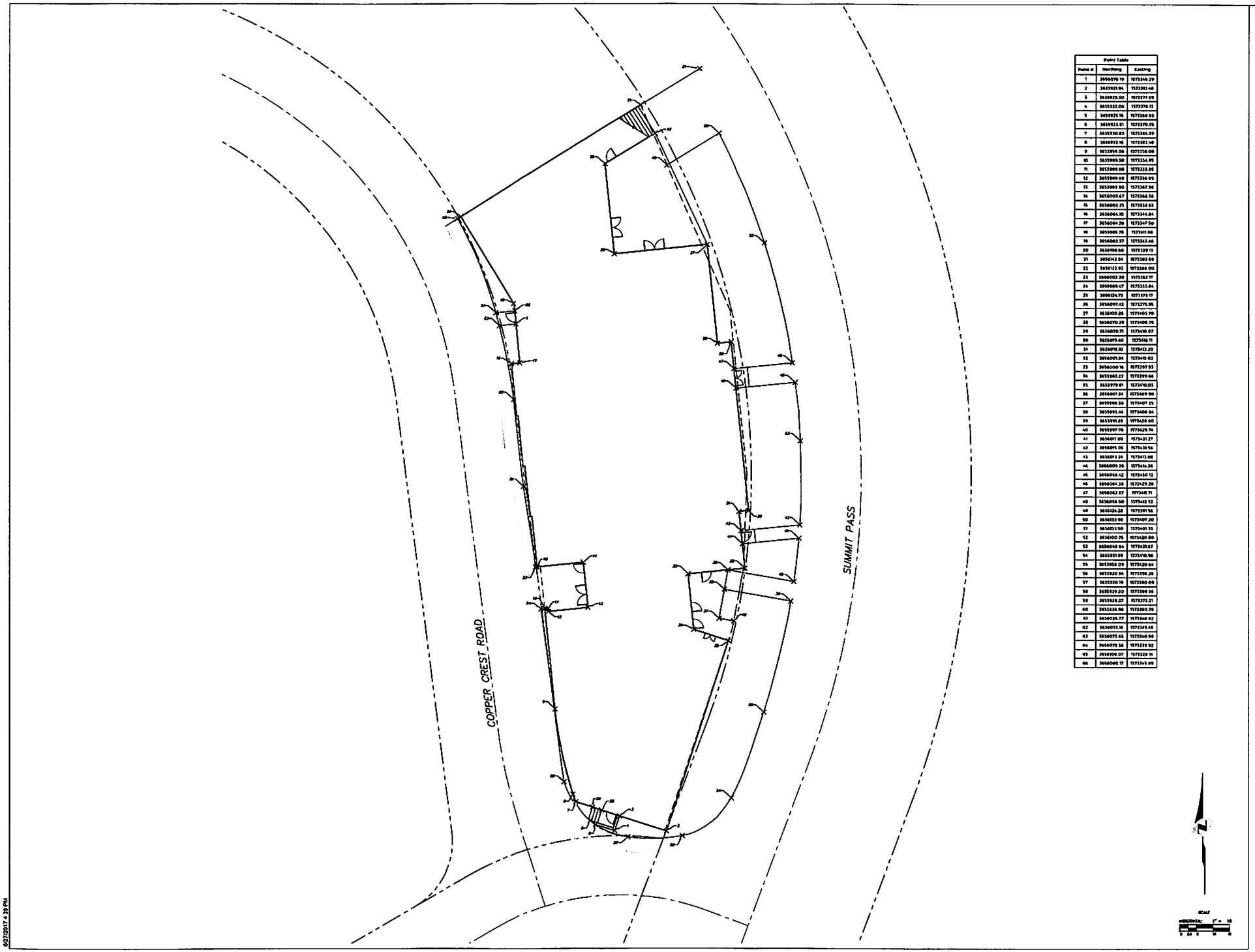
DATE
06/27/17

SCALE
N/A

SHEET NO.
C001

6/27/2017 4:39 PM

R&A: IF THIS SHEET IS NOT 30"x 42", IT IS A REDUCED PRINT



Point Table		
Point #	Northing	Easting
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3	3655928.50	1573377.39
4	3655922.06	1573376.13
5	3655921.16	1573368.85
6	3655923.91	1573370.35
7	3655930.83	1573384.39
8	3655933.16	1573383.48
9	3655959.06	1573356.06
10	3655989.58	1573354.99
11	3655989.68	1573333.98
12	3655989.69	1573356.95
13	3655983.90	1573367.96
14	3656003.67	1573366.56
15	3656002.25	1573352.83
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19	3656082.27	1573361.46
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22	3656133.93	1573386.00
23	3656002.26	1573362.77
24	3655989.47	1573353.84
25	3656124.73	1573373.17
26	3656097.43	1573375.96
27	3656100.26	1573401.79
28	3656070.29	1573409.76
29	3656070.71	1573410.87
30	3656099.60	1573416.11
31	3656079.30	1573413.20
32	3656001.84	1573418.03
33	3656000.16	1573397.93
34	3655983.22	1573399.66
35	3655979.69	1573410.05
36	3656001.54	1573409.90
37	3655986.58	1573407.75
38	3655995.44	1573408.84
39	3655994.85	1573428.65
40	3655997.78	1573429.76
41	3656011.00	1573431.27
42	3656015.05	1573433.56
43	3656013.24	1573412.98
44	3656009.26	1573414.26
45	3656068.42	1573430.12
46	3656064.28	1573429.28
47	3656062.57	1573418.71
48	3656056.50	1573418.12
49	3656124.28	1573389.56
50	3656133.98	1573409.20
51	3656133.58	1573401.33
52	3656100.75	1573430.80
53	3656040.84	1573438.67
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63	3656075.65	1573360.98
64	3656079.16	1573339.92
65	3656108.07	1573326.16
66	3656060.12	1573369.89

R&A
Architecture and Design
4438 South 49 Parkway Suite 100
Cedar City, UT 84720
tel 435 750 0448
www.ra-ad.com

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POWDER MOUNTAIN
5752 N COPPER CREST
EDEN, UT 84310

SHEET TITLE
HORIZONTAL CONTROL

No	Description	Date
1	GRILED FOR FOUNDATION PERMIT	06/27/17

JOB NO 236
DATE 06/27/17
SCALE 1"=10'
SHEET NO C101

06/27/2017 4:39 PM

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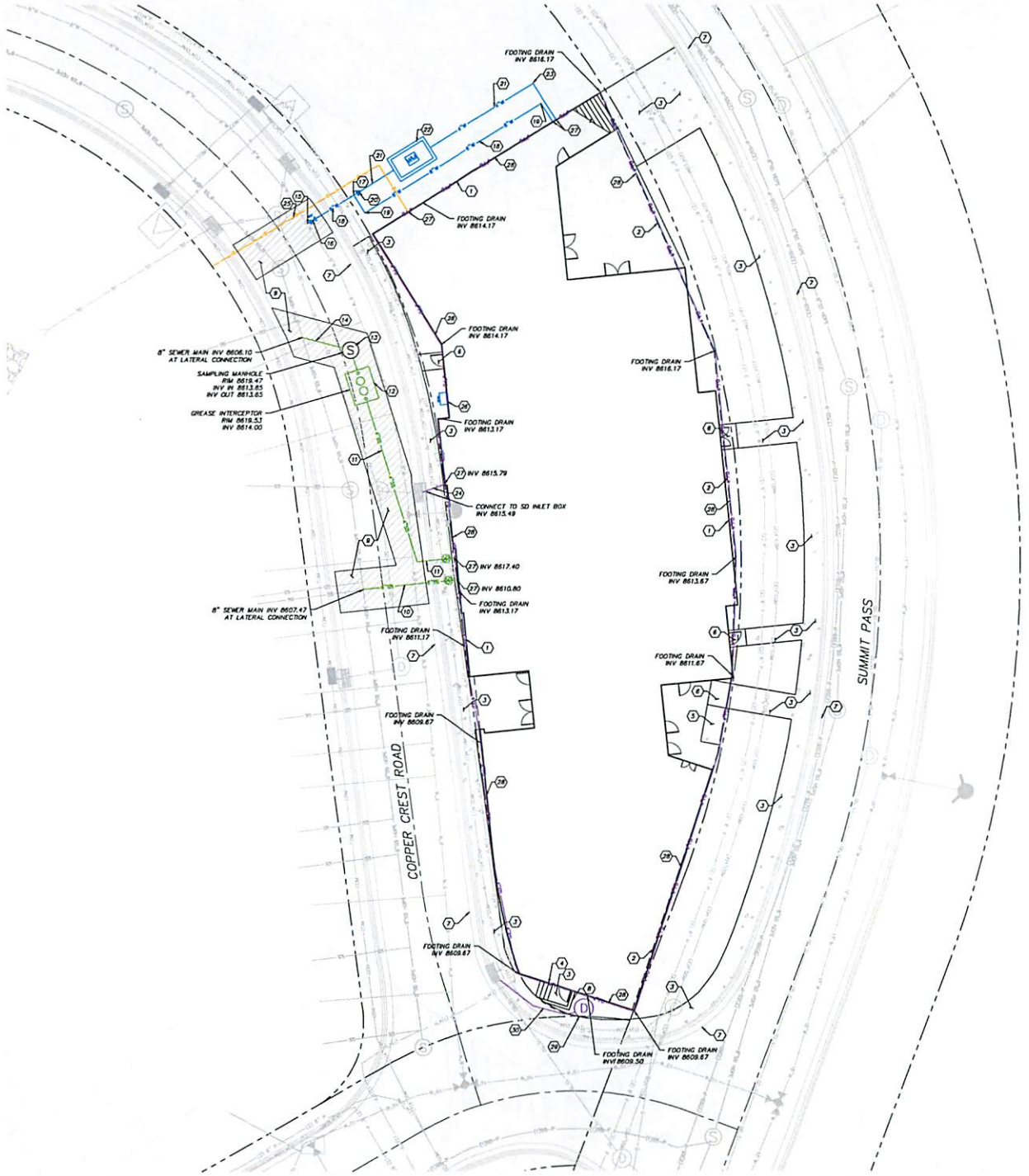

GENERAL NOTES:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO WEBER COUNTY ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY WEBER COUNTY. ALSO, INSPECTORS WILL HAVE THE RIGHT TO REQUEST CHANGES TO THE FACILITIES AS NEEDED.

DUST MUST BE KEPT TO A MINIMUM. CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTACT POWDER MOUNTAIN WATER & SEWER IMPROVEMENT DISTRICT TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

ALL ACCESS TO PROPERTY WILL BE FROM PUBLIC RIGHT-OF-WAYS.

THE CONTRACTOR IS REQUIRED BY STATE AND FEDERAL REGULATIONS TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN AND FILE A "NOTICE OF INTENT" WITH THE UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER QUALITY.

ENSURE ALL GRADING SLOPES AWAY FROM STRUCTURE AT 5% FOR A MINIMUM OF 10' PER IRC R401.3

UTILITIES:

ENSURE MINIMUM BURIED DEPTH PER BUILDING CODE FOR ALL BURIED UTILITIES.

IMPROVEMENTS, INCLUDING LANDSCAPING, SHALL NOT INTERFERE WITH THE DRAINAGE CULVERT, RIP RAP, AND DRAINAGE PATTERN ASSOCIATED WITH ANY DRAINAGE EASEMENT.

KEY NOTES:

1. BUILDING FOOTPRINT. SEE ARCHITECTURAL PLANS.
2. EXPOSED FOUNDATION FOOTPRINT. SEE STRUCTURAL PLANS.
3. CONSTRUCT 4" THICK SIDEWALK PER APWA PLAN NO. 231.
4. CONSTRUCT CONCRETE STAIRS. SEE ARCHITECTURAL PLANS FOR DETAILS.
5. CONSTRUCT CONCRETE RAMP. SEE GRADING PLAN FOR SLOPES AND ELEVATIONS.
6. LANDING. SLOPE TO NOT EXCEED 2.00% MAX IN ANY DIRECTION. SEE GRADING PLAN.
7. PROTECT IN PLACE EXISTING IMPROVEMENTS. IF DAMAGED, REPLACE PER DETAILS ON SHEETS C5.00 AND C5.01.
8. CONSTRUCT CONCRETE CURB WALL. SEE STRUCTURAL DRAWINGS.
9. SAW CUT AND REMOVE ASPHALT FOR EXCAVATION OF UTILITY TRENCH. FOLLOW WEBER COUNTY PUBLIC WORKS STANDARDS AND SPECIFICATIONS SECTION 1.16 RESTORATION OF SURFACE IMPROVEMENTS AND APWA PLAN NO. 255.
10. INSTALL 6"ø SDR-35 SEWER LATERAL PER APWA PLAN NO. 431.
11. INSTALL 4"ø SEWER GREASE LINE AND 3"ø VENT TO GREASE INTERCEPTOR.
12. INSTALL ENDURA XL75-TRI HYDROMECHANICAL GREASE INTERCEPTOR WITH CONCRETE LID PER MANUFACTURER'S STANDARDS AND SPECIFICATIONS. SEE MECHANICAL PLANS FOR DETAILS.
13. INSTALL 48"ø PRECAST SAMPLING MANHOLE PER APWA PLAN NO. 411.
14. INSTALL 4"ø SDR-35 SEWER LATERAL PER APWA PLAN NO. 431.
15. HOT TAP WATER MAIN WITH 8"ø SADDLE x 6"ø OUTLET.
16. INSTALL 6" GATE VALVE WITH THRUST BLOCKING PER APWA PLAN NO. 561.
17. INSTALL 6" TEE WITH THRUST BLOCKING PER APWA PLAN NO. 561.
18. INSTALL 6"ø C900 PVC WATER PIPE PER APWA PLANS NO. 381 & 382.
19. INSTALL 6"ø 90° BEND WITH THRUST BLOCKING PER APWA PLAN NO. 561.
20. INSTALL 6"x4" REDUCER WITH THRUST BLOCKING PER APWA PLAN NO. 561.
21. INSTALL 4"ø C900 PVC WATER PIPE PER APWA PLANS NO. 381 & 382.
22. INSTALL 4" COMPOUND METER WITH 2" BYPASS PER APWA PLAN NO. 523.
23. INSTALL 4"ø 90° BEND WITH THRUST BLOCKING PER APWA PLAN NO. 561.
24. INSTALL 6"ø HDPE STORM DRAIN PIPE, CONNECT TO EXISTING STORM DRAIN INLET BOX.
25. GAS PIPES AND STORAGE TANKS (1,000 GAL) TO BE EXCAVATED AND TRENCHED BY CONTRACTOR. INSTALLATION BY OTHERS.
26. INSTALL FIRE DEPARTMENT CONNECTION PER WEBER FIRE DISTRICT.
27. SEE MECHANICAL PLANS FOR CONTINUATION.
28. INSTALL FOOTING DRAIN 4"ø PERFORATED HDPE PIPE. SEE DETAIL A/SHEET C504.
29. INSTALL 48"ø PRECAST MANHOLE WITH FLAT BOTTOM AND SUMP PUMP PER DETAIL B/SHEET C504.
30. INSTALL 1"ø POLY PIPE FROM SUMP PUMP TO EXISTING STORM DRAIN INLET BOX.

SCALE
HORIZONTAL: 1" = 10'

R&A
Architecture and Design
4730 Sepulveda Boulevard, Suite 100
Culver City, CA 90230
tel 310.735.1616
www.r-a-a.com

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POWDER MOUNTAIN
5752 N COPPER CREST
EDEN, UT 84310

SHEET TITLE
SITE & UTILITY PLAN

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO. 236
DATE 06/27/17
SCALE 1"=10'
SHEET NO. C201

6/27/2017 4:40 PM

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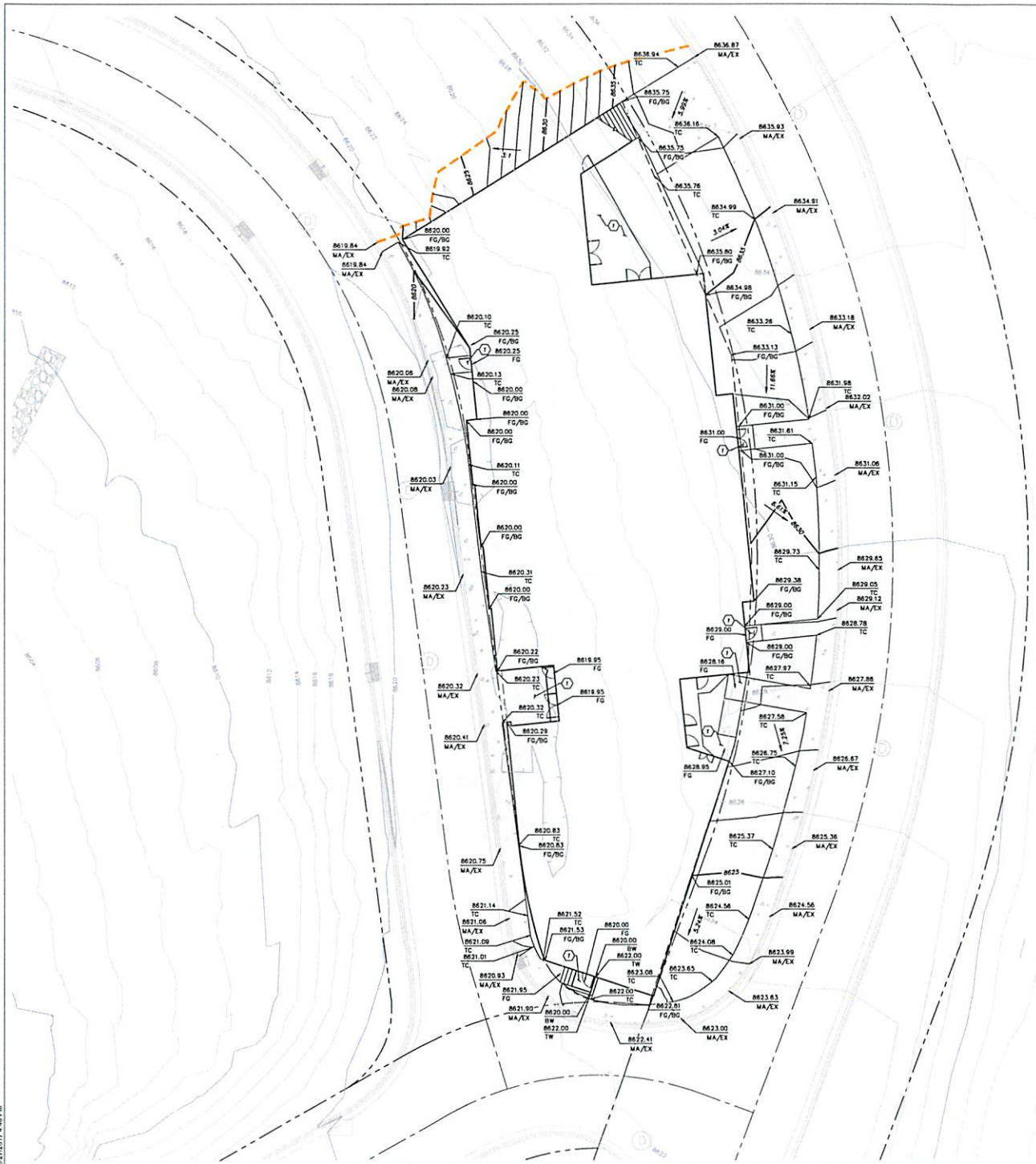

GENERAL NOTES:
THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO WEBER COUNTY ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY WEBER COUNTY. ALSO, INSPECTORS WILL HAVE THE RIGHT TO REQUEST CHANGES TO THE FACILITIES AS NEEDED.

DUST MUST BE KEPT TO A MINIMUM. CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTACT POWDER MOUNTAIN WATER & SEWER IMPROVEMENT DISTRICT TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

ALL ACCESS TO PROPERTY WILL BE FROM PUBLIC RIGHT-OF-WAYS.

THE CONTRACTOR IS REQUIRED BY STATE AND FEDERAL REGULATIONS TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN AND FILE A "NOTICE OF INTENT" WITH THE UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER QUALITY.

ENSURE ALL GRADING SLOPES AWAY FROM STRUCTURE AT 5% FOR A MINIMUM OF 10' PER IRC R401.3

UTILITIES:
ENSURE MINIMUM BURIED DEPTH PER BUILDING CODE FOR ALL BURIED UTILITIES.

IMPROVEMENTS, INCLUDING LANDSCAPING, SHALL NOT INTERFERE WITH THE DRAINAGE CULVERT, RIP RAP, AND DRAINAGE PATTERN ASSOCIATED WITH THE DRAINAGE EASEMENT.

KEY NOTES:

(1) LANDING. SLOPE TO NOT EXCEED 2% MAX IN ALL DIRECTIONS.

SCALE
HORIZONTAL: 1" = 10'

R&A
Architecture and Design
4708 Sorrento Mesa Rd, Suite 100
Coral City, CA 95130
tel 916.735.6636
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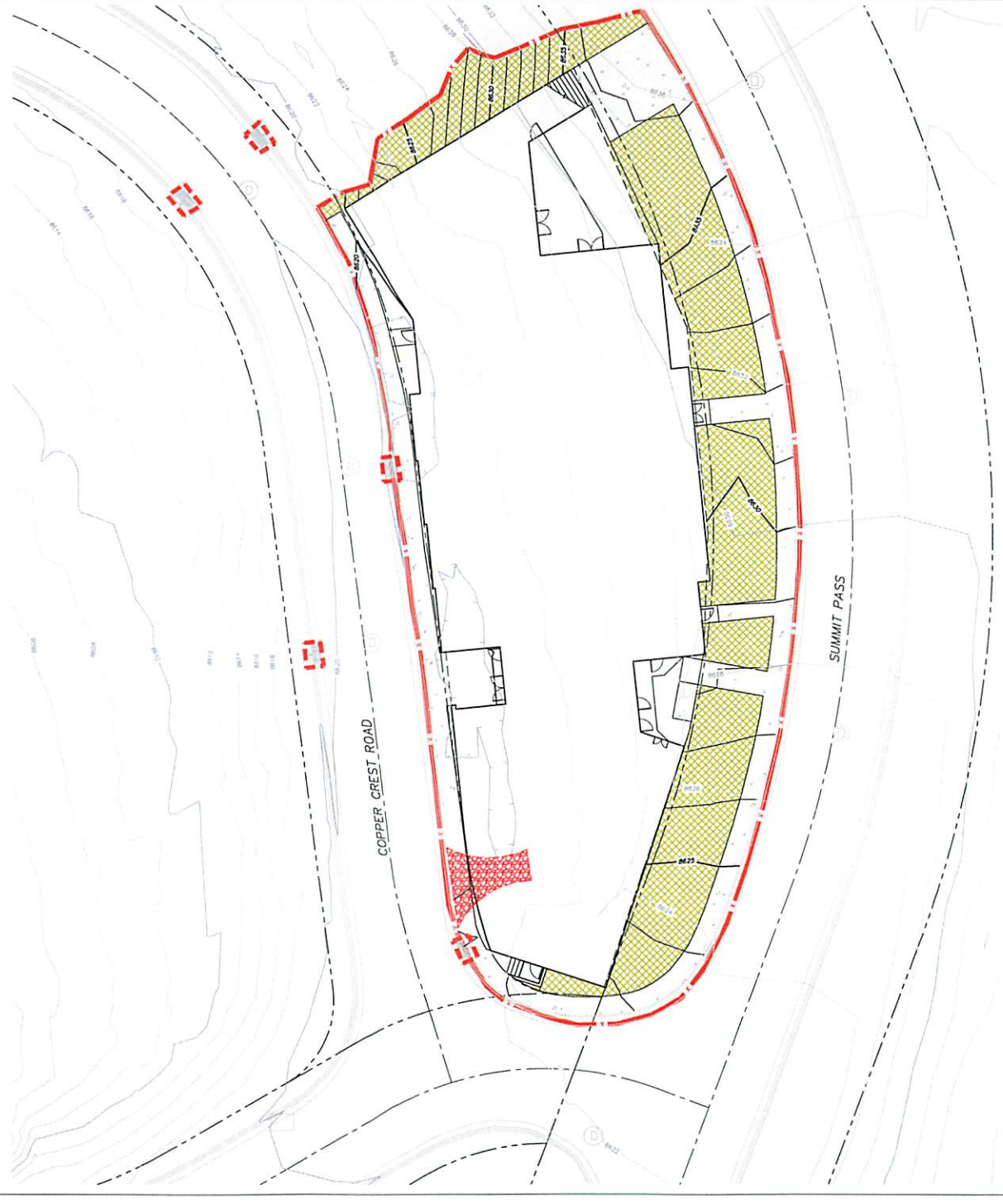
EDEN, UT 84310

SHEET TITLE
GRADING PLAN

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO. 236
DATE 06/27/17
SCALE 1"=10'
SHEET NO. C301

6/27/2017 4:40 PM



EROSION CONTROL GENERAL NOTES:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO WEBER COUNTY ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE COUNTY. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.

CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTRACTOR TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER. CONSTRUCTION WATER COST TO BE INCLUDED IN BID.

WHEN GRADING OPERATIONS ARE COMPLETED AND THE DISTURBED GROUND IS LEFT "OPEN" FOR 14 DAYS OR MORE, THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

ALL ACCESS TO PROPERTY WILL BE FROM PUBLIC RIGHT-OF-WAYS.

THE CONTRACTOR IS REQUIRED BY STATE AND FEDERAL REGULATIONS TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN AND FILE A "NOTICE OF INTENT" WITH THE UTAH DIVISION OF WATER QUALITY.

MAINTENANCE:

ALL BEST MANAGEMENT PRACTICES (BMP'S) SHOWN ON THIS PLAN MUST BE MAINTAINED AT ALL TIMES UNTIL VEGETATION IS RE-ESTABLISHED.

THE CONTRACTOR'S RESPONSIBILITY SHALL INCLUDE MAKING BI-WEEKLY CHECKS ON ALL EROSION CONTROL MEASURES TO DETERMINE IF REPAIR OR SEDIMENT REMOVAL IS NECESSARY. CHECKS SHALL BE DOCUMENTED AND COPIES OF THE INSPECTIONS KEPT ON SITE.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF BARRIER.

SEDIMENT TRACKED ONTO PAVED ROADS MUST BE CLEANED UP AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN THE END OF THE NORMAL WORK DAY. THE CLEAN UP WILL INCLUDE SWEEPING OF THE TRACKED MATERIAL, PICKING IT UP, AND DEPOSITING IT TO A CONTAINED AREA.

EXPOSED SLOPES:

ANY EXPOSED SLOPE THAT WILL REMAIN UNTOUCHED FOR LONGER THAN 14 DAYS MUST BE STABILIZED BY ONE OR MORE OF THE FOLLOWING METHODS:

A) SPRAYING DISTURBED AREAS WITH A TACKIFIER VIA HYDROSEED
B) TRACKING STRAW PERPENDICULAR TO SLOPES
C) INSTALLING A LIGHT-WEIGHT, TEMPORARY EROSION CONTROL BLANKET

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

HATCHING INDICATES AREAS TO RECEIVE 4" TOPSOIL AND TO BE SEEDED FOR NATURAL VEGETATION. AREAS RECEIVING SEEDING FOR NATURAL REVEGETATION MUST BE COVERED WITH AN EROSION CONTROL BLANKET AFTER THE FINAL GRADING AND SEEDING ARE FINISHED. INSTALL NORTH AMERICAN GREEN SC-150 BLANKET OR APPROVED EQUAL. FOLLOW MANUFACTURER'S SPECIFICATIONS. INSTALL NORTH AMERICAN GREEN P300 EROSION CONTROL BLANKET ON ALL SLOPES GREATER THAN 1.5:1. RE-SEED AREA IS APPROXIMATE. CONTRACTOR IS TO REVEGTATE ALL DISTURBED AREAS.

STABILIZED CONSTRUCTION ENTRANCE FOR SITE INGRESS/EGRESS. IF ALTERNATE ACCESS POINTS ARE APPROVED BY OWNER, ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES WILL BE REQUIRED.

INSTALL SILT FENCE ALONG DOWN GRADIENT LIMITS OF DISTURBANCE AS SHOWN ON PLAN.

INSTALL ORANGE SAFETY FENCING AROUND OUTER LIMITS OF PROJECT PRIOR TO GRADING.

SCALE
HORIZONTAL: 1" = 10'

R&A
Architecture and Design
4700 Southside Boulevard Suite 100
Coral City, CA 90130
ph: 310.730.5616
www.r-a-d.com

TALISMAN
CIVIL CONSULTANTS

STAMP

No. 7899508
REGISTERED PROFESSIONAL ENGINEER
STATE OF UTAH

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POWDER MOUNTAIN
5752 N COPPER CREST
EDEN, UT 84310

SHEET TITLE
EROSION CONTROL PLAN

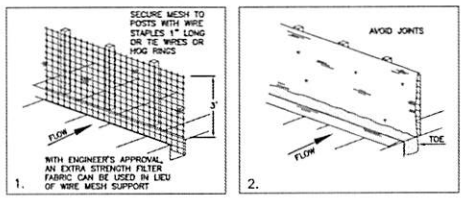
No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	7/17/17

JOB NO. 236
DATE 06/27/17
SCALE 1"=10'
SHEET NO. C401

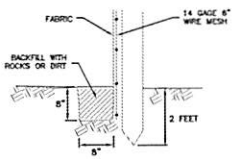
6/27/2017 4:41 PM

R&A: IF THIS SHEET IS NOT 36"x 42", IT IS A REDUCED PRINT

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



INSTALLATION SEQUENCE



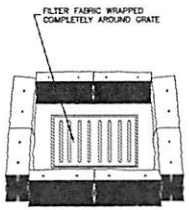
TOE DETAIL

Silt fence

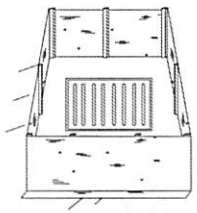
February 2006 | 7 | Plan 122

1 *SILT FENCE DETAIL* NTS

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



STRAW BALE BARRIER
(PLAN No. 121)



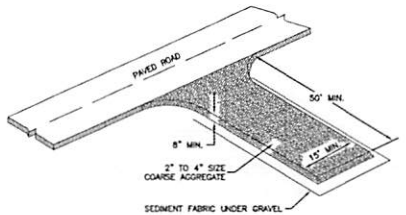
SILT FENCE
(PLAN No. 122)

Inlet protection - fence or straw bale

February 2006 | 15 | Plan 124 Sheet 3 of 3

2 *INLET PROTECTION DETAIL* NTS

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



Stabilized roadway entrance

February 2006 | 19 | Plan 126

3 *STABILIZED ROADWAY ENTRANCE DETAIL* NTS

6/27/2017 4:42 PM

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R&A Architecture and Design
4290 Bells Way Suite 100
Park City, UT 84098
tel 435.649.8999
www.r-a-d.com

TALISMAN CIVIL CONSULTANTS

STAMP

NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN
5752 N COPPER CREST
EDEN, UT 84310

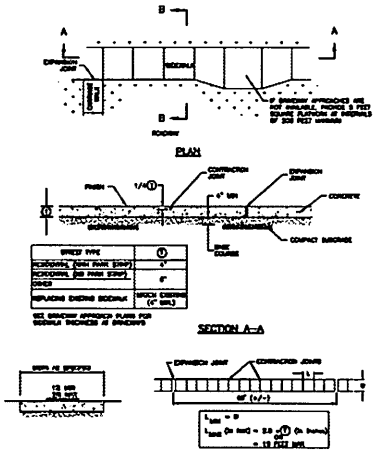
SHEET TITLE
EROSION CONTROL DETAILS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO. 236
DATE 06/27/17
SCALE N/A
SHEET NO. C402

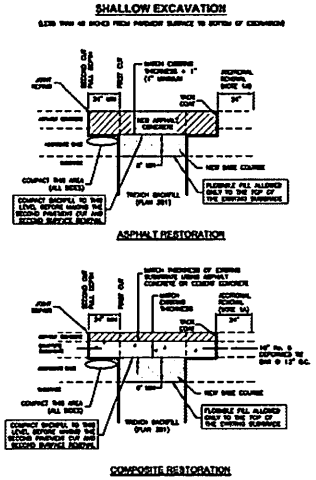
Sidewalk

1. GENERAL
   A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
   B. Additional requirements are specified in APWA Section 32 16 13.
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
   C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution, however, as concrete cracking (spider cracks) may develop if air temperature exceeds 90 degrees F.
   D. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.
3. EXECUTION
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Concrete Placement: APWA Section 03 30 10.
      1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface.
      2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 6-inches thick. Maximum length to width ratio for non-square panels is 1.5 to 1. Maximum panel length (in feet) is 1.5 times the slab thickness (in inches).
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.



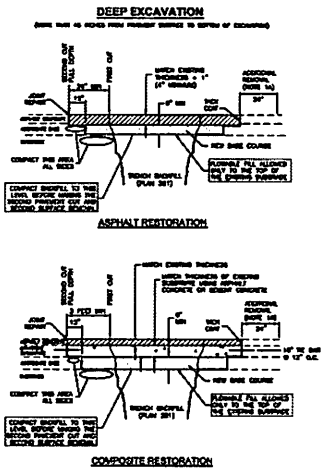
Asphalt concrete T-patch

1. GENERAL
   A. If a saw cut in the direction of vehicular travel is to a wheel path, consult ENGINEER for directions on removing additional pavement other than the amount shown on the drawing.
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Flowable Fill: Target is 60 psi in 28 days with 80 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
   C. Reinforcement: No. 5, Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A 615.
   D. Concrete: Class 4000, APWA Section 03 30 04.
   E. Tack Coat: APWA Section 32 12 13 13.
   F. Asphalt Concrete: APWA Section 32 12 05.
      1) Warm Weather Patch: AC-20-DM-1/2, unless indicated otherwise.
      2) Cold Weather Patch: Modified MC-250-FM-1 as indicated in APWA Section 33 05 25.
3. EXECUTION
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Flowable Fill: Cure to initial set before placing aggregate base or asphalt pavement. Use in excavations that are too narrow to receive compaction equipment.
   C. Tack Coat: Clean all horizontal and vertical surfaces. Apply full coverage.
   D. Asphalt Pavement: Match existing thickness plus 1 inch but not more than 6-inches in residential thoroughfares or 8-inches non residential thoroughfares. Install in lifts no greater than 3-inches after compaction. Compact to 94 percent of ASTM D 2041 (Rice density) plus or minus 2 percent. If asphalt pavement is substituted for concrete substrate, omit rebar and provide 1.25 inches of pavement for each 1 inch of concrete substituted.
   E. Reinforcement: Required if thickness of existing Portland-cement concrete substrate is 6-inches or greater. Not required if (1) less than 6-inches thick, (2) if existing concrete is deteriorating, (3) if excavation is less than 3 feet square, or (4) if asphalt pavement is substituted for Portland-cement concrete substrate.
   F. Concrete Substrate: Cure to initial set before placing new asphalt concrete patch.
   G. Joint Repair: If a crack occurs at a connection to an existing pavement or at any street fixture, flush seal the crack per Plan 205.
   H. Patch Repair: Repair patch if any of the following conditions within the patch occur.
      1) Permanent surface distortion exceeds 1/4-inch deviation in 10 feet. Repair option: Plane off surface distortions. Coat planed surfaces with a cationic or anionic emulsion that complies with APWA Section 32 12 03.
      2) Cracks at least 1 foot long and 1/4-inch wide occur more often than 1 in 10 square feet. Repair option: Crack seal.
      3) Asphalt raveling is greater than 1 square foot per 100 square feet. Repair option: Mill and inlay.



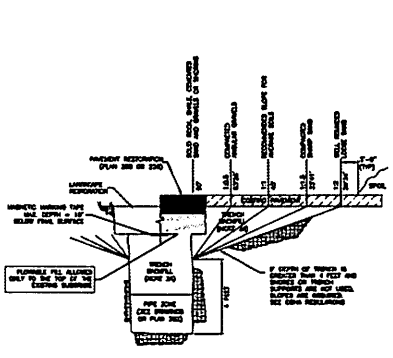
Asphalt concrete T-patch

1. GENERAL
   A. If a saw cut in the direction of vehicular travel is within a wheel path, ENGINEER may order additional pavement removal as saw cut falls outside of a wheel path.
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Flowable Fill: Target is 60 psi in 28 days with 80 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
   C. Reinforcement: Galvanized or epoxy coated, 60 ksi yield grade steel, ASTM A 615.
   D. Concrete: Class 4000, APWA Section 03 30 04.
   E. Tack Coat: APWA Section 32 12 13 13.
   F. Asphalt Concrete: APWA Section 32 12 05.
      1. Warm weather patch – AC-20-DM-1/2 unless indicated otherwise.
      2. Cold weather patch – modified MC-250-FM-1, APWA Section 33 05 25.
3. EXECUTION
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Tack Coat: Clean all horizontal and vertical surfaces. Apply full coverage.
   C. Asphalt Pavement: Match existing thickness plus 1 inch but not more than 6-inches in residential thoroughfares or 8-inches non residential thoroughfares. Install in lifts no greater than 3-inches after compaction. Compact to 94 percent of ASTM D 2041 (Rice density) plus or minus 2 percent. If asphalt pavement is substituted for concrete substrate, omit rebar and provide 1.25 inches of pavement for each 1 inch of concrete substituted.
   D. Reinforcement: Required if thickness of existing Portland-cement concrete substrate is 6-inches or greater. Not required if (1) less than 6-inches thick, (2) if existing concrete is deteriorating, (3) if excavation is less than 3 feet square, or (4) if asphalt pavement is substituted for Portland-cement concrete substrate.
   E. Concrete Substrate: Cure to initial set before placing new asphalt concrete patch.
   F. Joint Repair: If a crack occurs at a connection to and existing pavement or at any street fixture, flush seal the crack per Plan 205.
   G. Patch Repair: Repair patch if any of the following conditions within the patch occur.
      1) Permanent surface distortion exceeds 1/4-inch deviation in 10 feet. Repair option: Plane off surface distortions. Coat planed surfaces with a cationic or anionic emulsion that complies with APWA Section 32 12 03.
      2) Cracks at least 1 foot long and 1/4-inch wide occur more often than 1 in 10 square feet. Repair option: Crack seal, APWA Section 32 01 17.
      3) Asphalt raveling is greater than 1 square foot per 100 square feet. Repair option: Mill and inlay.



Trench backfill

1. GENERAL
   A. This drawing applies to backfilling the trench above the pipe zone.
2. PRODUCTS
   A. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 3-inches.
   B. Flowable Fill: Target is 60 psi in 28 days with 80 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
3. EXECUTION
   A. Trench Backfill
      1) DO NOT USE sewer rock, pea gravel or recycled RAP aggregate as trench backfill.
      2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
      3) Water jetting is NOT allowed.
      4) Submission of quality control compaction test result data developed for haunching areas may be requested by ENGINEER at any time. Provide results of tests immediately upon request.
   B. Flowable Fill: When required place controlled low strength material in the trench, APWA Section 31 05 15. Cure the fill before placing surface restorations.
   C. Surface Restoration
      1) Landscaped Surface: Rake to match existing grade. Replace vegetation to match pre construction conditions. Follow APWA Section 32 92 00 (turf or grass) or APWA Section 32 93 13 (ground cover) requirements.
      2) Paved Surface: Do not install asphalt or concrete surfacing until trench compaction is acceptable to ENGINEER. Follow APWA Section 33 05 25 (asphalt surfacing), or APWA Section 33 05 25 (concrete surfacing).



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POWDER MOUNTAIN
5752 N COPPER CREST
EDEN, UT 84310

SHEET TITLE
DETAILS

No.	Description	Date
1	ISSUED FOR CONSTRUCTION	2/17/17
2	ISSUED FOR PERMIT	3/7/17

JOB NO 236
DATE 06/27/17
SCALE N/A
SHEET NO C501

6/27/2017 4:42 PM
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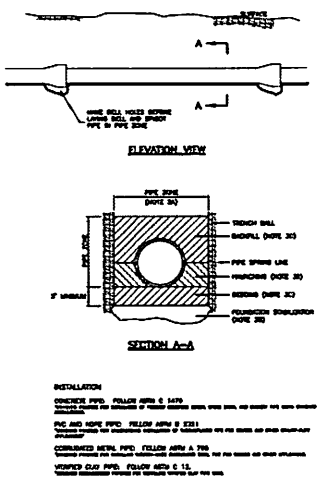
Pipe zone backfill

1. GENERAL
   A. Install the pipe in the center of the trench or no closer than 6 inches from the wall of the pipe to the wall of the trench
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches
   C. Concrete: APWA Section 03 30 04
   D. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation
   E. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19
3. EXECUTION
   A. Excavate the Pipe Zone: Width is measured at the pipe spring line and includes any necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.
   B. Foundation Stabilization: Get ENGINEER's permission before installing common fill. Vibrate to stabilize. Installation of stabilization-separation geotextile will be required to separate backfill material and native subgrade materials if common fill cannot provide a working surface or prevent soils migration.
   C. Base Course
      1) Furnish untreated base course material unless specified otherwise by pipe manufacturer
      2) Maximum fill thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26
      3) When using concrete, provide at least Class 2,000 per APWA Section 03 30 04
   D. Pipe Zone: DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate in the pipe zone. Water jetting is NOT allowed
      1) Maximum fill thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26 unless pipe manufacturer requires more stringent installation
      2) Submission of quality control compaction test result data developed for the haunch zone may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
   E. Flowable Fill (when required and if allowed by pipe manufacturer)
      1) Place the controlled low strength material, APWA Section 31 05 15
      2) Prevent pipe flotation by installing in lifts and prorrizing pipe restraints as required by pipe manufacturer.
      3) Reset pipe to line and grade if pipe "floats" out of position

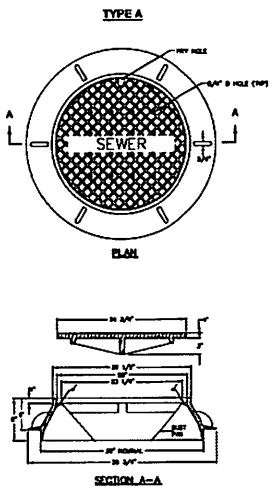
204



30" Frame and cover

1. GENERAL
   A. The frame and cover fits the manhole in Plan 411
2. PRODUCTS
   A. Castings: Grey iron class 35 minimum, ASTM A 48, coated with asphalt based paint or better (except on machined surfaces)
      1) Cast the heat number on the frame and cover
      2) Give the frame and cover a machine finish so the cover will not rock
      3) √ designates machined surface
      4) Cast the words "SEWER" on the cover in upper case flush with the surface finish
3. EXECUTION
   A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

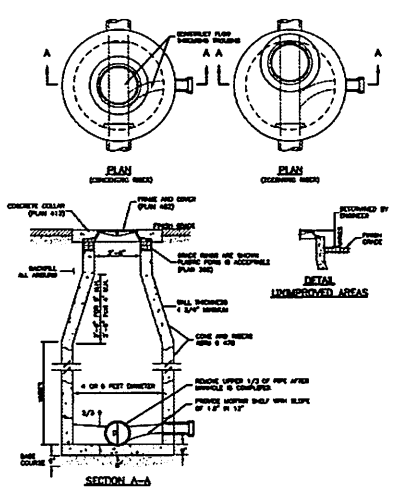
210



Sanitary sewer manhole

1. GENERAL
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the manhole
   B. Manhole size
      1) Diameter is 4 feet. For sewers under 12" diameter
      2) Diameter is 5 feet. For sewers 12" and larger, or when 3 or more pipes intersect the manhole.
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4000, APWA Section 03 30 04
   D. Riser and Reducing Riser: ASTM C 478
   E. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615
   F. Grout: 2 parts sand to 1 part cement mortar, ASTM C 1329
   G. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19
3. EXECUTION
   A. Foundation Stabilization: Get ENGINEER's permission to use a sewer rock or a granular backfill borrow in a geotextile wrap to stabilize an unstable foundation.
   B. Base Course Placement: APWA Section 32 11 23. Maximum fill thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26
   C. Invert Cover: During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan 412.
   D. Pipe Connections: Grout around all pipe openings.
   E. Pipe Seal: Install rubber-based pipe seals on all plastic pipes when connecting plastic pipes to manholes. Heat water-stop in place with stainless steel bands.
   F. Joints: Place flexible gasket type sealant in all riser joints. Finish with grout.
   G. Adjustment: If the required manhole adjustment is more than 1'-0", remove the cone and grade rings and adjust the manhole elevation with the appropriate manhole section, the cone section, and the grade rings or plastic form to make frame and lid match finish grade.
   H. Finish: Provide smooth and neat finishes on interior of cones, shelfs, and rings. Imperfect moldings or honeycombs will not be accepted.
   I. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26

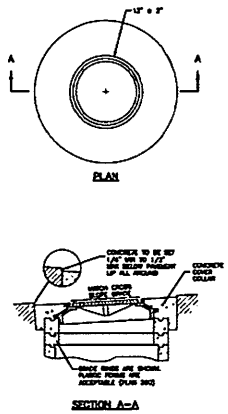
212



Cover collar for sanitary sewer manhole

1. GENERAL
   A. In a pavement surface, the concrete will support the frame under traffic loadings.
2. PRODUCTS
   A. Concrete: Class 4000, APWA Section 03 30 04
   B. Concrete Curing Agent: Type ID Class A (clear with fugitive dye), membrane forming compound, APWA Section 03 39 00
3. EXECUTION
   A. Pavement Preparation: Provide a neat vertical and concentric joint between concrete and existing asphalt concrete surfaces. Clean edges of silt dirt, oil and loose debris
   B. Concrete Placement: Fill the annular space around the frame and cover casting with concrete. Apply a broom finish. Apply a curing agent

216



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POWDER MOUNTAIN
5752 N COPPER CREST
EDEN, UT 84310

SHEET TITLE
DETAILS

No.	Description	Date
1	ISSUED FOR CONSTRUCTION PERMIT	06/27/17

JOB NO 236
DATE 06/27/17
SCALE N/A
SHEET NO C502

6/27/2017 4:42 PM

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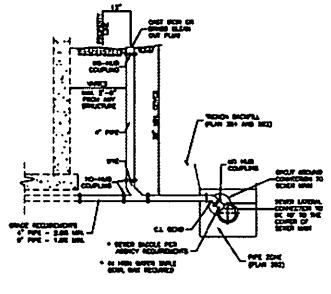
Sewer lateral connection

1. GENERAL
   A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used
   B. Before backfilling, secure inspection of installation by ENGINEER. Give at least 24 hours notice.
   C. Verify if CONTRACTOR or agency is to install the wye
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches
   C. Provide agency approved wye or tee with appropriate donut
   D. Stainless steel straps required
3. EXECUTION
   A. Tape wrap pipe as required by soil conditions
   B. Remove sore plug from sewer main. Do not break into sewer main to make connection
   C. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26



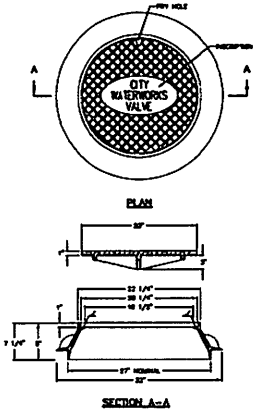
Sewer lateral connection

Plan 431

January 2011 210

27" Frame and co

1. GENERAL
   A. This frame and cover fits manholes in Plan 5C
2. PRODUCTS
   A. Castings: Gray iron class 35 minimum, ASTM or better (except on machined surfaces)
      1) Cast the heat number on the frame and co
      2) Give the frame and cover a machine finish
      3) 1 designates machined surface
      4) Cast the name of the agency or its acronym "WATERWORKS" as the second line. Co worn) as the third line. Cast all letters on t
   B. Paint: Shop paint with one coat of asphaltic paint
3. EXECUTION (Not used)



27" Frame and cover

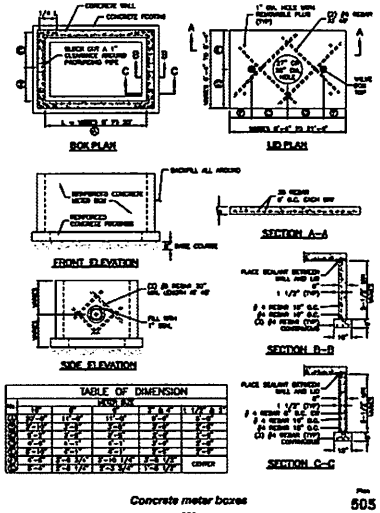
Plan 502

April 1997 231

Concrete meter boxes

B. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent
C. Fill annular space around pipe wall penetrations with waterproof sealer
D. Place frame and cover directly over valve or meter location
E. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26

box shall. Seal opening with compressible seal.



Concrete meter boxes

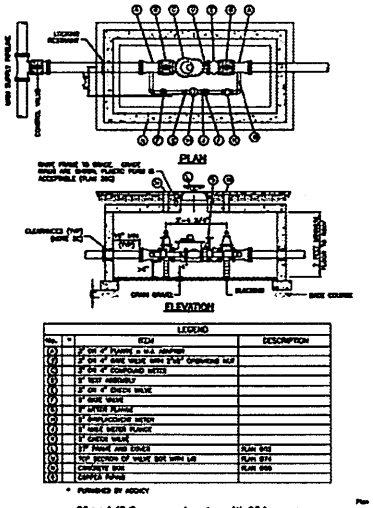
Plan 505

August 2001 235

3" and 4" Compound meter with 2" bypass

Plan 523

August 2001 243



LEGEND

No.	ITEM	DESCRIPTION
	2" DR 7" FLANGE x 5-8 ADAPTER	
	2" DR 7" GATE VALVE WITH 2"x5" Greenfield NUT	
	3" DR 7" COMPOUND METER	
	3" TEST ASSEMBLY	
	3" DR 7" CHECK VALVE	
	3" GATE VALVE	
	3" METER FLANGE	
	3" DISPLACEMENT METER	
	3" GATE METER FLANGE	
	3" GATOR VALVE	
	3'6" FRAME AND COVER	PLAN 5702
	10x8" SECTION OF VALVE BOX WITH LID	PLAN 5703
	CONCRETE BOX	PLAN 5000
	COPPER PIPING	

* FURNISHED BY AGENCY

POWDER MOUNTAIN

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EDEN, UT 84310

SHEET TITLE
DETAILS

No.	Description	Date
1	REVISION FOR CONSTRUCTION PERMIT	2017-06-27

JOB NO 236

DATE 06/27/17

SCALE N/A

SHEET NO C503

6/27/2017 4:43 PM

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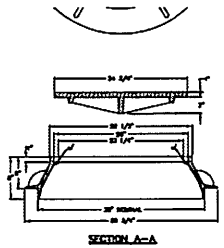


SECTION A–A

30" Frame and cover

September 2009 — 133 — Plan 302 — Sheet 1 of 2

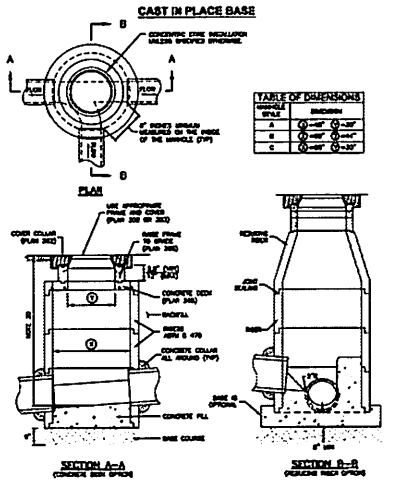


TABLE OF DIMENSIONS

A	
B	
C	

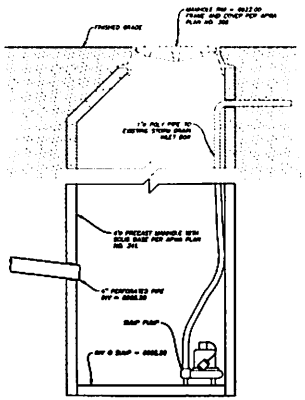
Precast manhole

November 2010 — 167 — Plan 341 — Sheet 1 of 2

4"	2	2	2	1	0
6"	4	0.5	2	1.5	1
8"	0.5	0.5	3	2.75	1.5
12"	14	20	11	0.5	3
14"	13	20.5	11.5	7.5	4
16"	24	34	12.5	0.5	6
20"	27	50	20.5	14.5	10
24"	33	74	11	21	20
30"	81	114	62	33	10

Direct bearing thrust block

August 2010 — 297 — Plan 561



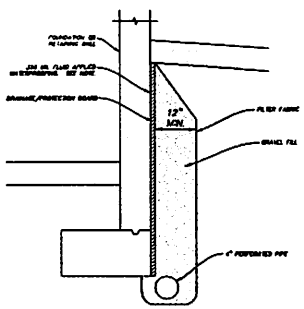
FOOTING DRAIN SUMP DETAIL

SCALE: N.T.S.

LANDSCAPED AREA

Cover collar for water valve box

August 2010 — 277 — Plan 574



FOOTING DRAIN

SCALE: N.T.S.

Architect business and Design

STAMP

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EDEN, UT 84310

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No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO: 236

DATE: 06/27/17

SCALE: N/A

SHEET NO: C504

5/27/2017 4:43 PM

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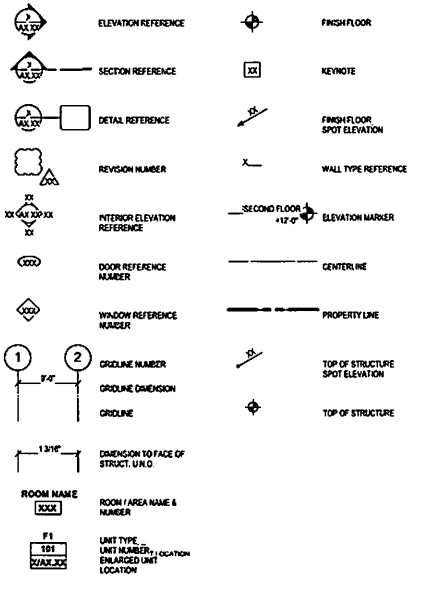
&	AND	HB	HOSE BIB	SL	SLOPE
<	ANGLE OR LESS THAN	H.C.	HANDICAP or HOLLOW CORE	SLD	SEE LANDSCAPE DRAWINGS
@	AT	HCT	HOLLOW CLAY TILE	S.C.D.	SEE LIGHTING CONSULTANT'S DRAWINGS
℄	CENTER-INE	HD	HEAD	SMF	SPECIAL MOMENT FRAME
ø	DIAMETER OR ROUND	HDF	HIGH DENSITY FIBERBOARD	SMS	SEE MECHANICAL DRAWINGS
$	DOLLAR (US CURRENCY)	HDG	HOT DIPPED GALVANIZED	SOG	SLAB ON GRADE
#	NUMBER OF POUND	HDR	HEADER	SSP	SHELF AND POLE
%	PERCENTAGE/ PER	HDWD	HARDWOOD	ST	STANDPIPE
		HDWR	HARDWARE	STD	SEE PLUMBING DRAWINGS
AB	ANCHOR BOLT	HT	HEIGHT	STLC	SPECIFICATIONS
ABV	ABOVE	HM	HOLLOW METAL	SQ	SQUARE
AC	ASPHALTIC CONCRETE	HORIZ	HORIZONTAL	SSD	SEE STRUCTURAL DRAWINGS
ACT	ACOUSTICAL CEILING TILES	HP	HIGH POINT	SS	SELECT STRUCTURAL or STAINLESS STEEL
ACCES	ACCESSORIES	HR	HAND RAIL	STD	STANDARD or STANDO
AD	AREA DRAIN	HSS	HIGH STRENGTH SECTION	STL	STEEL
ADJ	ADJACENT	HTNG	HEATING	STR	STORAGE
AFF	ABOVE FINISH FLOOR	HT SASM	HIGH TEMP SELF ADHERED SHEET MEMBRANE	STRFR	STOREFRONT
AGGR	AGGREGATE	HW	HOT WATER	STRUCT	STRUCTURAL
ALT	ALTERNATE	HVAC	HEATING/VENTILATION & AIR CONDITIONING	SUSP	SUSPENDED
ALUM	ALUMINUM	HVY	HEAVY	SYM	SYMETRICAL
ANN/AC	ANNUNCIATOR	ID	INSIDE DIAMETER		
ANOD	ANODIZED	IN	INCH	TBD	TO BE DETERMINED
AP	ACCESS PANEL	INCL	INCLUDE(ING)	TEL	TELEPHONE
APPL	APPLIANCE	INV	INVERT ELEVATION	TEMP	TEMPERED or TEMPORARY
APPROX	APPROXIMATELY	IF	INSIDE FACE	T&B	TOP AND BOTTOM
ARCH	ARCHITECTURE	INSTLTN	INSTALLATION	T&G	TONGUE AND GROOVE
ARCHT	ARCHITECT	INFO	INFORMATION	THK	THICKNESS
A'B	AUGER TO BELOW	INSTAL	INSTALLATIONS	THRU	THROUGH
AUTO	AUTOMATIC	INSTRUC	INSTRUCTION	TO	TOP OF
AVC	AVERAGE	INSUL	INSULATION	TOC	TOP OF CONCRETE
BD	BOARD	INT	INTERIOR	TOD	TOP OF DECK
BETWN	BETWEEN	INTERMED	INTERMEDIATE	TOJ	TOP OF JOIST
BL	BUILDING LINE	INV	INVERT	TOP	TOP OF PARAPET
BLDG	BUILDING			TOS	TOP OF STRUCTURE
BLK	BLOCK	JAN	JANITOR	TOW	TOP OF WALL
B.R.S.	BUILDING RESTRICTION SETBACK	JST	JOIST	TOST	TOP OF STEEL
BLKT	BLANKET	JT	JOINT	TOW	TOP OF WALL
BLW	BELOW			TR	TREAD
BM	BEAM	KIT	KITCHEN	TRTD	TREATED
BN	BOUNDARY LINE	KPE	KEYSTONE ETHYLENE ESTER	TS	TUBULAR STEEL
BO	BOTTOM OF	KT	KITCHEN	TV	TELEVISION
BOS	BOTTOM OF STRUCTURE	KP	KICK PLATE	TYP	TYPICAL
BRDG	BRIDGING			UBC	UNIFORM BUILDING CODE or
BRKT	BRACKET	L	LENGTH		APPLICABLE LOCAL BLDG CODE
BS	BOOT SIDES	LAV	LAVATORY	UL	UNDERWRITERS LABORATORY
BTM	BOTTOM	LBS or #	POUNDS	UNDERLAY	UNDERLAYMENT
B'T'W	BRITISH THERMAL UNIT	LF	LINEAL FEET	UNO	UNLESS NOTED OTHERWISE
BUR	BUILT UP ROOFING	LH	LEFT HAND	U/S	UNDERSIDE
BYND	BEYOND	LIN	LINEN	UTL'Y	UTILITY
		LL	LIVE LOAD	UV	ULTRAVIOLET
CAB	CABINET	LO	LINE OF		
CB	CATCH BASIN	LOBA	LINE OF BUILDING ABOVE	V	VOID
CBC	CALIFORNIA BUILDING CODE	LP	LOW POINT	VB	VAPOR BARRIER
CC	CENTER TO CENTER	LT	LIGHT	VCT	VINYL COMPOSITE TILE
CEM	CEMENT	LTWT	LIGHT WEIGHT	VD	VERTICAL DRAIN
CB	CORNER GUARD	LVR	LOUVER	VDF	VERTICAL GRAIN DOUGLAS FIR
CHBC	CALIFORNIA HISTORIC BUILDING CODE			VEST	VESTIBULE
CIP	CAST IN PLACE			VENT	VENTILATION
CJ	CONSTRUCTION JOINT	MACH	MACHINE	VERT	VERTICAL
CL	CENTER LINE	MAR	MARBLE	V.I.F.	VERIFY IN FIELD
CLG	CEILING	MATL	MATERIAL	VOL	VOLUME
CLR'S	CLEAR(ING)	MAX	MAXIMUM	VTR	VENT THROUGH ROOF
CLO	CLOSET	MB	MACHINE BOLT		
CLR	CLEAR	MC	MEDICINE CABINET	W	WEST or WIDE FLANGE or WASHER
CMU	CONCRETE BLOCK MASONRY UNIT	MDF	MEDIUM DENSITY FIBERBOARD	W/	WITH
CO	CLEAN OUT	MDO	MEDIUM DENSITY OVERLAY	WC	WATER CLOSET
COL	COLUMN	MECH	MECHANICAL	WD	WOOD
COMP	COMPOSITION	MEMB	MEMBRANE	W/D	WASHER AND DRYER
CONC	CONCRETE	MEZZ	MEZZANINE	WF	WALL FURNACE
CONN	CONNECTION	MF	MOMENT FRAME	WFGL	WIRE GLASS
CONST	CONSTRUCTION	MFD	MANUFACTURED	W/H	WATER HEATER or WHIP HOLE
CONT	CONTINUOUS	MFR	MANUFACTURER	WN	WINDOW
COORD	COORDINATE	MH	MANHOLE	W/O	WITHOUT
CORR	CORRIDOR	MIN	MINIMUM	WP	WATERPROOF
CORRG	CORRUGATED	MIR	MIRROR	WPM	WATERPROOF MEMBRANE
CPT	CARPET	MISC	MISCELLANEOUS	WRB	WEATHER RESISTIVE BARRIER
CS	COUNTER SINK	MLWK	MILLWORK	WT	WEIGHT
CT	CERAMIC TILE	MOIST	MOISTURE	WWF	WELDED WIRE FABRIC
CTR	CENTER	MTD	MOUNTED	WPT	WORK POINT
CW	COLD WATER	MTD	MOUNTED		
D	DRYER	MTL	METAL		
DBL	DOUBLE	MIX	MIXTURE		
DEG	DEGREE	MUL	MULLION		
DEPT	DEPARTMENT				
DET, DTL	DETAIL	N	NEW		
DF	DRINKING FOUNTAIN or DOUGLAS FIR	N	NORTH		
DIA	DIAMETER	NAT	NATURAL		
DIM	DIMENSION	NIC	NOT IN CONTRACT		
DISP	DISPENSER	NO or #	NUMBER		
DW	DISHWASHER	NTS	NOT TO SCALE		
DWG	DRAWING				
DWR	DRAWER	OBS	OBSCURE		
		OC	ON CENTER		
E	EAST	OD	OUTSIDE DIAMETER or OVERFLOW DRAIN		
EA	EACH	OFF	OFFICE		
EF	EACH FACE	OH	OPPOSITE HAND		
EG	EXISTING GRADE	OPNG	OPENING		
EJ	EXPANSION JOINT	OVHD	OVERHEAD		
EL	ELEVATION, VERTICAL				
ELAST	ELASTOMERIC	PA	PLANTING AREA		
ELAST COATG	ELASTOMETRIC COATING	PB	PLANTER BOX		
ELEC	ELECTRICAL	PBD	PARTICLE BOARD		
ELEV	ELEVATOR	PCF	PER SQ FOOT		
EMBED	EMBEDDED(ING)	PERF	PERFORATED		
EMER	EMERGENCY	PJ	POUR JOINT		
ENCL	ENCLOSURE	PL	PROPERTY LINE or PLATE		
ENCLS	ENCLOSURE	PLAS	PLASTER		
ENGR'D	ENGINEER	PLAM	PLASTIC LAMINATE		
EP	ELECTRICAL PANEL	PLMB	PLUMBING		
EQ	EQUAL SPACE	PLYWD	PLYWOOD		
EQPT	EQUIPMENT	PNL	PANEL		
EW	EYEWASH	PP	POWER POLE		
EXIST'G	EXISTING	PR	PAIR		
EXP	EXPOSED	PREFAB	PREFABRICATED		
EXT	EXTERIOR	PREFIN	PREFINISHED		
EXPO	EXPOSED	PROV'D	PROVIDED		
		PROJ	PROJECT		
FA	FIRE ALARM	PSF	POUNDS PER SQ FT		
FAB	FABRICATION	PT	POINT		
FASB	FLUID APPLIED AIR BARRIER	PTD	PAINTED		
FB	FROM BELOW	PTN	PARTITION		
FC	FINISHED CEILING	PVC	POLYVINYL CHLORIDE		
FD	FLOOR DRAIN				
FDC	FIRE DEPARTMENT CONNECTION	QT	QUARRY TILE		
FDN	FOUNDATION	QTY	QUANTITY		
FE	FIRE EXTINGUISHER				
FEC	FIRE EXTINGUISHER CABINET	R	RISER		
FF	FINISH FLOOR	RA	RETURN AIR		
FHC	FIRE HOSE CABINET	RAD	RADIUS		
FIN	FINISH	RFG	ROOF ACCESS HATCH		
FIX	FIXTURE	RCP	REFLECTED CEILING PLAN		
FL	FLOW LINE	RD	ROOF DRAIN		
PLMBG	PLUMBING	REC	RECESSED		
FLDG	FLOORING	RECIRC	RECIRCULATING		
FLR or FLRG	FLOOR(ING)	RECEP	RECEPTACLE		
FLUOR	FLUORESCENT	RECS	RECOMMENDATIONS		
FO	FACE OF	REF	REFERENCE or REFRIGERATOR		
FOC	FACE OF CONCRETE	REG	REGISTER or REGULATION or REGULAR		
FOF	FACE OF FINISH	REINF	REINFORCEMENT		
FOM	FACE OF MASONRY	REMOV	REMOVE		
FOS	FACE OF STRUCTURAL	REPDN	REDENTAL		
FOW	FACE OF WALL	REQ'D	REQUIRED		
FP	FIREPLACE	REV	REVISED or REVISION		
FPRF	FIRE PROOF	RF	ROOF		
FR	FIRE RATED(NG)	RFG	ROOFING		
FRMG	FRAME(D)	RH	RIGHT HAND		
FRT	FIRE RETARDANT TREATED	RJ	ROOF JOIST		
FS	FLOOR SINK	RND	ROUND		
FT	FOOT/FEET	RM	ROOM		
FTNG	FOOTING	RO	ROUGH OPENING		
FUR	FURRING	ROD	ROOF OVERFLOW DRAIN		
FURN	FURNITURE	ROW	RIGHT OF WAY		
GA	GAUGE	RP	ROOF PLAN		
GALV	GALVANIZED	RR	ROOF RAFTERS		
GB	GRAB BAR	RSHO	RESHOOD		
GC	GENERAL CONTRACTOR	S	SOUTH		
GD	GARBAGE DISPOSAL	SA	SUPPLY AIR		
GEN	GENERAL	SAM	SELF ADHERED MEMBRANE		
GFRG	GLASS FIBER REINFORCED GYPSUM	SAF	SELF ADHERED FLASHING		
GFRP	GLASS FIBER REINFORCED PLASTER	SASM	SELF ADHERED SHEET MEMBRANE		
GL	GLASS	SC	SOLID CORE		
GLZ	GLAZING	SCHED	SCHEDULE		
GLB	GLUE LAMINATED BEAM	SCUP	SCUPPER		
GN	GRADE(ING)	SECT	SECTION		
GR	GUARDRAIL	SEP	SEPARATE, SEPARATION		
GRND	GROUND	SF	SQUARE FEET		
GYPS	GRATING	SF	SUB FLOOR		
GT	GRAVEL STOP	SGL	SINGLE		
GSM	GALVANIZED SHEET METAL	SHT	SHEET		
GYP	GYPSUM	SHRG	SHORING		
GYP BD	GYPSUM BOARD	SIM	SIMILAR (NOT IDENTICAL)		
GWB	GYPSUM WALL BOARD	SCI	SEE CIVIL DRAWINGS		
		SDNG	SIDING		
		SED	SEE ELECTRICAL DRAWINGS		
		SEW	SEWER		
		SHWR	SHOWER		



ABBREVIATIONS AND GRAPHIC SYMBOLS | 1/8" = 1'-0" | 1

R&A

4765 Sandwick Boulevard, Suite 100
Cedar City, UT 84720
tel: 435.770.0040
www.rnaeng.com

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE

GRAPHIC SYMBOLS AND ABBREVIATIONS

No	Description	Date
	ISSUED FOR FOUNDATION PERMIT	2017-0-27

JOB NO 236

DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO A00.02

6/26/2017 11:19:56 AM

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GROSS BUILDING AREAS SCHEDULE	
LEVEL	AREA
LEVEL 1.1	11,534 SF
LEVEL 2	10,232 SF
LEVEL 3.1	9,507 SF
LEVEL 4	8,864 SF
ROOF LEVEL	4,064 SF
	44,200 SF

APPLICABLE CODES

AS PER UTAH OFFICIAL, SUBJECT TO THE OTHER PROVISIONS OF THIS PART, THE FOLLOWING CONSTRUCTION CODES ARE INCORPORATED BY REFERENCE, AND TOGETHER WITH THE AMENDMENTS SPECIFIED IN CHAPTER 3, PART 3, STATEWIDE AMENDMENTS TO INTERNATIONAL PLUMBING CODE, AND CHAPTER 4, LOCAL AMENDMENTS INCORPORATED AS PART OF STATE CONSTRUCTION CODE, ARE THE CONSTRUCTION STANDARDS TO BE APPLIED TO BUILDING CONSTRUCTION, ALTERATION, REMODELING, AND REPAIR, AND IN THE REGULATION OF BUILDING CONSTRUCTION, ALTERATION, REMODELING, AND REPAIR IN THE STATE:

(A) 2015 INTERNATIONAL BUILDING CODE, INCLUDING APPENDIX J

(B) 2015 INTERNATIONAL RESIDENTIAL CODE

(C) 2015 INTERNATIONAL PLUMBING CODE

(D) 2015 INTERNATIONAL MECHANICAL CODE

(E) 2015 INTERNATIONAL FUEL GAS CODE

(F) 2014 NATIONAL ELECTRICAL CODE ISSUED BY THE NATIONAL FIRE PROTECTION ASSOCIATION

(G) 2015 INTERNATIONAL ENERGY CONSERVATION CODE

(H) 2015 INTERNATIONAL EXISTING BUILDING CODE

(I) SUBJECT TO SUBSECTION 15A-2-104(2) HUD CODE

(J) SUBJECT TO SUBSECTION 15A-2-104(1), APPENDIX E OF 2015 INTERNATIONAL RESIDENTIAL CODE

(K) 2009 ICC/ANSI A117.1 STANDARD FOR ACCESSIBILITY

PROJECT SUMMARY

PROJECT SUMMARY

5 STORY ABOVE GRADE MULTI-HOUSING, RETAIL AND RESTAURANT PROJECT.

ADDRESS: 5752 N. COPPER CREST, EDEN, UTAH 84310

LAND USE ZONING:

DEFERRED SUBMITTALS

THE FOLLOWING ITEMS ARE DESIGN-BUILD AND ARE NOT A PART OF THIS PERMIT. THEY WILL BE SUBMITTED FOR PLAN CHECK AS REQUIRED DURING CONSTRUCTION BY THE CONTRACTOR. THESE DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THESE SEPARATE ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE DEPARTMENT OF BUILDING AND SAFETY

1. WET STANDPIPE
2. FIRE SPRINKLERS
3. FIRE ALARM AND LIFE SAFETY
4. ELEVATORS
5. PRE-FABRICATED STAIRS WHERE OCCUR
6. GLAZING AND SKYLIGHTS
7. SHORING
8. WINDOW CLEANING SYSTEMS AND TIE BACKS
9. COMPACTION GROUTING

PLUMBING FIXTURES CALCS

A-2 OCCUPANCY ON LEVEL 1, 2 & 3			
TOTAL OCCUPANT	170		
	MEN	WOMEN	
	85	85	
	REQ'D	REQ'D	
WATER CLOSET	2	3	
URINALS	1		
LAVATORIES	1	1	
DRINKING FOUNTAINS			1

A-2 OCCUPANCY ON ROOF LEVEL			
TOTAL OCCUPANT	89		
	MEN	WOMEN	
	45	45	
	REQ'D	REQ'D	
WATER CLOSET	1	2	
URINALS	1		
LAVATORIES	1	1	
DRINKING FOUNTAINS			1

PROVIDED AS REQUIRED

BUILDING CODE INFORMATION

OCCUPANCIES:

MIXED USE:

RESI TIMESHARE UNITS	GROUP R-2
WHISKEY BAR, RESI LOUNGE, RESTAURANT, ROOF LEVEL EVENT SPACE	GROUP A-2
MEP	S-1
STORAGE	GROUP S-2
RETAIL	GROUP M
DISTILLERY	INCIDENTAL USE TO A-2 9.45 % OF BUILDING AREA OF STORY IN WHICH IT IS LOCATED ALLOWED AS PER IBC 509.2

TOTAL GROSS BUILDING AREA 44,351 SF

BUILDING IS COMPOSED OF 3 STORY TYPE V-B OVER 2 STORY TYPE I-A BUILT USING SPECIAL PROVISION IBC 510.2

FROM LEVEL 1 TO LEVEL UP TO 3 AND 3.1 FLOOR SLABS:

CONSTRUCTION TYPE I-A
POURED IN PLACE CONCRETE SLAB AND PRIMARY STRUCTURE 1 STORY HEIGHT

BUILDINGS SEPARATED WITH HORIZONTAL ASSEMBLY HAVING FIRE-RESISTANCE RATING OF NOT LESS THAN 3 HOURS

FROM LEVEL ABOVE LEVEL 3 SLAB TO TOP OF ROOF:

TYPE V-B - FULLY SPRINKLERED (NFPA13) (CONCEALED HEADS)
R-2 TIMESHARE CONDOMINIUMS

TABLE 503 - ALLOWABLE BUILDING HEIGHT AND AREAS:

OCCUPANCY R-2 TYPE V-B
HEIGHT

MAX HEIGHT = 40'
MAX STORIES ABOVE GRADE PLANE (AS PER 510.2 THIS IS ABOVE "LEVEL 3" SLAB) = 2
AUTOMATIC SPRINKLER SYSTEM INCREASE FOR MAX HEIGHT AND NUMBER OF STORIES AS PER 504.2

HEIGHT +20' = 60' TOTAL
NO. OF STORIES +1 = 3 STORIES TOTAL

PROPOSED HEIGHT = 56'-4"
PROPOSED NO. OF STORIES = 3

MAX ALLOWABLE AREA:

Aa = [21,000 + (7,000 x 0)] x 3 = 63,000 SF

PROPOSED MAX. AREA PER FLOOR = 11,664 SF

TABLE 601
FIRE RESISTANCE RATING REQUIREMENTS PER TYPE

	TYPE I-A	TYPE V-B	
STRUCTURE:	3 HR	0	
BEARING WALLS	2 HR	0	
NON BEARING WALLS AND PARTITION INTERIOR	SEE TABLE 602	1 HR BETWEEN DWELL. UNITS	
FLOOR CONSTRUCTION AND SECONDARY MEMBERS:	2 HR	1 HR BETWEEN DWELL. UNITS	
ROOF CONSTRUCTION AND SECONDARY MEMBERS:	1 HR	0	

BUILDING FULLY SPRINKLERED, AUTOMATIC SYSTEM THROUGHOUT PER 903.3.1
PROVIDE FIRE ALARM SYSTEM PER SECTION 907.
PROVIDE APPROVED CLASS 1 STANDPIPE SYSTEM AS SET FORTH IN BUILDING CODE AND FIRE CODE 905.

SHAFT RATINGS
PER 713.4, 2-HR FIRE RESISTANCE RATING WHERE CONNECTING FOUR STORIES OR MORE

GRADE PLANE CALCULATION:

8,513.84' + 8,621.52' + 8,622.81' + 8,633.75' + 34,499.92' / 4 = 8,624.98' ASL

R&A
4700 Spaulding Boulevard, Suite 120
Culver City, CA 90230
tel: 310.735.0044
www.r-a-a.com

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
AREA CALCS & CODE ANALYSIS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO.
236

DATE
06/27/17

SCALE

SHEET NO.
A01.01

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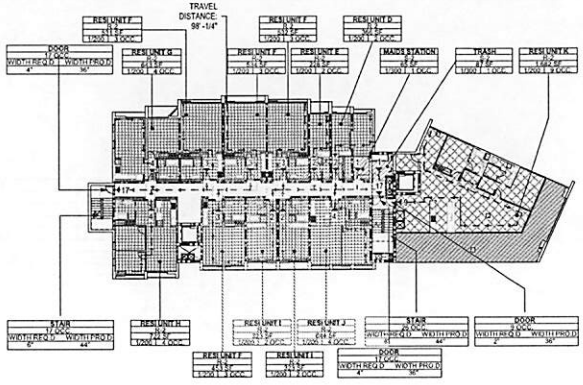
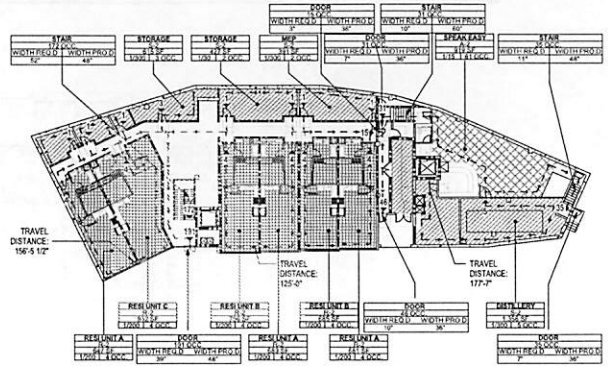
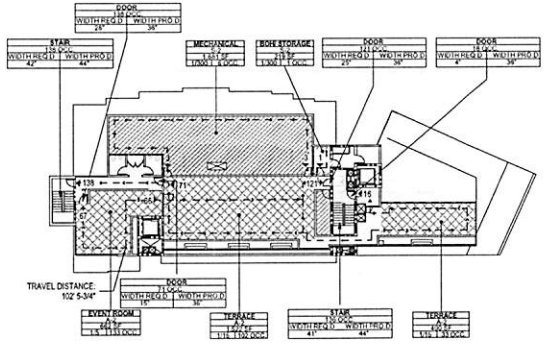


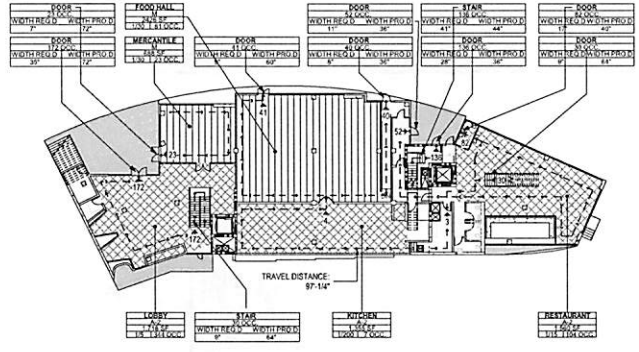
LEVEL 4 OCCUPANCY | 1" = 20'-0" | 4



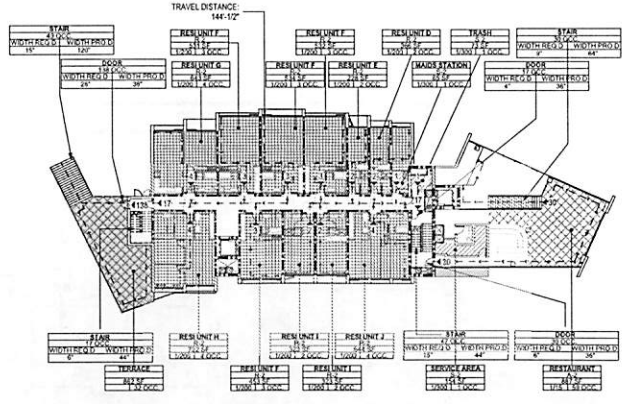
LEVEL 1.1 OCCUPANCY | 1" = 20'-0" | 1



ROOF LEVEL OCCUPANCY | 1" = 20'-0" | 5



LEVEL 2 OCCUPANCY | 1" = 20'-0" | 2



LEVEL 3.1 OCCUPANCY | 1" = 20'-0" | 3

NOTE:

EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE, PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT (BUILDING CODE 1004.3; FIRE CODE 1004.3)

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Architecture and Design

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STATE OF UTAH
CHRISTIAN ROBERT
REGISTERED ARCHITECT

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CODE ANALYSIS PLANS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	27/17/6/ 27

PROJECT NO.
236

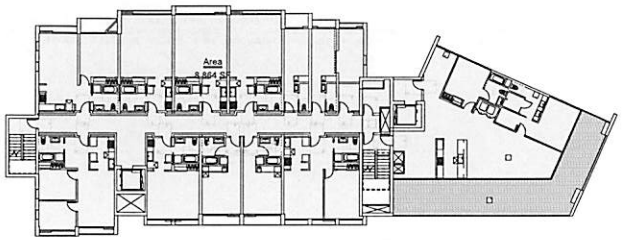
DATE
06/27/17

SCALE
1" = 20'-0"

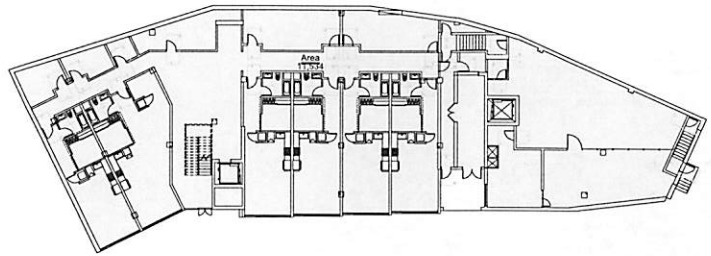
SHEET NO.
A01.02

Building Area Legend

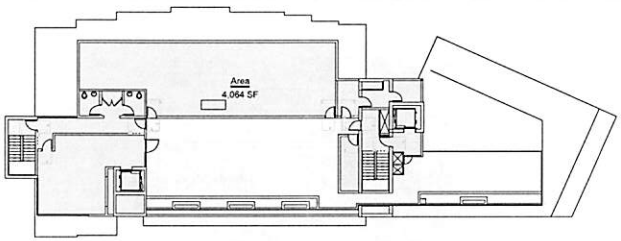
☐ Gross Building Area



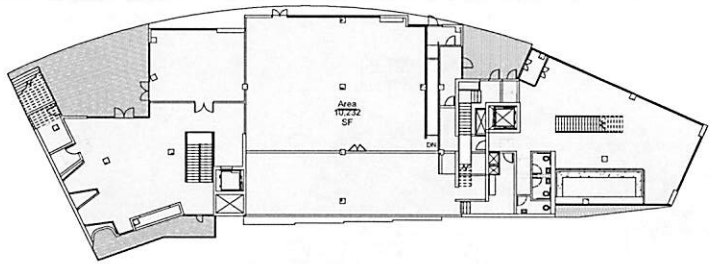
LEVEL 4 GROSS AREA PLAN | 1/16" = 1'-0" | 4



LEVEL 1 GROSS AREA PLAN | 1/16" = 1'-0" | 1

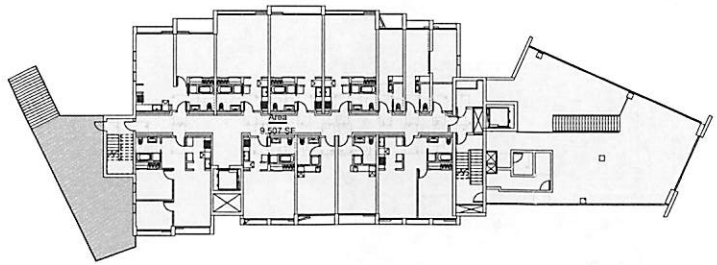


ROOF LEVEL GROSS AREA PLAN | 1/16" = 1'-0" | 5



LEVEL 2 GROSS AREA PLAN | 1/16" = 1'-0" | 2

GROSS BUILDING AREAS SCHEDULE	
LEVEL	AREA
LEVEL 1.1	11,534 SF
LEVEL 2	10,232 SF
LEVEL 3.1	9,507 SF
LEVEL 4	8,864 SF
ROOF LEVEL	4,064 SF
	44,200 SF



LEVEL 3 GROSS AREA PLAN | 1/16" = 1'-0" | 3

R&A
Architecture and Design
4700 Spaulding Boulevard, Suite 100
Boise City, CA 95018
tel 208.730.6898
www.r-a-a.com

STAMP

STATE OF UTAH
CHRISTIAN ROBERT
LICENSED ARCHITECT

NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE

GROSS AREA PLANS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO
236

DATE
06/27/17

SCALE
1/16" = 1'-0"

SHEET NO.
A01.03

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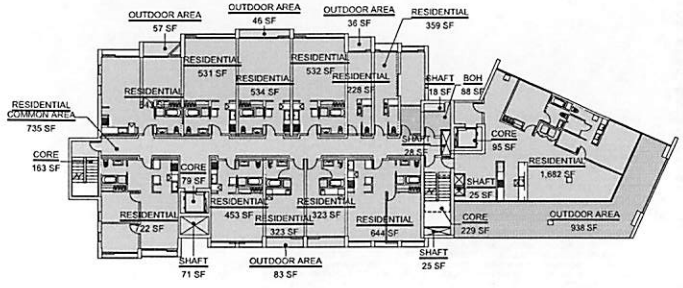
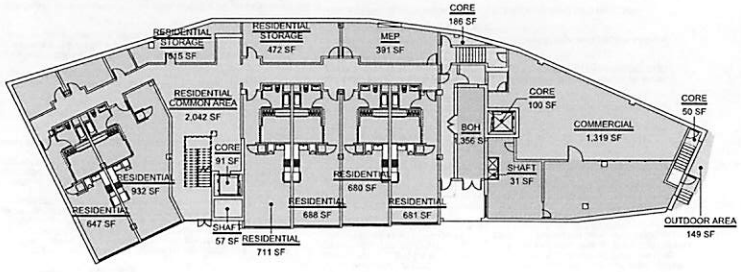


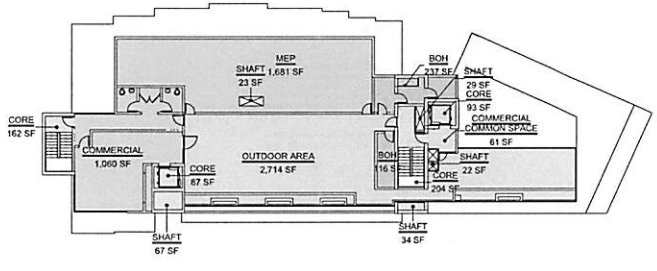
LEVEL 4 AREA PLAN | 1/16" = 1'-0" | 4



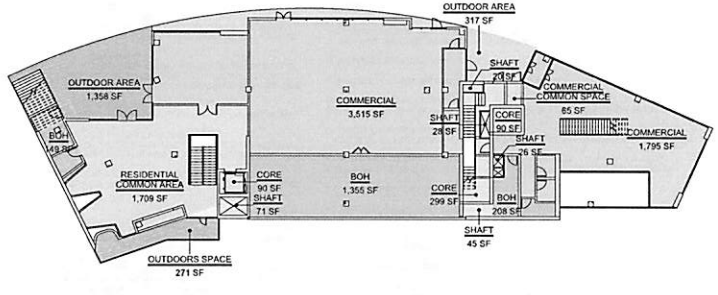
LEVEL 1 AREA PLAN | 1/16" = 1'-0" | 1

Rentable Area Legend

- BOH
- COMMERCIAL
- CORE
- MEP
- OUTDOOR AREA
- RESIDENTIAL
- RESIDENTIAL COMMON AREA
- RESIDENTIAL STORAGE
- SHAFT



ROOF LEVEL AREA PLAN | 1/16" = 1'-0" | 5



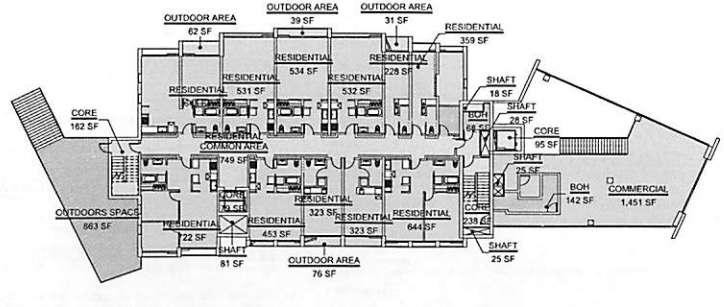
LEVEL 2 AREA PLAN | 1/16" = 1'-0" | 2

AREA RENTABLE_COMMERCIAL	
LEVEL	AREA
LEVEL 1.1	1,319 SF
LEVEL 2.3	5,375 SF
LEVEL 3.1	1,451 SF
ROOF LEVEL	1,121 SF
	9,267 SF

RESIDENTIAL UNITS TOTAL AREAS	
Level	AREA
LEVEL 1.1	4,340 SF
LEVEL 3.1	5,291 SF
LEVEL 4	6,973 SF
Grand total	16,604 SF

RESIDENTIAL STORAGE TOTAL AREA	
Level	AREA
LEVEL 1.1	1,087 SF
Total	1,087 SF

AREA RENTABLE_RESIDENTIAL	
LEVEL	AREA
LEVEL 1.1	932 SF
LEVEL 1.1	688 SF
LEVEL 1.1	647 SF
LEVEL 1.1	711 SF
LEVEL 1.1	681 SF
LEVEL 1.1	680 SF
LEVEL 3.1	534 SF
LEVEL 3.1	722 SF
LEVEL 3.1	323 SF
LEVEL 3.1	643 SF
LEVEL 3.1	531 SF
LEVEL 3.1	532 SF
LEVEL 3.1	228 SF
LEVEL 3.1	359 SF
LEVEL 3.1	323 SF
LEVEL 3.1	453 SF
LEVEL 3.1	644 SF
LEVEL 4	1,682 SF
LEVEL 4	534 SF
LEVEL 4	722 SF
LEVEL 4	323 SF
LEVEL 4	643 SF
LEVEL 4	531 SF
LEVEL 4	532 SF
LEVEL 4	228 SF
LEVEL 4	359 SF
LEVEL 4	323 SF
LEVEL 4	453 SF
LEVEL 4	644 SF
	16,604 SF



LEVEL 3 AREA PLAN | 1/16" = 1'-0" | 3

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R&A Architecture and Design
4290 Sequoia Pavement, Suite 100
Drive City, CA 95618
tel 316 736 5696
www.r-a-a.com

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STATE OF UTAH
CHRISTIAN ROBERT
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AREA PLANS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

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JOB NO. 236

DATE 06/27/17

SCALE 1/16" = 1'-0"

SHEET NO. A01.04

GENERAL NOTES

1. ALL GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE UTAH BUILDING CODE AND THE APPROVED GEOTECHNICAL REPORT. ALL EXCAVATED MATERIAL RESULTING FROM GRADING SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

2. ALL CONSTRUCTION AND DETAILS SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE UTAH BUILDING CODE AND IBC AND ALL OTHER APPLICABLE CODES AND AMENDMENTS

3. IF ANY CONFLICT IN INFORMATION IS DISCOVERED WITH REFERENCES TO STANDARDS OF PERFORMANCE OR CONSTRUCTION OR WORKMANSHIP, THE MORE ONEROUS PROVISION SHALL BE DEEMED TO APPLY UNLESS OTHERWISE AGREED TO BY THE ARCHITECT

4. THE CONTRACTOR (AND HIS SUB-CONTRACTORS) SHALL STUDY AND COMPARE THE CONTRACT DOCUMENTS AND SHALL AT ONCE REPORT TO THE ARCHITECT IN WRITING, ALL INCONSISTENCIES, ERRORS OR OMISSIONS DISCOVERED AND VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING THE WORK. IF THE CONTRACTOR PROCEEDS WITH ANY OF THE WORK SO AFFECTED WITHOUT WRITTEN INSTRUCTIONS OF THE ARCHITECT, THE CONTRACTOR SHALL MAKE GOOD AT HIS OWN COST ANY RESULTING ERROR, DAMAGE, OR DEFECTS OR TIME DELAYS SO CAUSED. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK WITHOUT CONTRACT DOCUMENTS OR, WHERE REQUIRED, APPROVED SHOP DRAWINGS, PRODUCT DATA OR SAMPLES BEING AVAILABLE ON SITE FOR WORKERS TO REFER TO, FOR SUCH PORTION OF THE WORK

5. THE CONTRACTOR SHALL PROVIDE OPERATING AND MAINTENANCE BROCHURES AS REQUIRED THE GUARANTEE SHALL COMMENCE WHEN THE WORK IS DEEMED SUBSTANTIALLY COMPLETE BY THE ARCHITECT.

6. CONTRACTOR SHALL PROVIDE ONE MARKED UP SET OF DRAWINGS INDICATING ALL DIFFERENCES, CHANGES, ETC., AND ACTUAL LOCATIONS OF CONCEALED WORK, BEFORE ARCHITECT'S FINAL INSPECTION.

7. WHERE SPECIFIED ITEMS ARE MENTIONED, THE CONTRACTOR MAY SUBMIT ALTERNATE MATERIALS FOR APPROVAL BY THE OWNER AND THE ARCHITECT. SUBMISSION PACKAGE SHALL CONTAIN BROCHURE, CUT SHEETS, SPECIFICATIONS, COSTS, AVAILABILITY, REFERENCES, ETC. CONTRACTOR SHALL REIMBURSE ARCHITECT FOR TIME SPENT EVALUATING ALTERNATIVES OR SUBSTITUTIONS THAT ARE SUBMITTED AFTER PROJECT CONSTRUCTION HAS COMMENCED.

8. DO NOT SCALE DRAWINGS

9. CONTRACTOR SHALL CONSULT WITH REPRESENTATIVES OF APPLICABLE UTILITIES, INCLUDING BUT NOT LIMITED TO GAS, WATER, POWER, SEWER, TELEPHONE, AND CABLE TELEVISION AND DETERMINE EXACT LOCATIONS AND AVAILABILITY OF UTILITIES AND DETERMINE CONDITION OF EXISTING SERVICE PRIOR TO COMMENCING CONNECTING UTILITIES. CONTRACTOR SHALL LOCATE UTILITIES BY POTHOLING PRIOR TO BEGINNING CONSTRUCTION.

10. CONTRACTOR TO STAKE OUT ALL WORKS AS SHOWN ON PLANS, CONFIRM EXISTING CONDITIONS AND PROPERTY LINE LOCATIONS, AND VERIFY COMPLIANCE WITH SETBACKS AND CLEARANCES REQUIRED BY CODE.

11. IMPROVEMENTS ON THE SITE, WORK IN PROGRESS, STORED MATERIALS, AND PUBLIC AND PRIVATE IMPROVEMENTS ON PROPERTY ADJACENT TO THE SITE SHALL BE PROTECTED BY THE CONTRACTOR FROM DAMAGE ARISING FROM THE WORK. ALL DAMAGE SO OCCURRING SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO OWNER.

12. STRUCTURAL OBSERVATION BY THE STRUCTURAL ENGINEER ARE REQUIRED BY CITY OF WEST HOLLYWOOD. A WRITTEN STATEMENT SHALL BE GIVEN TO THE BUILDING OFFICIAL, STATING THAT SITE VISITS HAVE BEEN MADE AND WHETHER OR NOT ANY OBSERVED DEFICIENCIES HAVE BEEN CORRECTED TO CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS.

13. INSPECTION OF NAILING REQUIRED FOR DRYWALL AND ALL LATH WHEN IN PLACE. CORNER BEADS ARE TO BE NAILED. FASTENERS USED FOR THE ATTACHMENT OF GYPSUM BOARD TO A HORIZONTAL TIMBER DIAPHRAGM SHALL BE AS DEFINED IN TABLE 2508.5. FASTENERS SHALL NOT BE MORE THAN 7" O.C. AT ALL SUPPORTS, INCLUDING PERIMETER BLOCKING, AND NOT MORE THAN 3/8 INCH FROM EDGES AND ENDS OF THE GYPSUM. BOARD [CBC 2508.5.4]

14. CEMENT, FIBER-CEMENT OR GLASS MAT GYPSUM BACKERS IN COMPLIANCE WITH ASTM C 1178, C 1288 OR C 1325 AND INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS SHALL BE USED AS A BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL AND CEILING PANELS IN SHOWER AREAS. [CBC 2509.2].

CONSTRUCTION

1. ALL WOOD CONSTRUCTION SHALL BE 8" MINIMUM ABOVE ADJACENT FINISH GRADE UNLESS LUMBER IS TREATED FOR SUCH APPLICATIONS

2. CONTRACTOR SHALL ERECT AND MAINTAIN TEMPORARY BARRICADES AS NEEDED FOR PROTECTION AGAINST ACCIDENT, AND SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF HIS WORK AND THE OWNER'S PROPERTY FROM DAMAGE OR LOSS ARISING IN CONNECTION WITH CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN OWNER'S REQUIREMENTS FOR SUCH BARRICADES. BARRIER, SIGNS, AND COVERED WALKWAYS SHALL BE CONSTRUCTED TO PROTECT PEDESTRIANS PER CBC SECTION 3306 AND BUILDING INSPECTOR TO VERIFY THESE DURING CONSTRUCTION

3. CONTRACTOR SHALL CLEAN ALL GLASS, REMOVE STAINS, SPOTS, MARKS AND DIRT FROM ALL WORK. CLEAN ALL HARDWARE. REMOVE PAINT SPOTS AND SMEARS FROM ALL SURFACES. CLEAN ALL FIXTURES AND FLOORS AND ANY OTHER ITEMS CAUSED BY CONSTRUCTION ACTIVITIES.

4. ELECTRIC POWER, PHONES, AND TEMPORARY TOILET FACILITIES ARE TO BE PROVIDED BY THE CONTRACTOR AS NECESSARY AND AS REQUIRED BY CODE.

5. NO PART OF THE STRUCTURE SHALL BE OVERLOADED BEYOND ITS SAFE CARRYING CAPACITY BY THE PLACING OF MATERIALS, EQUIPMENT, TOOLS, MACHINERY OR ANY OTHER ITEM.

6. CONTRACTOR SHALL PROTECT FLOOR SURFACES FROM DAMAGE AND EQUIP MOBILE EQUIPMENT WITH PNEUMATIC TIRES

7. WHEN DEMOLITION IS REQUIRED ON SITE: 1) ALL DEBRIS SHALL BE WET AT THE TIME OF HANDLING TO PREVENT DUST; 2) NO STRUCTURAL MEMBER IN ANY STORY SHALL BE DEMOLISHED UNTIL THE STORY ABOVE IS COMPLETELY REMOVED. 3) FREE FALL DUMPING OVER EXTERIOR WALL WILL NOT BE ALLOWED FOR HEIGHT MORE THAN 25 FT.

8. ALL METAL FLASHING, GUTTER, AND DOWNSPOUT JOINTS SHALL BE LAPPED, JOINED, AND SEALED SO THAT THEY ARE WATER TIGHT AND PROVIDE FOR POSITIVE WATER FLOW.

9. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UNDERGROUND UTILITIES AND CONNECTION WITH THE RELEVANT UTILITY COMPANIES.

10. CONTRACTOR SHALL PREPARE, SUBMIT AND HAVE CITY OF LOS ANGELES APPROVE ALL NECESSARY CONSTRUCTION STAGING, SITE ACCESS AND ENVIRONMENTAL PROTECTION PLANS

11. THE CONSTRUCTION SHALL NOT RESTRICT A FIVE-FOOT CLEAR & UNOBSTRUCTED ACCESS TO ANY WATER OR POWER DISTRIBUTION FACILITIES (POWER POLES, PULL-BOXES, TRANSFORMERS, VAULTS, PUMPS, VALVES, METERS, APPURTENANCES, ETC.) OR TO THE LOCATION OF THE HOOKUP. THE CONSTRUCTION SHALL NOT BE WITHIN TEN FEET OF ANY POWER LINES - WHETHER OR NOT THE LINES ARE LOCATED ON THE PROPERTY. FAILURE TO COMPLY MAY CAUSE CONSTRUCTION DELAYS AND/OR ADDITIONAL EXPENSES.

12. THE PERIMETER WALLS BELOW GRADE ARE NOT TO BE BACKFILLED UNTIL THE FLOOR SLABS ARE POURED & CURED

13. THE CONSTRUCTION SHALL NOT RESTRICT A FIVE-FOOT CLEAR AND UNOBSTRUCTED ACCESS TO ANY WATER OR POWER DISTRIBUTION FACILITIES (POWER POLES, PULL-BOXES, TRANSFORMERS, VAULTS, PUMPS, VALVES, METERS, APPURTENANCES, ETC.) OR TO THE LOCATION OF THE HOOK-UP. THE CONSTRUCTION SHALL NOT BE WITHIN TEN FEET OF ANY POWER LINES - WHETHER OR NOT THE LINES ARE LOCATED ON THE PROPERTY. FAILURE TO COMPLY MAY CAUSE CONSTRUCTION DELAYS AND/OR ADDITIONAL EXPENSES.

14. THERE SHALL BE NO TRENCHES OR EXCAVATIONS 5 FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND

PLUMBING

1. ALL PLUMBING AND DRAIN LINES INDICATED ON THE PLANS IN CEILING & WALLS TO BE CAST IRON AND INSULATED AS REQUIRED BY ACOUSTIC REPORT.

2. ALL PLUMBING PENETRATIONS THROUGH WALLS WHICH REQUIRED PROTECTED OPENINGS (OCCUPANCY SEPARATION WALLS, AREA SEPARATION WALLS, CORRIDOR WALLS AND WALLS TO CLOSE TO A REAL OR IMAGINARY PROPERTY LINE) ARE REQUIRED TO BE GALVANIZED OR CAST IRON PIPING.

3. CONTRACTOR SHALL VERIFY THAT COPPER WATER SUPPLY LINES ARE SIZED TO PROVIDE ACCEPTABLE PRESSURE AND VOLUME. CONTRACTOR SHALL CONNECT WASTE LINES TO SEWER AND PROVIDE CLEANOUTS AND VENTILATION AS REQUIRED BY THE UNIFORM PLUMBING CODE

4. SEISMIC GAS SHUT OFF VALVES ARE TO BE INSTALLED ON EACH FUEL GAS LINE AT EACH METER.

5. ALL SHOWER COMPARTMENTS, REGARDLESS OF SHAPE, SHALL HAVE A MINIMUM FINISHED INTERIOR AREA OF NOT LESS THAN 1024 SQUARE INCHES AND SHALL BE CAPABLE OF ENCOMPASSING A 30 INCH DIAMETER CIRCLE. THE MINIMUM AREA AND DIMENSIONS SHALL BE MAINTAINED TO A POINT 70 INCHES ABOVE THE SHOWER DRAIN OUTLET. (P.C. 410.4)

6. PROVIDE ULTRA LOW FLUSH TOILET (1.6 GALLONS/FLUSH) AT ALL NEW BATHROOMS IN RESIDENTIAL OCCUPANCIES.

7. PROVIDE WATER CLOSET CLEAR SPACE NOT LESS THAN 30 INCHES IN WIDTH AND A 24 INCH CLEAR SPACE IN FRONT

ENERGY NOTES

1. THE CONTRACTOR SHALL PROVIDE THE OWNER A LIST OF THE HEATING, COOLING, WATER HEATING, LIGHTING AND CONSERVATION OF SOLAR DEVICES INSTALLED IN THE BUILDING AND INSTRUCTIONS ON HOW TO USE THEM EFFICIENTLY.

2. A MAINTENANCE LABEL SHALL BE AFFIXED TO ALL EQUIPMENT REQUIRING PREVENTATIVE MAINTENANCE, AND A COPY OF THE MAINTENANCE INSTRUCTIONS SHALL BE PROVIDED FOR THE OWNER'S USE.

3. ALL DOORS AND WINDOWS BETWEEN CONDITIONED AND UNCONDITIONED SPACE SHALL BE FULLY WEATHER-STRIPPED.

4. ALL OPENINGS IN THE BUILDING ENVELOPE SUCH AS FRAME, FRAMING AND PANEL JOINTS, ELECTRICAL AND PLUMBING LINE OPENINGS, AND MASONRY/WOOD FRAMING JOINTS SHALL BE CAULKED OR OTHERWISE SEALED TO LIMIT WATER AND AIR INFILTRATION

5. FAN OR OTHER EXHAUST SYSTEMS EXHAUSTING AIR FROM CONDITIONED SPACE TO THE OUTSIDE SHALL BE PROVIDED WITH BACKDRAFT DAMPERS TO PREVENT AIR LEAKAGE.

6. THERMOSTATICALLY CONTROLLED HEATING OR COOLING SYSTEMS SHALL HAVE AN AUTOMATIC THERMOSTAT WITH A CLOCK MECHANISM WHICH THE BUILDING OCCUPANT CAN MANUALLY PROGRAM TO AUTOMATICALLY SET BACK THE THERMOSTAT SET POINTS FOR AT LEAST TWO PERIODS WITHIN 24 HOURS.

7. WATER HEATER SIZE TO BE AS PER PLUMBING DRAWINGS. GAS-FIRED FUEL TYPE, AND TO BE STATE LISTED.

8. STORAGE TYPE WATER HEATERS SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING AN INSTALLED THERMAL RESISTANCE OF R-12 OR GREATER.

9. LAMPS USED IN LUMINARIES FOR GENERAL LIGHTING IN KITCHENS AND BATHROOMS SHALL HAVE AN EFFICACY OF NOT LESS THAN 25 LUMENS PER WATT (I.E. FLUORESCENT). LUMINARIES WHICH ARE THE ONLY LIGHTING IN A KITCHEN OR BATHROOM WILL BE CONSIDERED GENERAL LIGHTING. LIGHTING TO BE USED ONLY FOR SPECIFIC VISUAL TASKS OR DECORATIVE EFFECT ARE EXEMPT FROM THIS REQUIREMENT. SUCH EXEMPT LIGHTING INCLUDES LUMINARIES THAT ARE MEANT TO LIGHT ONLY A SPECIFIC TASK AREA SUCH AS A KITCHEN COUNTER OR SINK, A DINING TABLE, OR A BATHROOM MIRROR

10. A MECHANICAL VENTILATION SYSTEM IN LIEU OF OPERABLE WINDOWS IN THE BATHROOM, TOILET ROOM AND LAUNDRY, WHICH FURNISHES FIVE AIR CHANGES PER HOUR DIRECT TO THE OUTSIDE, IS REQUIRED

SOUND

1. ALL PENETRATIONS INTO SOUND RATED PARTITIONS OR FLOOR-CEILING ASSEMBLIES WILL BE SEALED WITH APPROVED PERMANENT ACOUSTIC RESILIENT SEALANT.

2. ALL RIGID CONDUIT, DUCTS, PLUMBING PIPES, APPLIANCE VENTS LOCATED IN SOUND ASSEMBLIES SHALL BE ISOLATED FROM THE BUILDING CONSTRUCTION BY MEANS OF RESILIENT SLEEVES. MOUNTS OR MINIMUM 1/4" THICK APPROVED RESILIENT MATERIAL.

3. AN APPROVED PERMANENT AND RESILIENT ACOUSTICAL SEALANT WILL BE PROVIDED ALONG THE JOINT BETWEEN THE FLOOR AND THE SEPARATION WALLS

4. MINERAL FIBER INSULATION WILL BE INSTALLED IN JOIST SPACES WHEREVER PLUMBING PIPING OR DUCT PENETRATES A FLOOR-CEILING ASSEMBLY OR WHERE SUCH LIMIT PASSES THROUGH THE PLANE OF THE FLOOR-CEILING ASSEMBLY FROM WITHIN A WALL. THE INSULATION SHALL BE INSTALLED TO A POINT 12" BEYOND THE PIPE OR DUCT

5. ELECTRICAL OUTLET BOXES IN OPPOSITE FACES OF SEPARATION WALLS WILL BE SEPARATED HORIZONTALLY BY 24" AND BACK AND SIDES OF BOXES WILL BE SEALED WITH 1/8" RESILIENT SEALANT AND BACKED BY A MINIMUM OF 2" THICK MATERIAL FIBER INSULATION. TV, TELEPHONE AND INTERCOM OUTLETS MUST BE INSTALLED IN BOXES ACCORDINGLY.

SECURITY NOTES

1. COORDINATE WITH SECURITY COMPANY FOR INSTALLATION OF ALARM SYSTEMS

2. DOOR STOPS OF IN-SWINGING DOORS SHALL BE OF ONE-PIECE CONSTRUCTION WITH THE JAMB OR BE PROVIDED WITH SOME DEVICE TO PREVENT THE DOOR FROM BEING OPENED SHOULD THE STOP BE REMOVED

3. STOPS ON OUT-SWINGING DOORS TO BE ONE-PIECE CONSTRUCTION OR FASTENED WITH 3/4" SCREWS 6" O.C.

4. ALL PIN-TYPE HINGES ACCESSIBLE FROM THE OUTSIDE WHEN THE DOOR IS CLOSED SHALL HAVE NON-REMOVABLE HINGE PINS OR A MECHANICAL INTERLOCK TO PRECLUDE REMOVAL OF THE DOOR FROM THE EXTERIOR BY REMOVING THE HINGE PINS. IN ADDITION, THEY SHALL HAVE 1/4" MIN. STEEL JAMB STUD WITH 1/4" MIN. PROJECTION

5. THE STRIKE PLATE FOR LATCHES AND THE HOLDING DEVICE FOR PROJECTING DEADBOLTS SHALL BE SECURED TO THE JAMB AND WALL FRAMING WITH 3" LONG SCREWS. (A) THE STRIKE PLATE FOR DEAD BOLTS ON ALL WOOD FRAMED DOORS SHALL BE CONSTRUCTED OF MINIMUM SIXTEEN U.S. GAUGE STEEL, BRONZE, OR BRASS AND SECURED TO THE JAMB BY A MINIMUM OF TWO SCREWS, WHICH MUST PENETRATE AT LEAST TWO INCHES INTO SOLID BACKING BEYOND THE SURFACE TO WHICH THE STRIKE IS ATTACHED

6. ALL EXTERIOR DOORS SHALL BE FLUSH-TYPE HOLLOW METAL OR WOOD DOORS 1-3/4" THICK WITH SOLID CORE CONSTRUCTION, OR FULLY TEMPERED GLASS 9' CLASS, AND SHALL BE INSTALLED WITH DEAD LOCKING LATCHES. DEADBOLTS SHALL HAVE A MINIMUM 1" THROW AND A MINIMUM 5/8" EMBEDMENT (STRAIGHT TYPE) AND SHALL CONTAIN HARDENED INSERTS. LOCKS SHALL BE FLUSH, KEY-OPERATED CYLINDERS ON THE EXTERIOR AND SHALL BE OPERABLE WITHOUT KEY, SPECIAL KNOWLEDGE, OR SPECIAL EFFORT ON THE INTERIOR.

7. DOOR JAMBS SHALL BE INSTALLED WITH SOLID BACKING IN SUCH A MANNER THAT ANY OPEN SPACE BETWEEN TRIMMERS AND WOOD DOOR JAMBS SHALL BE SOLID SHIMMED BY A SINGLE PIECE EXTENDING NOT LESS THAN TWELVE INCHES ABOVE AND BELOW THE STRIKE PLATE

8. TRIMMERS SHALL BE FULL DOOR LENGTH WITH SOLID BACKING AGAINST SOLE AND HEADER PLATES

9. HORIZONTAL BLOCKING SHALL BE PLACED BETWEEN STUDS AT LOCK STRIKE HEIGHT FOR 3 STUD SPACES

10. DOUBLE DOORS (INACTIVE LEAFS) SHALL BE SECURED WITH BOTH HEAD AND BASE FLUSH BOLTS WITH A MINIMUM 5/8" EMBEDMENT.

11. NOT LESS THAN THREE FOUR AND ONE-HALF INCH STEEL BUTT HINGES SHALL BE SYMMETRICALLY FASTENED TO BOTH THE DOOR AND FRAME WITH NOT LESS THAN FOUR NO. 9 BY THREE-FOURTHS-INCH WOOD SCREWS OR TO METAL WITH NOT LESS THAN FOUR NO. 9 MACHINE SCREWS

12. KEYING REQUIREMENTS: UPON OCCUPANCY BY THE OWNER OR PROPRIETOR, EACH SINGLE UNIT IN A TRACT OR COMMERCIAL DEVELOPMENT, CONSTRUCTED UNDER THE SAME GENERAL PLAN, SHALL HAVE LOCKS USING COMBINATIONS WHICH ARE INTERCHANGE FREE FROM LOCKS USED IN ALL OTHER SEPARATE DWELLINGS, PROPRIETORSHIPS OR SIMILAR DISTINCT OCCUPANCIES

GLAZING NOTES:

1. EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, THE MANUFACTURER OR INSTALLER AND THE SAFETY GLAZING STANDARD. THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSED OF SAFETY GLAZING.

A. SWING DOORS

B. FIXED AND SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANELS IN SLIDING AND BIFOLD CLOSET DOOR ASSEMBLIES.

C. STORM DOORS

D. UNFRAMED SWINGING DOORS

E. DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, AND SHOWERS

F. FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE

G. FIXED OR OPERABLE PANELS OTHER THAN DESCRIBED IN ITEMS E AND F, WHICH MEETS ALL OF THE FOLLOWING CONDITIONS:

i. EXPOSED AREA OF THE INDIVIDUAL PANE GREATER THEN 9 S F
ii. EXPOSED BOTTOM EDGE LESS THEN 18" ABOVE THE FLOOR
iii. EXPOSED TOP EDGE GREATER THEN 36" ABOVE THE FLOOR
iv. ONE OR MORE WALKING SURFACES WITHIN 36" HORIZONTALLY OF THE PLANE OF THE GLAZING

H. GUARDS AND RAILINGS REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE. INCLUDED ARE STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS

I. WALLS AND FENCES ENCLOSING INDOOR AND OUTDOOR SWIMMING POOLS AND SPAS WHERE ALL OF THE FOLLOWING CONDITIONS ARE PRESENT:

i. THE BOTTOM EDGE OF THE GLAZING IS LESS THEN 60" ABOVE A WALKING SURFACE ON THE POOL OR SPA SIDE OF THE GLAZING
ii. THE GLAZING IS WITHIN 60" OF A SWIMMING POOL OR SPA WATER'S EDGE.

J. ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36" HORIZONTALLY OF A WALKING SURFACE, WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THEN 60" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.

K. ADJACENT TO STAIRWAYS WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE PLANE IS LESS THEN 60" ABOVE THE NOSE OF THE TREAD

2. ALL GLASS DOORS AND WINDOWS SHALL BE CERTIFIED AND LABELED TO SHOW COMPLIANCE WITH AIR INFILTRATION STANDARDS

3. GLASS DOORS, ADJACENT PANELS, AND ALL GLAZED OPENINGS WITHIN 18" OF THE ADJACENT FLOOR SHALL BE OF GLASS APPROVED FOR IMPACT HAZARD. ALL GLAZING TO BE FULLY TEMPERED GLASS

MEANS OF EGRESS

1. THE MEANS OF EGRESS SHALL BE ILLUMINATED WITH AT LEAST 1 FOOT CANDLE AT THE FLOOR LEVEL, IN ADDITION TO ANY OTHER CODE REQUIREMENTS.

2. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED.

3. EXIT SIGNS ILLUMINATED BY AN EXTERNAL SOURCE SHALL HAVE AN INTENSITY OF NOT LESS THAN 5 FOOT CANDLES (54 LUX)

4. INTERNALLY ILLUMINATED SIGNS SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SECTION 2702.

5. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES

6. EXIT SIGNS SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM THAT WILL PROVIDE AN ILLUMINATION OF NOT LESS THAN 90 MIN. IN CASE OF PRIMARY POWER LOSS. (1011.2-1011.5.3)

7. EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. SEE 1008.1.9.3

8. DOOR HANDLES, LOCK AND OTHER OPERATING DEVICES SHALL BE INSTALLED AT A MIN. 34" AND A MAX 48" ABOVE FINISHED FLOOR

9. THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED.

10. ALL EGRESS DOOR OPERATION SHALL ALSO COMPLY WITH SECTION 1008.1.8-1008.1.8.8

11. THE MEANS OF EGRESS, INCLUDING THE EXIT DISCHARGE, SHALL BE ILLUMINATED AT ALL TIMES THE BUILDING SPACE SERVED BY THE MEANS OF EGRESS IS OCCUPIED. THE MEANS OF EGRESS ILLUMINATION LEVEL SHALL NOT BE LESS THAN 1 FOOT-CANDLE AT THE WALKING SURFACE. (1006.1)

12. THE POWER SUPPLY FOR MEANS OF EGRESS ILLUMINATION SHALL NORMALLY BE PROVIDED BY THE PREMISES ELECTRICAL SUPPLY. IN THE EVENT OF POWER SUPPLY FAILURE, AN EMERGENCY ELECTRICAL SYSTEM SHALL AUTOMATICALLY ILLUMINATE THE FOLLOWING AREAS
A. AISLES AND UNENCLOSED EGRESS STAIRWAYS IN ROOMS AND SPACES THAT REQUIRE TWO OR MORE MEANS OF EGRESS.
B. CORRIDORS, EXIT ENCLOSURES AND EXIT PASSAGEWAYS IN BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS
C. EXTERIOR EGRESS COMPONENTS AT OTHER THAN THE LEVEL OF EXIT DISCHARGE UNTIL EXIT DISCHARGE IS ACCOMPLISHED FOR BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS.
D. INTERIOR EXIT DISCHARGE ELEMENTS, AS PERMITTED IN SECTION 1024.1, IN BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS.
E. EXTERIOR LANDINGS, AS REQUIRED BY SECTION 1008.1.5, FOR EXIT DISCHARGE DOORWAYS IN BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS.

13. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR. THE INSTALLATION OF THE EMERGENCY POWER SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 2702. (1008.3)

14. EXIT SIGN(S) ARE REQUIRED WHEN 2 OR MORE EXITS ARE REQUIRED. SHOW LOCATION OF ALL EXIT SIGNS

EMERGENCY LIGHTING FACILITIES SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOT-CANDLE (11 LUX) AND A MINIMUM AT ANY POINT OF 0.1 FOOT-CANDLE (1 LUX) MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. ILLUMINATION LEVELS SHALL BE PERMITTED TO DECLINE TO 0.6 FOOT-CANDLE (6 LUX) AVERAGE AND A MINIMUM AT ANY POINT OF 0.006 FOOT-CANDLE (0.6 LUX) AT THE END OF THE EMERGENCY LIGHTING TIME DURATION, A MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED.

15. THE EXIT SIGN SHALL ALSO BE CONNECTED TO AN EMERGENCY ELECTRICAL SYSTEM PROVIDED FROM STORAGE BATTERIES UNIT EQUIPMENT OR AN ON-SITE GENERATOR SET, AND THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE ELECTRICAL CODE. SHOW TWO SOURCES OF POWER FOR MEANS OF EGRESS
16. EXIT SIGN ARE REQUIRED FOR FLOOR-LEVEL EXIT SIGNS AND EXIT PATH MARKINGS PER CBC 1011.7 AND 1011.8

FIRE PROTECTION/FIRE ALARM

1. PROVIDE FIRE SPRINKLERS THROUGHOUT. THE SPRINKLER SYSTEM SHALL BE APPROVED BY PLUMBING DIVISION PRIOR TO INSTALLATION.

2. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A:10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDINGS ON EACH FLOOR. ALSO DURING CONSTRUCTION.

3. PROVIDE PORTABLE FIRE EXTINGUISHER WITH A RATING NOT LESS THAN 10BC FOR KITCHEN, ELECTRICAL ROOM, MECHANICAL ROOM OR PARKING GARAGE.

4. PROVIDE FIRE EXTINGUISHER AS REQUIRED BY FIRE DEPARTMENT FIELD INSPECTOR

5. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON ADDRESS SIDE OF BUILDING SHOW LOCATION ON PLANS.

6. THIS BUILDING AND GARAGE MUST BE EQUIPPED WITH AN AUTOMATIC FIRE EXTINGUISHING SYSTEM, COMPLYING WITH NFPA-13. THE SPRINKLER SYSTEM SHALL BE APPROVED BY THE PLUMBING DIVISION PRIOR TO INSTALLATION

7. PROVIDE AN APPROVED FIRE ALARM SYSTEM

8. PROVIDE SINGLE STATION SMOKE DETECTOR WITHIN SLEEPING AREAS AND AREAS GIVING ACCESS TO SLEEPING AREAS, AND ON TOP CENTER OF STAIRS LEADING THERETO. SMOKE DETECTORS SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS OF THE DWELLING UNIT IN WHICH THEY ARE LOCATED. (C.C.R. TITLE 24, PART 6)

FIRE-RESISTANCE RATED CONSTRUCTION

1. PENETRATION IN A FIRE-RATED WALL SHALL BE PROTECTED BY AN APPROVED FIRE STOP MATERIAL IN ACCORDANCE WITH SECTION 712.3.1
A) STEEL, COPPER, OR FERROUS PIPES OR CONDUITS MAY PENETRATE CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH DIAMETER AND THE AREA OF THE OPENING THROUGH THE WALL DOES NOT EXCEED 144 SQUARE INCHES.
B) MEMBRANE PENETRATIONS OF MAXIMUM 2-HR FIRE-RESISTANCE RATED WALL AND PARTITIONS BY STEEL ELECTRICAL OUTLET BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENING DO NOT EXCEED 100 SQUARE FEET OF WALL AREA. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES
C) WHERE WALLS ARE PENETRATED BY OTHER MATERIALS OR WHERE LARGER OPENINGS ARE REQUIRED THAN PERMITTED IN (5) ABOVE, THEY MUST BE QUALIFIED BY TESTS CONDUCTED IN ACCORDANCE WITH SECTION 712.3.1.1

2. SMOKE AND FIRE DAMPERS MUST BE INSTALLED IN THE FOLLOWING LOCATIONS PER SECTIONS 716.3.1
A) DUCT PENETRATIONS OF FIRE BARRIERS, EXCEPT EXIT ENCLOSURES AND EXIT PASSAGEWAYS WHERE THEY ARE NOT ALLOWED TO PENETRATE (716.5.2)
B) DUCTS PENETRATING SHAFTS (716.5.3)
C) DUCTS PENETRATING FIRE PARTITIONS AND FIRE-RATED CORRIDOR WALLS. SEE EXCEPTION FOR STEEL DUCTS WITH NOT OPENINGS INTO CORRIDOR. (716.5.4)

INTERIOR ENVIRONMENT/ INTERIOR FINISHES

1. EVERY SPACE INTENDED FOR HUMAN OCCUPANCY SHALL BE PROVIDED WITH NATURAL LIGHT BY MEANS OF EXTERIOR GLAZED OPENINGS IN ACCORDANCE WITH SECTION 1205.2 OR SHALL BE PROVIDED WITH ARTIFICIAL LIGHT THAT IS ADEQUATE TO PROVIDE AN AVERAGE ILLUMINATION OF 10 FOOT-CANDLES OVER THE AREA OF THE ROOM AT A HEIGHT OF 30 INCHES ABOVE FLOOR LEVEL (1205.1 AND 1205.3)

2. INTERIOR FINISH MATERIALS APPLIED TO WALL AND CEILINGS SHALL BE TESTED AS SPECIFIED IN SECTION 802. IN ADDITION, APPLICATIONS ARE TO BE IN ACCORDANCE WITH SECTION 803. 804, AND TABLE 803.5.

3. ANY DECORATIONS SHALL BE NONCOMBUSTIBLE OR FLAME-RETARDANT TREATED IN AN APPROVED MANNER (CURTAINS, DRAPES, SHADES, HANGINGS, ETC.)

4. THE FLAME SPREAD RATING OF PANELING MATERIALS ON THE WALLS OF THE CORRIDOR, LOBBY & EXIT ENCLOSURE MUST BE IDENTIFIED ON THE PLANS.

5. ADD NOTE ON PLAN: WALL, FLOOR AND CEILING FINISHES SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CBC 803.9

SPECIAL HAZARDS

1. ROOF CONSTRUCTION SUCH AS TELEVISION ANTENNA, GUY WIRES, AND RAZOR RIBBON SHALL NOT

MEMBRANE TERMINATION

MT1- Provide concrete curbs at the base of exterior wall assemblies, excluding doors, to allow the membrane to terminate 4 in. minimum above the finish surface

MT2- Terminate membrane by integrating it with the WRB at the walls and doors so that there are no discontinuities in the water proofing system.

MT3- Provide adsorbed asphalt flashing sheet (such as those manufactured by Grace) and liquid membrane at all transitions between the hot rubberized asphalt membrane and the adjacent exterior wall system.

MT4- Protect the membrane termination with sheet metal flashing that integrates with the cladding waterproofing and storefront window sills

MT5- Provide stainless steel sheet metal where flashings will be buried, frequently wet, and if or cannot easily be replaced

MT6- Do not apply hot rubberized asphalt over lightweight concrete unless extended drying is allowed or a topical moisture vapor mitigation system is implemented

UNDERSLAB WATERPROOFING

US1- As the lowest level of the building extends into the design water table, it will require underslab waterproofing in addition to waterproofing of the below-grade walls. Given the anticipated hydrostatic condition, we recommend the use of the waterproofing membrane that will be specified for the below-grade walls (e.g., Coretex by Cetco).

US2- Provide a 2 in. mud slab as a substrate for the installation of the underslab waterproofing

US3- At locations of a mat slab over 18 in. thick, over the membrane, provide a minimum 4 in. protection slab reinforced with #4 bars at 18 in. o.c. in both directions

US4- Between the protection slab and foundation, place two rows of waterstops continuously around the perimeter. Detail laps in accordance with the recommendations for the below-grade wall application.

US5- Provide a dedicated waterproof membrane around the elevator pits as described above

US6- Provide water stops at all concrete construction joints

US7- Provide injection tube waterstops (such as DeNeef Injecto Tube) at the elevator pit construction joints.

US8- Perk tests as required to ensure the moisture levels in the slab do not exceed those allowable by the proposed flooring. When needed, provide topical vapor retarder (such as Koester's VAP I 2000) at areas of sensitive flooring to prevent moisture / vapor migration from within the slab

SUNKEN PATIO RETAINING WALL WATERPROOFING

US9- Water proof retaining walls at sunken patios on Courtyard level with the same contiguous water proofing systems that protects the adjacent below grade walls that define exterior spaces. Place water stops at all concrete construction joints.

US10- Coat the exposed face of the retaining walls with elastomeric coating Dow Allegard or with clear elastomeric coating AquaBarrier UA 210 E Series Coating by Edison Coatings Inc. to prevent efflorescence and staining

WATERPROOFING UNDER EXTERIOR "FLOATING" STAIRS

PM17- At exterior stairs over occupied space extending from the Floor 1 sidewalks to Floor 2 landings, and from Floor 4 balconies to roof terraces, provide a "roof" structure under the stairs, sloped to drain, with MTSAM underlayment (such as Grace Ice & Water Shield HT) and a stainless steel sheet metal cover or hot dipped galvanized with a sheet-applied fluoropolymer coating (such as Kynar).

PM18- Terminate the underlayment to the wall WRB and stair landing / terrace waterproofing systems to provide continuous air and moisture protection.

WINDOW AND STOREFRONT GLAZING ASSEMBLIES

PM19- For ADA compliance, provide a drop at the structural slab or deck at the threshold so that the door frame can be installed at the exterior slab or deck level. Allow the interior finish floor to be flush with the top of the frame.

PM20- Provide a dual-line of sealant over backer rod at all doors, windows and store front glazing assemblies.

PM21- Provide closed-cell foam outer backer rod and open-cell foam inner backer rod.

PM22- Make the seal continuous around the opening and permanently flexible to maintain a seal as components thermally expand / contract.

PM23- Where sheet metal sill pans occur as part of assembly transitions, provide back- and end dams and integrate with adjacent jamb flashing. Use stainless or galvanized steel to allow fully-soldered transitions.

SKYLIGHT ASSEMBLIES

SK1- Provide continuous gutters and rafters to avoid joints that will be susceptible to leakage.

SK2- Provide a minimum 3-in-12 slope (rise-to-run) to relieve drain water over the skylights.

SK3- Provide sill flashing to collect condensate and other water from skylight gutters and direct it to the exterior.

SK4- Provide watertight upturned back-and-end dams at all skylight sill flashings

SK5- Penetration through the sill flashing are not allowed.

SK6- Provide continuous exterior wet seals to waterproof glazing in place (no rubber gaskets)

SK7- Avoid pressure bars that run transverse to the skylight slope to prevent ducking water.

SK8- Install continuous glazing ties and avoid transverse glazing seams.

BELOW GRADE WATERPROOFING

BG1- Do not install a drainage assembly over the below-grade walls

BG2- In lieu of a drainage assembly, install a bentonite membrane layer,as specified (Cetco Volclay DS), to prepare the substrate and serve as secondary waterproofing.

BG3- Third-party full time inspection is required for the membrane system application to obtain the material and labor warranty (i.e., Hydroshield) from the manufacturer

BG4- No gaps, edges, or localized depressions greater than 1/2 in. in the shoring system are allowed. The substrate must be sound and solid to eliminate movement during concrete placement, and the substrate should not have sharp angular projections or loose aggregate.

BG5- Overlap and heat-weld all membrane laps 4 in. minimum. The bentonite core must be pulled back at these laps and must not be removed

BG6- As required for the material and labor warranty, every weld in the system must be inspected and probed for breaches by the third-party inspector

BG7- For enhanced quality control at welded seams, run testing for breaches in accordance with American Society for Testing and Materials (ASTM) D 5641, ASTM D5820, or with Spark Testing by the applicator with the inspector present. After confirmation in writing that all seams are free from breaches, fold back the bentonite core and seal with a continuous bead of CetSeal

BG8- Rebar cage stabilization needs to be fixed rods of an adequate diameter to allow a manufacturer approved flashing detail

BG9- Waterstops should be placed at all cold joints and around all penetrations (Cetco RX-101)

BG10- Tie-backs should receive a pre-fabricated collar with weldable flange per the manufacturer's standard details. Fix the pre-fabricated collar with a mix of bentonite granules and mastic. If de-tensioning of tie-backs is required after concrete placement, provide a 24 in. by 24 in. minimum smooth formed block-out in the concrete. The use of "stay-forms" for block-outs in not allowed.

BG11- Provide cast waterstops at the perimeter of block-outs prior to patching with concrete

BG12- Terminate the top edge of the membrane with a termination bar integrated with the weather-resistive barrier (WRB) elements of the wall cladding. A separation layer (foil tape) is required between the thermoplastic membrane and any asphaltic-based self-adhered or fluid-applied membranes. Terminate the below-grade membrane above grade.

BG13- At grade level, provide stainless steel cover flashing to protect the below-grade membrane, transition, and WRB elements

BG14- Where concrete is to be cast against the walls, provide compressible filler and traffic-bearing sealant between the flashing and concrete

BG15- Use stainless steel flashing only. Do not install aluminum flashing in contact with concrete

RAMP DRAINAGE AND WATERPROOFING

RD1- Design all hardscape to drain water away from the building where possible

RD2- Provide trench drains at the top and first slope transition of the ramp to intercept and drain water that reaches the ramp

RD3- Provide traffic-bearing coating (such as Autogard by Neogard) to prevent water on a parking ramp from leaking through the deck into levels below

COURTYARD AND PODIUM WATERPROOFING

CY1- Provide split-slab assembly with a hot rubberized asphalt membrane (such as American Hydrotech Monolithic Membrane 6125 FR-215 ed assembly with fabric reinforcement) at slabs over garage and/or occupied spaces of Courtyard level.

CY2- Provide minimum 4" slab drop at courtyard level to accommodate the waterproof membrane, protection layer drainage composite, and finish surface. Establish the 4 in. minimum depression at the high point of the drainage layout to provide minimum 4 in. everywhere. Refer to civil courtyard plan and architectural slab plan for further detail

CY3- Provide a great drop for proposed finish surfaces exceeding 3 in. in thickness

CY4- Provide a minimum of 2% slope in the structural slab to drain locations for adequate drainage

CY5- All adjacent hardscape to drain water away from the building

CY6- Maximum finish slope of topping slab to not exceed 2% in circulation areas

CY7- Slope the drainage away from planted areas to avoid combining the drainage systems for the paved and planted areas.

CY8- Provide a high-capacity high-strength drainage module (such as VersiCell by Elmich) under site walls and hardscape to allow through-drainage

CY9- Provide continuous waterproofing membrane over the structural slab beneath the planters or site walls.

CY10- Provide topping slabs inside built-in planters to provide slope to planter drains while creating a substrate for an adhesive waterproofing membranes and drainage composite inside the planters.

CY11- Planters to receive the same continuous hot rubberized asphalt membrane used along the structural slab for continuity and tie-in detailing.

CY12- Provide tie-level drains inside the planters for independent drainage, and a root barrier over the planter membrane to prevent root damage

DETAILING AND QUALITY ASSURANCE

SLAB/FLOOR PENETRATIONS

SP1- Provide uncured neoprene flashing at all transitions (such as 90 deg angles at curbs and other steps), terminations, pipe penetrations, rebar penetrations, drain locations, and all other locations where additional reinforcement may be warranted

SP2- Provide a 36 in. by 36 in. piece of uncured neoprene set in 90 mils of hot asphalt at all drain penetrations.

SP3- All drain assemblies must contain a clamping ring at the membrane level. The strainer face to complement the finish surface

SP4- Provide a bi-level drain with weep holes at the membrane level the upper level drain is not required at pedestal pavers where water rapidly reaches the membrane level

SP5- Provide filter fabric over the drainage mat edges extending up the drain extension collar to prevent the migration of concrete fines into the drains. secure the filter fabric with a stainless steel clamping band

SP6- Provide mechanically fastened and fully soldered threshold flashings with back- and end-dams under all doors opening to horizontal waterproofing.

SP7- Slope the overburden away from doors. Fully integrate the flashings with the adjacent WRB

SP8- Provide a continuous protection layer consisting of a flexible asphalt impregnated fiberglass sheet (Hydrofilas 30 by American Hydrotech) embedded into the hot rubberized asphalt membrane while it is hot.

SP9- Provide a dimple core drainage composite with an integral filter fabric to facilitate the flow of water to drain locations beneath finish surfaces that are not free draining (Hydrodrain 700 by American Hydrotech, or as an enhancement, provide VersiCell by Elmich at all locations)

SP10- For pedestal paver assemblies without insulation beneath it, provide an additional 1/4 in. rigid protection board (Hydrotech Permaboard by American Hydrotech) over the flexible protection sheet in lieu of the drainage composite.

SP11- Provide a high density polyethylene (HDPE) root barrier at locations where vegetation will occur over the waterproofing assembly. Install the root barrier (Root Stop HD by American Hydrotech) over the flexible protection layer. Provide Root Stop tape at all laps in the root barrier

SP12- Flood-test installed waterproofing and incorporated flashings and details with 2 in. of water for 48 hrs. Alternatively, use appropriate electronic leak detection technology, which checks for conductivity to locate membrane breaches within the field of the membrane, and provide flood testing at drain and penetration locations only

BALCONY, STAIR LANDING, AND EXTERIOR CORRIDOR WATERPROOFING

PM1- At exterior areas over occupied spaces, provide a cold fluid-applied poly methyl methacrylate (PMMA) coating (such as Soprema Alsan RS), with full reinforcement embedded in the coating

PM2- At concrete balconies, where the balconies occur only partially over occupied space, extend the reinforcement a minimum of 24 in. beyond the projected line of occupied space

PM3- At wood frame balconies, provide full reinforcement of the coating

PM4- Provide an integral wear surface over the coating

PM5- Provide an integral wear surface over the coating or tiles set tile

PM6- Provide a minimum of 2% slope to drain in the structural slab or wood deck

PM7- Install PMMA System directly over the slab or deck

PM8- PMMA system to include primer as recommended per the manufacturer

PM9- Prepare surface at plywood deck joints per manufacturer's recommendations

PM10- At balconies where glazing assemblies occur, extend the PMMA coating up to and under the glazing assemblies and door thresholds and provide a sealant joint

PM11- At opaque walls around the sides of balconies, stair landings and exterior corridors, provide a curb to allow the waterproofing to terminate 4 in. minimum above the finish surface and integrate with the wall waterproofing.

PM12- At doors in opaque walls, extend the waterproofing under the threshold and install a raised threshold over the coating set in a full bed of sealant

PM13- For ADA compliant thresholds, design a drop in the structural slab or framing at balcony door thresholds such that the door thresholds can be installed at the exterior slab level to meet accessibility codes

PM14- For face mounted railing, extend the balcony coating to the edge of the balcony and transition to a high-temperature self-adhering membrane (HTSAM) under the metal fascia. Then transition the HTSAM to the cement plaster soffit assembly

PM15- For wall sealant joints in contact with balconies, landings or corridors with PMMA coatings, test for adequate sealant adhesion and compatibility to the PMMA coating prior to full production

PM16- At the intersection of cantilevered balconies, landings or corridor edges with the adjacent drainage exterior wall systems, provide sheet metal saddles to flash the pinhole in the corner, to achieve continuity of the waterproofing systems and to avoid contact of incompatible materials.

RAIN SCREEN WALL ASSEMBLIES

RS1- At locations where there is no UV exposure of the membrane and the temperature in the cavity does not exceed the allowable temperature of the membrane, provide a 40 mil rubberized asphalt, self adhesive sheet membrane (such as Grace Perm-A-Barrier) that acts as an air barrier, vapor barrier, and WRB.

RS2- At locations where there is no UV exposure of the membrane, provide a 30 mil butyl-based, High Temperature self-adhesive sheet membrane (such as Grace Ice & Water Shield HT or Grace Ultra) that acts as an air barrier, vapor barrier, and WRB

RS3- At locations where open joints or similar conditions occur, block UV exposure of the above options with a UV cloth/ poly sheet, such as Delta Fassada II or Revedehsed by VaproShield, or an acceptable fluid-applied UV-stable membrane, such as Grace Perm-A-Barrier VPO, over the sheet membrane at panel joints

RS4- Specify self-adhesive flashing (SAF), such as Grace Perm-A-Barrier Wall Flashing and Grace Vycor Aluminum, at membrane terminations and penetrations. Note that Dow Corning 758 Weather Barrier Sealant is required with the polyethylene-faced SAF, while regular silicone can be used with the foil-faced SAF.

RS5- Use Grace Bituthene Liquid Membrane to pre-detail penetrations and corners flashings before SAF installation. Use Dow Corning 758 weather barrier sealant for detailing penetrations over the SAF and when filling gaps between flashings and windows and adjacent SAF.

RS6- Seal fasteners and attachment anchor penetrations with Grace Bituthene Liquid Membrane (before SAF) or Dow 758 (after SAF). If track systems are used, seal them against the membrane with a butyl tape

RS7- Detail the membrane system to accommodate deflection joints if / where they occur

CEMENT PLASTER ASSEMBLIES

ST1- Install a polymer modified portland cement plaster system over 1 lb per square yard self-furring galvanized welded wire lath (such as Streetlath by Structa Wire Corp.) one layer of Grade D 60 minute building paper, and a continuous air and WRB.

ST2- Polymer modified cement plaster should include three coats as follows: (1) scratch, (2) brown, and (3) acrylic finish. Sto, Parex Dryvit, Omega all make comparable products for a typical sand finish. For a very smooth finish, add an additional layer under the acrylic finish consisting of polymer modified cement with continuous fabric reinforced lamina.

ST3- Provide solid exterior sheathing (such as DensGlass Gold by Georgia Pacific at metal framing or plywood at wood framing) at all locations. At metal studs, provide metal straps as backing for the fastening of flashings and cement plaster accessories where they do not align with framing locations

ST4- All sheet metal accessories should be stripped in with self-adhering membrane flashing.

ST5- All penetrations through the cement plaster must be detailed with watertight sheet metal collars integrated with the air and water barrier. The sheet metal collars should be mechanically fastened and soldered watertight and have minimum 4 in. flanges.

ST6- Arrange control joints to create portland cement plaster panels of less than 144 sq ft, less than 15 ft in any direction, and length-to-width ratios of 2 1/ or less in accordance with ASTM C 1063 to minimize plane cracking. Cut the lath at control joints so it is not continuous, and install in accordance with ASTM C 1063.

ST7- Control joints to be a simple product that allows movement within the plaster system and expansion metal flanges to integrate with the metal lath (such as the Joint #XJ15 by Cemco). Extruded aluminum reveals, which do not have the capability to expand, are not considered control joints. To minimize bulk water entry, tub and seal plaster accessory joints and terminations with compatible sealant

ST8- Provide drill and fair deflection joints at all floor lines to accommodate movements, as well as provide drainage. As the drill / deflection joint, provide a two-piece fill-slide type joint. Provide a sealant joint within the fill-slide joint.

ST9- Terminate cement plaster assemblies 2 in. minimum above hardscapes and paved areas and 4 in. above landscape areas.

ST10- Provide a weather barrier sealant (such as Dow 758) at locations where sealant is integrated with the rubberized asphalt sheet membrane or the plastic face of most air and water barriers and flashing membranes

ST11- Provide a drip edge at the front edge of plaster soffits.

ST12- Ensure that plaster cement (complying with ASTM C 1328) be the primary constituent in the plaster mix. Cement plaster accessories are to be galvanized G-90 sheet metal (GSM). Paint all GSM plaster accessories with an industrial grade protective coating to ensure long-lasting performance

ST13- Provide permanent tie-back couplers for scaffolding that are integrated with the waterproofing during construction and remain in place after removal of the scaffolding

STRUCTURAL SEPARATION JOINT

SJ1- Provide a 12 in. wide structural separation joint at the roof deck level and adjacent vertical walls

SJ2- Provide Silura Redline as the waterproof expansion joint material to allow prefabricated transitions for watertight corners and geometry changes. Integrate joint with adjacent wall waterproofing as well as with the roofing. Conceal the joint with architectural expansion joint cover such as those by Construction Specialties).

LOW-SLOPE ROOFING

RF1- Provide polyvinyl chloride (PVC) roof membrane at low slope roofs at Floors 3, 4 and the high roof level.

RF2- All PVC roofs to be sloped at 1/4"/ft grooved that owner establishes a regular roof maintenance schedule to remove debris and standing water, and that it is acceptable from a code perspective.

RF3- Provide valleys at 45 deg to the primary slope to maintain maximum slope within the valleys.

RF4- Achieve slope-to-drain with tapered insulation system (typically, polyisocyanurate rigid board insulation). Provide a cover board (1/2 in. DensDeck Prime) over the insulation to provide a continuous substrate for the roof membrane.

RF5- Where rigid insulation occurs over a concrete or composite deck, provide a fully adhered vapor barrier between the concrete deck and the tapered insulation.

RF6- Provide an air barrier between wood decking and the tapered insulation if required by the mechanical system

RF7- For the roof membrane, provide a fully adhered 60 mil, felt-backed PVC membrane (such as G410 by Sarnafil). At locations with pedestal decking, and around outdoor kitchens, provide an additional loose-laid PVC protection sheet with welded seams between the roof membrane and pedestals

RF8- Roof area drains with sumps to be internal and (when possible) located at points of maximum deflection.

RF9- Provide one main drain and one overflow drain for each sump. Provide a minimum of 12 in. between drains and other penetrations to allow room for proper flashing.

RF10- Provide a minimum 8 in. roof membrane upturn above finished roof surface at all locations such as parapets, door thresholds, mechanical curbs, penetrations, etc.

RF11- Space penetrations at a minimum of 12 in. from any adjacent items (e.g., parapets, curbs, penetrations).

RF12- For typical penetrations, provide a PVC flashing collar encorporated with the roofing system in addition to a stainless steel sheet metal bonnet with a clamping band and sealant above the collar. For vent penetrations provide a PVC flashing collar integrated with the roofing system in addition to a lead cap, which extends 1 in. into the vent penetration.

RF13- Provide continuity of the waterproofing systems with adjacent air and water barriers by integrating self-adhesive flashing and foil tape with the roofing system prior to the installation of the two-piece sheet metal reglet and counterflashing

RF14- Verify that the height of all concrete pads and curbs is coordinated to maintain a minimum roofing upturn of 8 in. At concrete pads and curbs, terminate the roofing system with self-adhesive flashing and foil tape beneath a sheet metal reglet and removable counterflashing. Allow the top of the concrete pad or curb to receive a high temperature self-adhesive underlayment and a stainless steel sheet metal cap flashing

RF15- Provide drainage crickets on the upslope side of pads and curbs.

RF16- Connect scuppers and gutters to downspouts, and spleen blocks below

RF17- Provide walkway pads at all paths of travel

RAIN SCREEN CLADDING

FL1- Provide fasteners and cladding sub-framing that resist corrosion and galvanic action. Provide sub-framing consisting of aluminum or stainless steel members in lieu of galvanized steel. Isolate between dissimilar metals with neoprene gaskets or other resilient materials to prevent galvanic action.

FL2- Provide flashings at regular intervals to drain water from the cavity behind the metal wall panels if the assembly spans multiple stories

FL3- Include a weather seal at trans-tions between glazed and rain screen wall assemblies

FL4- For required sheet metal flashing, provide stainless steel where flashings will be buried or cannot easily be replaced

System Integration

SI13- While all of the individual exterior wall components can be designed to be effective waterproofing systems, the integration between the various exterior wall systems must also be designed. Primarily, the various claddings systems execute on two different waterproofing principles. The exterior wall systems include glazing assemblies and rain screen wall systems. The interface between the types of systems will require detailing to transition from the glazing assembly to the WRB inboard of the rain screen

SI14- Provide a dual line of minimum 1/2 in. wide sealant joints over backer rod between all window assemblies and adjacent exterior wall WRB. Strip in to the WRB with SAF any sheet metal flashing that is required to trans-tion between systems

SI15- Provide on-site mockups to confirm the metal allon requirements and to ensure the airtight and watertight integration of the various exterior waterproofing systems

SI16- Provide field testing throughout the installation process

SHEET METAL FLASHING

SI1- For sheet metal flashing at terminations and transitions of waterproofing, roofing, and enclosure systems, follow the standards in industry guidelines such as the Sheet Metal and Air Conditioning Contractors' National Association Architectural Sheet Metal Manual and Revere's Copper and Common Sense

SI2- Slope sheet metal at 4% or more to avoid local ponding

SI3- Provide stainless steel flashing at all locations where flashing will be installed in contact with grade, planting soil, or gravel

SI4- Galvanized sheet metal (G90) is acceptable for flashings that are not in soil contact or constantly wet and can be maintained

SI5- Aluminum flashing with anodized or bid-ed-on paint finish is acceptable as a secondary flashing element over fully waterproofed underlayment, aluminum flashing cannot be soldered and must instead be sealed if required to be fully watertight.

SI6- Use self-adhered membrane to provide waterproofing underlayment under sheet metal flashing; use high temperature membrane where sheet metal is exposed to sunlight

SI7- Avoid exposed fasteners and use concealed cleats and hook strips instead. Where exposed fasteners are required, include a neoprene washer to prevent the fastener holes from leaking

SI8- Pop rivets are not allowed

SI9- Provide spot welded and soldered sheet metal flashings for saddles, transitions and other "unsized" sheet metal flashings

SI10- For s-mple laps over waterproof underlayment, 4 in. laps bedded with elastomeric sealant are acceptable at non-moving joints only.

SI11- For moving joints provide elastomeric joint flashing (e.g., neoprene or silicone sheet adhered to the metal with sealant) with protective sheet metal cover plates. Simple laps at copings and sill pan flashings are not allowed. instead provide sheet metal set over minimum 8 in. wide backer plates in a full bed of sealant

SI12- Provide shop-fabricated sheet metal saddles at complex flashing trans-tions between surfaces in different planes, including interfaces between parapets and rising walls and flashing transitions at fenestration corners. The flashings shall be mechanically fastened and soldered watertight, and integrated with adjacent weather barrier components

MOCKUPS AND TESTING

MT1- Provide allowances for construction of mockups of critical assemblies. Mockups to be constructed with all weatherproofing materials and flashings installed as they would be for construction and connected until they meet the design intent. The mock-up should include typical conditions as well as complicated transitions including multiple products and trades.

MT2- Provide one on-site mockup for each waterproofing assembly

MT3- Provide laboratory mockups for enhanced testing when needed

MT4- For all horizontal waterproofing, provide flood testing for 48 hrs to identify leakage so deficiencies can be corrected prior to overburden installation or completion of the work

MT5- For vertical assemblies, such as rising walls and waterproofing intersections with windows and doors, provide water testing with a spray rack in accordance with ASTM E1105 water testing with differential air pressure or hand-held spray nozzle per AAMA 501.2 to identify and correct details resulting in water entry

R&A
6160 Stoneridge Mall Road, Suite 100
Pleasanton, CA 94588
tel 925 730 8000
www.r-a-a.net

STAMP

STATE OF UTAH
CHRISTIAN ROBERT
REGISTERED ARCHITECT

NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
WATERPROOFING NOTES - PROJECT SPECIFIC

No.	Description	Date

JOB NO
236

DATE
06/27/17

SCALE

SHEET NO
A04.02

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A. APPLICATION AND ADMINISTRATION

1 WHEN ALTERATIONS OR ADDITIONS ARE MADE TO EXISTING BUILDINGS OR FACILITIES, AN ACCESSIBLE PATH OF TRAVEL TO THE SPECIFIC AREA OF ALTERATION OR ADDITION SHALL BE PROVIDED UNLESS DISPROPORTIONATE

2 PRIMARY ACCESSIBLE ENTRANCE OF TRAVEL SHALL INCLUDE A PRIMARY ENTRANCE TO THE BUILDING OR FACILITY, TOILET AND BATHING FACILITIES SERVING THE AREA, DRINKING FOUNTAINS SERVING THE AREA, PUBLIC TELEPHONE SERVING THE AREA, AND SIGNS

3 WHEN THE ADJUSTED CONSTRUCTION COST IS LESS THAN OR EQUAL TO THE CURRENT VALUATION THRESHOLD ($134,000), THE COST OF COMPLIANCE WITH THE PRIMARY ACCESSIBLE PATH OF TRAVEL REQUIREMENTS IS LIMITED TO 20 PERCENT OF THE ADJUSTED CONSTRUCTION COST OF ALTERATIONS. STRUCTURAL REPAIRS OR ADDITIONS PRESENTLY PLANNED AND THOSE DURING THE PRECEDING THREE YEAR PERIOD

4 ADJUSTED CONSTRUCTION COST OF ALTERATIONS, STRUCTURAL REPAIRS OR ADDITIONS DOES NOT INCLUDE THE COST OF ALTERATIONS TO PATH OF TRAVEL ELEMENTS

5 IN CHOOSING WHICH ACCESSIBLE ELEMENTS TO PROVIDE, PRIORITY SHOULD BE GIVEN TO THOSE ELEMENTS THAT WILL PROVIDE THE GREATEST ACCESS IN THE FOLLOWING ORDER

#1 AN ACCESSIBLE ENTRANCE, #2 AN ACCESSIBLE ROUTE TO THE ALTERED AREA (1) AT LEAST ONE ACCESSIBLE RESTROOM FOR EACH SEX (2) ACCESSIBLE TELEPHONES (3) ACCESSIBLE DRINKING FOUNTAINS, AND (4) WHEN POSSIBLE, ADDITIONAL ACCESSIBLE ELEMENTS SUCH AS PARKING, STORAGE AND ALARMS

6 ALTERATIONS TO A QUALIFIED HISTORIC BUILDING OR FACILITY SHALL COMPLY WITH CHAPTER 11B UNLESS IT WILL THREATEN OR DESTROY THE HISTORICAL SIGNIFICANCE OR CHARACTER-DEFINING FEATURES OF THE BUILDING OR PROPERTY. IN THOSE CASES, ALTERNATIVE PROVISIONS SHALL BE APPLIED ON AN ITEM BY ITEM OR CASE-BY-CASE BASIS WITH SUFFICIENT WRITTEN DOCUMENTATION

7 PUBLIC ACCOMMODATIONS SHALL MAINTAIN IN OPERABLE WORKING CONDITION THOSE FEATURES OF FACILITIES AND EQUIPMENT THAT ARE REQUIRED TO BE ACCESSIBLE TO AND USEABLE BY PERSONS WITH DISABILITIES LOCATED ON TEMPORARY INTERRUPTIONS IN SERVICE OR ACCESSIBILITY DUE TO MAINTENANCE OR REPAIRS MAY BE PERMITTED

B. BUILDING BLOCKS FLOOR OR GROUND SURFACES

1 FLOOR AND GROUND SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT

2 CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING OR NO CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT/UNCUT PILE TEXTURE. PILE HEIGHT SHALL BE ½ INCH MAXIMUM

CHANGES IN LEVEL

3 VERTICAL CHANGES IN LEVEL FOR FLOOR OR GROUND SURFACES MAY BE ¼ INCH HIGH MAXIMUM AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL GREATER THAN ¼ INCH AND NOT EXCEEDING ½ INCH IN HEIGHT SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2

4 CHANGES IN LEVEL GREATER THAN ½ INCH IN HEIGHT SHALL BE RAMPED

5 ABRUPT CHANGES IN LEVEL EXCEEDING ½ INCHES IN A VERTICAL DIMENSION BETWEEN WALKS, SIDEWALKS OR OTHER PEDESTRIAN WAYS AND ADJACENT SURFACES OR FEATURES SHALL BE IDENTIFIED BY WARNING CURBS AT LEAST 6 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE, OR BY RAILINGS, CHANGES OR HANDRAILS WITH A GUIDE RAIL CENTERED 2 INCHES MINIMUM AND 4 INCHES MAXIMUM FROM THE SURFACE OF THE WALKWAY, THESE REQUIREMENTS DO NOT APPLY BETWEEN A WALK OR SIDEWALK AND AN ADJACENT STREET OR DRIVEWAY

TURNING SPACE

6 CIRCULAR TURNING SPACES SHALL BE A SPACE OF 60 INCHES DIAMETER MINIMUM AND MAY INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 11B-306 KNEE AND TOE CLEARANCE

7 T-SHAPED TURNING SPACES SHALL BE A T-SHAPED SPACE WITHIN A 60 INCH SQUARE MINIMUM WITH ARMS AND BASE 36 INCHES WIDE MINIMUM. EACH ARM OF THE T-SHAPE SHALL BE CLEAR OF OBSTRUCTIONS 24 INCHES MINIMUM IN EACH DIRECTION AND THE BASE SHALL BE CLEAR OF OBSTRUCTIONS 24 INCHES MINIMUM

8 FOR LAVATORIES AND BUILT-IN DINING AND WORK SURFACES REQUIRED TO BE ACCESSIBLE, TOE CLEARANCE SHALL BE PROVIDED THAT IS 30 INCHES IN WIDTH AND 19 INCHES IN HEIGHT ABOVE THE FINISH FLOOR OR GROUND FOR A DEPTH OF 19 INCHES MINIMUM

9 TOE CLEARANCE SHALL EXTEND 19 INCHES MAXIMUM UNDER LAVATORIES FOR TOILET AND BATHING FACILITIES AND 25 INCHES MINIMUM UNDER OTHER ELEMENTS

10 AT LAVATORIES IN TOILET AND BATHING FACILITIES, KNEE CLEARANCE SHALL BE PROVIDED THAT IS 30 INCHES IN WIDTH FOR A DEPTH OF 11 INCHES AT 9 INCHES ABOVE THE FINISH FLOOR OR GROUND AND FOR A DEPTH OF 8 INCHES AT 27 INCHES ABOVE THE FINISH FLOOR OR GROUND INCREASING TO 29 INCHES HIGH MINIMUM ABOVE THE FINISH FLOOR OR GROUND FOR A DEPTH OF 29 INCHES AT A COUNTER WITH A BUILT-IN LAVATORY OR AT THE FRONT EDGE OF A SHELF MOUNTED LAVATORY

11 AT DINING AND WORK SURFACES REQUIRED TO BE ACCESSIBLE, KNEE CLEARANCE SHALL BE PROVIDED THAT IS 30 INCHES IN WIDTH AT 27 INCHES ABOVE THE FINISH FLOOR OR GROUND FOR A DEPTH OF AT LEAST 19 INCHES

FROST HEAVING OR HEAVE

12 EXCEPT FOR HANDRAILS, OBJECTS WITH LEADING EDGES MORE THAN 27 INCHES AND LESS THAN 80 INCHES ABOVE THE FINISH FLOOR OR GROUND SHALL PROTRUDE NO MORE THAN 4 INCHES HORIZONTALLY INTO THE CIRCULATION PATH

HANDRAILS MAY PROTRUDE 4½ INCHES MAXIMUM

13 FREE-STANDING OBJECTS MOUNTED ON POSTS OR PYLONS SHALL OVERHANG CIRCULATION PATHS NO MORE THAN 12 INCHES WHEN LOCATED FROM 27 TO 80 INCHES ABOVE THE FINISH FLOOR OR GROUND

14 PROTRUDING OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH REQUIRED FOR ACCESSIBLE ROUTES

15 LOWEST EDGE OF A SIGN OR OTHER OBSTRUCTION WHEN MOUNTED BETWEEN POSTS OR PYLONS SEPARATED WITH A CLEAR DISTANCE GREATER THAN 12 INCHES, SHALL BE LESS THAN 27 INCHES OR MORE THAN 80 INCHES ABOVE THE FINISH FLOOR OR GROUND

16 VERTICAL CLEARANCE SHALL BE AT LEAST 80 INCHES HIGH ON CIRCULATION PATHS EXCEPT AT DOOR OPENINGS AND DOOR STOPS, WHICH MAY BE 78 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND

17 GUARDRAILS OR OTHER BARRIERS WITH A LEADING EDGE LOCATED 27 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SHALL BE PROVIDED WHERE THE VERTICAL CLEARANCE ON CIRCULATION PATHS IS LESS THAN 80 INCHES HIGH

REACH RANGES

18 ELECTRICAL CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT SHALL BE LOCATED WITHIN ALLOWABLE REACH RANGES LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX

19 ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED WITHIN ALLOWABLE REACH RANGES LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX

20 HIGH FORWARD REACH THAT IS UNOBSTRUCTED SHALL BE 48 INCHES MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND

21 HIGH FORWARD REACH SHALL BE 48 INCHES MAXIMUM WHERE THE REACH DEPTH IS 20 INCHES OR LESS AND 44 INCHES MAXIMUM WHERE THE REACH DEPTH EXCEEDS 20 INCHES. HIGH FORWARD REACH SHALL NOT EXCEED 25 INCHES IN DEPTH

22 HIGH SIDE REACH SHALL BE 48 INCHES MAXIMUM AND THE LOW SIDE REACH SHALL BE 15 INCHES MINIMUM ABOVE THE FINISH FLOOR WHERE THE SIDE REACH IS UNOBSTRUCTED OR THE DEPTH OF ANY OBSTRUCTION DOES NOT EXCEED 10 INCHES

23 HIGH SIDE REACH SHALL BE 46 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND WHERE THE HIGH SIDE REACH IS OVER AN OBSTRUCTION MORE THAN 10 INCHES BUT NOT MORE THAN 24 INCHES IN DEPTH

24 OBSTRUCTIONS FOR HIGH SIDE REACH SHALL NOT EXCEED 34 INCHES IN HEIGHT AND 24 INCHES IN DEPTH

25 OBSTRUCTED HIGH SIDE REACH FOR THE CENTER LINE OF WASHING MACHINES AND CLOTHES DRYERS SHALL BE PERMITTED TO BE 36 INCHES MAXIMUM ABOVE THE FINISH FLOOR

26 OBSTRUCTED HIGH SIDE REACH FOR THE OPERABLE PARTS OF FUEL DISPENSERS SHALL BE FURNISHED TO BE 54 INCHES MAXIMUM MEASURED FROM THE SURFACE OF THE INCLINE MAY RISE OR FALL DEPENDING ITS ANGLE AND ALSO ON EXISTING CURBS

C. ACCESSIBLE ROUTES

GENERAL

1 AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES, PUBLIC STREETS AND SIDEWALKS, AND PUBLIC TRANSPORTATION STOPS TO THE ACCESSIBLE BUILDING OR FACILITY ENTRANCE THEY SERVE. WHERE MORE THAN ONE ROUTE IS PROVIDED, ALL ROUTES MUST BE ACCESSIBLE

2 AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE

3 AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT EACH STORY AND MEZZANINE IN MULTI-STORY BUILDINGS AND FACILITIES

4 IN NEW CONSTRUCTION OF BUILDINGS WHERE ELEVATORS ARE REQUIRED BY 11B-206.2.3 MULTI-STORY BUILDINGS AND FACILITIES, AND WHICH EXCEED 10,000 SQUARE FEET ON ANY FLOOR, AN ACCESSIBLE MEANS OF VERTICAL ACCESS (AN RAMP IN THAT/ON ONLY BY SHALL BE PROVIDED WITHIN 200 FEET OF TRAVEL OF EACH STAIR AND EACH ESCALATOR

5 IN EXISTING BUILDINGS THAT EXCEED 10,000 SQUARE FEET ON ANY FLOOR AND IN WHICH ELEVATORS ARE REQUIRED, WHENEVER A NEW ELEVATOR IS CONSTRUCTED WHERE AN ELEVATOR ACCESS IS PROVIDED (AN ESCALATOR) AN ACCESSIBLE MEANS OF VERTICAL ACCESS (A RAMP, ELEVATOR OR LIFT SHALL BE PROVIDED WITHIN 200 FEET OF TRAVEL OF EACH NEW STAIR OR ESCALATOR

6 AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDING OR FACILITY ENTRANCES WITH ALL ACCESSIBLE SPACES AND ELEMENTS WITHIN THE BUILDING OR FACILITY, INCLUDING MEZZANINES, WHICH ARE OTHERWISE CONNECTED BY A CIRCULATION PATH

7 ACCESSIBLE ROUTES SHALL COINCIDE WITH OR BE LOCATED IN THE SAME AREAS AS GENERAL CIRCULATION PATHS. WHERE CIRCULATION PATHS ARE INTERIOR, REQUIRED ACCESSIBLE ROUTES SHALL ALSO BE INTERIOR. AN ACCESSIBLE ROUTE SHALL NOT PASS THROUGH KITCHENS, STORAGE ROOMS, RESTROOMS, CLOSETS OR OTHER SPACES USED FOR SIMILAR PURPOSES

DETECTABLE WARNINGS AND DIFFERTIAN E DIRECTIONAL TEXTURE

8 CURB RAMPS SHALL HAVE DETECTABLE WARNINGS THAT ARE 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL FOR THE FULL WIDTH OF THE RAMP RUN EXCLUDING ANY FLARED SIDES

9 ON PERPENDICULAR CURB RAMPS, DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB IS 6 TO 8 INCHES FROM THE LINE AT THE FACE OF THE CURB MARKING THE TRANSITION BETWEEN THE CURB AND THE GUTTER, STREET OR HIGHWAY

10 ON PARALLEL CURB RAMPS, DETECTABLE WARNINGS SHALL BE PLACED ON THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALK

11 ISLANDS OR CUT-THROUGH MEDIANS 36 INCHES OR LONGER IN LENGTH IN THE DIRECTION OF DOORWAYS WITH DETECTABLE WARNINGS SHALL BE SEPARATED BY AN 24 INCHES MINIMUM IN DEPTH EXCLUDING THE FLARE, EITHER ON THE FLUSH PATH OR CUT-THROUGH PLACES AT THE EDGES OF THE PEDESTRIAN ISLAND OR CUT-THROUGH MEDIAN AND SEPARATED BY AN 24 INCHES MINIMUM OF RAISED SURFACE WITHOUT DETECTABLE WARNINGS

12 WALKS THAT CROSS OR ADJOIN A ROUTE PROVIDED FOR VEHICULAR TRAFFIC SUCH AS IN A STREET, DRIVEWAY, OR PARKING FACILITY SHALL BE SEPARATED BY DETECTABLE WARNINGS THAT CUE BETWEEN THE PEDESTRIAN AREAS AND VEHICULAR AREAS

13 ON STREETS WARNINGS PROVIDED TO SEPARATE WALKS THAT CROSS OR ADJOIN A ROUTE PROVIDED FOR VEHICULAR TRAFFIC, SUCH AS IN A STREET, DRIVEWAY OR PARKING FACILITY, SHALL BE PROVIDED WITH AND CONTINUOUS AT THE BOUNDARY BETWEEN THE PEDESTRIAN AREAS AND VEHICULAR AREAS

14 PROVIDE DETECTABLE WARNING DETAILS SHOWING COMPLIANCE WITH THE FOLLOWING

A. DETECTABLE WARNING SURFACES SHALL VISUALLY CONTRAST LIGHT-ON-DARK OR DARK-ON-LIGHT WITH ADJACENT WALKING SURFACES BY A 1 INCH WIDE BLACK STRIP MATERIAL USED TO PROVIDE CONTRAST SHALL NOT INCLUDE WARNINGS

B. DETECTABLE WARNING PRODUCTS AND DIRECTIONAL SURFACES MUST ENSURE CONSISTENCY AND UNIFORMITY FOR SHAPE, COLOR FASTNESS, CONFORMATION, SOUND-ON-CANE ACOUSTIC QUALITY RESILIENCE, AND THAT ATTACHMENT WILL NOT DEGRADE SIGNIFICANTLY WITH FOR AT LEAST FIVE YEARS

DETECTABLE WARNINGS AND DETECTABLE DIRECTIONAL TEXTURE

15 WALKS THAT CROSS OR ADJOIN A ROUTE PROVIDED FOR VEHICULAR TRAFFIC SUCH AS IN A STREET, DRIVEWAY OR PARKING FACILITY SHALL BE SEPARATED BY DETECTABLE WARNINGS THAT CUE BETWEEN THE PEDESTRIAN AREAS AND VEHICULAR AREAS

16 DETECTABLE WARNINGS PROVIDED TO SEPARATE WALKS THAT CROSS OR ADJOIN A ROUTE PROVIDED FOR VEHICULAR TRAFFIC, SUCH AS IN A STREET, DRIVEWAY OR PARKING FACILITY, SHALL BE PROVIDED WITH AND CONTINUOUS AT THE BOUNDARY BETWEEN THE PEDESTRIAN AREAS AND VEHICULAR AREAS

17 AT REFLECTING POOLS, DETAIL COMPLIANCE WITH THE FOLLOWING A 7 INCHES DEEP MIN EXCEPTIONS NOT S SHALL BE PROVIDED WHERE WALLS WARNING CURBS OR DETECTABLE WARNINGS B DETECTABLE EDGES PROVIDED TO PROTECT REFLECTING POOLS SHALL BE 24 TO 36 INCHES WIDTH

18 PROVIDE DETECTABLE WARNING DETAILS SHOWING COMPLIANCE WITH THE FOLLOWING

A. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A BASE DIAMETER OF 6 TO 9.0 INCHES, A TOP DIAMETER OF 6 45 TO 6 47 INCHES AND A HEIGHT OF 9 TO 9.02 INCHES

B. TRUNCATED DOMES PLACED IN A GRID PATTERN IN A DETECTABLE WARNING SURFACE SHALL HAVE A CENTER-TO-CENTER SPACING OF 2.33 TO 3 INCHES AND A MINIMUM BASE-TO-BASE SPACING OF 0.65 INCHES MEASURED BETWEEN THE MOST ADJACENT DOMES FURTHEST APART

C. DETECTABLE WARNING SURFACES SHALL VISUALLY CONTRAST LIGHT-ON-DARK OR DARK-ON-LIGHT WITH ADJACENT WALKING SURFACES OR BY SHALL A 3.0 INCH ADJACENT SURFACE BY A 1 INCH WIDE BLACK STRIP MATERIAL USED TO PROVIDE CONTRAST SHALL NOT INCLUDE WARNINGS

D. DETECTABLE WARNING SURFACES SHALL BE SHALL DIFFER FROM SURROUNDING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT EXCEPT AT CURB RAMPS, ISLANDS OR CUT-THROUGH MEDIANS

E. DETECTABLE WARNING SURFACES SHALL BE WITH LOW CONFORMING TO ES 33139 OF FEDERAL STANDARD 595C EXCEPT AT CURB RAMPS, ISLANDS OR CUT-THROUGH MEDIANS

F. DETECTABLE WARNING PRODUCTS AND DIRECTIONAL SURFACES SHALL BE APPROVED BY THE DIVISION OF THE STATE ARCHITECT

G. DETECTABLE WARNING PRODUCTS AND DIRECTIONAL SURFACES INSTALLED AFTER JANUARY 1, 2091, SHALL BE EVALUATED BY AN INDEPENDENT ENTITY, SELECTED BY THE DIVISION OF THE STATE ARCHITECT TO CONFIRM COMPLIANCE WITH THE PRESCRIPTIVE AND PERFORMANCE STANDARDS OF TITLE 24

H. INDEPENDENT ENTITIES FOR TESTING OF DETECTABLE WARNING PRODUCTS AND DIRECTIONAL SURFACES SHALL BE A NOT-FOR-PROFIT PRODUCT SAFETY TESTING AND CERTIFICATION ORGANIZATION DEDICATED TO TESTING FOR PUBLIC SAFETY THAT OPERATES FOR THE TESTING, CERTIFICATION AND QUALITY ASSESSMENT OF PRODUCTS, SYSTEMS AND SERVICES

I. INDEPENDENT ENTITIES FOR TESTING OF SLIP RESISTANCE OF DETECTABLE WARNING PRODUCTS AND DIRECTIONAL SURFACES SHALL BE RECOGNIZED AS HAVING APPROPRIATE EXPERTISE IN DETERMINING WHETHER PRODUCTS COMPLY WITH THE CALIFORNIA CODE OF REGULATIONS, TITLE 24

J. DETECTABLE WARNING PRODUCTS AND DIRECTIONAL SURFACES MUST ENSURE CONSISTENCY AND UNIFORMITY FOR SHAPE, COLOR FASTNESS, CONFORMATION, SOUND-ON-CANE ACOUSTIC QUALITY, RESILIENCE, AND THAT ATTACHMENT WILL NOT DEGRADE SIGNIFICANTLY WITH FOR AT LEAST FIVE YEARS

ENTRANCES

19 ENTRANCES SHALL BE PROVIDED IN ACCORDANCE WITH 11B-206 4 ENTRANCES ENTRANCE DOORS, DOORWAYS AND GATES SHALL COMPLY WITH 11B-404 DOORS, DOORWAYS AND GATES AND SHALL BE ON AN ACCESSIBLE ROUTE

20 ALL ENTRANCES AND EXTERIOR GROUND FLOOR EXITS TO BUILDINGS AND FACILITIES SHALL COMPLY WITH LOCAL BUILDING CODE

21 WHERE DIRECT ACCESS IS PROVIDED FOR PEDESTRIANS FROM A PARKING STRUCTURE TO A BUILDING OR FACILITY ENTRANCE

22 DIRECT CONNECTIONS TO OTHER FACILITIES SHALL PROVIDE AN ACCESSIBLE ROUTE, AND SHALL BE IN THE FORM OF CONNECTIONS TO BOARDING PLATFORMS AND ALL TRANSPORTATION SYSTEM ELEMENTS REQUIRED TO BE ACCESSIBLE. ANY ELEMENTS PROVIDED TO FACILITATE FUTURE DIRECT CONNECTIONS SHALL BE ON AN ACCESSIBLE ROUTE CONNECTING BOARDING PLATFORMS AND ALL TRANSPORTATION SYSTEM ELEMENTS REQUIRED TO BE ACCESSIBLE

TECHNICAL REQUIREMENTS FOR ACCESSIBLE ROUTES

23 ACCESSIBLE ROUTES SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING COMPONENTS WALKING SURFACES WITH A RUNNING SLOPE NOT STEEPER THAN 1:21 (5%), DOORWAYS, RAMPS, CURB RAMPS EXCLUDING THE FLARED SIDES, ELEVATORS, AND PLATFORM LIFTS

24 THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20 (5%). THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48 (2.083%)

25 EXCEPT AT TURNS OR PASSING SPACES, THE CLEAR WIDTH OF WALKING SURFACES SHALL BE 36 INCHES MINIMUM

26 THE CLEAR WIDTH FOR WALKING SURFACES IN CORRIDORS SERVING AN OCCUPANT LOAD OF 50 OR MORE SHALL BE 44 INCHES MINIMUM

27 THE CLEAR WIDTH FOR SIDEWALKS AND WALKS SHALL BE 48 INCHES MINIMUM

28 THE CLEAR WIDTH FOR AISLES SHALL BE 36 INCHES MINIMUM IF SERVING ELEMENTS ON ONLY ONE SIDE, AND 44 INCHES MINIMUM IF SERVING ELEMENTS ON BOTH SIDES

DOORS, DOORWAYS AND GATES

29 DOORS, DOORWAYS, AND GATES PROVIDING USER PASSAGE SHALL BE PROVIDED IN ACCORDANCE WITH 11B-206 3 DOORS, DOORWAYS AND GATES

30 DOORS, DOORWAYS AND GATES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH 11B-404 DOORS, DOORWAYS AND GATES

31 REVOLVING DOORS, REVOLVING GATES, AND TURNSTILES SHALL NOT BE PART OF AN ACCESSIBLE ROUTE

32 AT LEAST ONE OF THE ACTIVE LEAVES OF DOORWAYS WITH TWO LEAVES SHALL COMPLY WITH LOCAL REQUIRED CLEAR WIDTH AND MANEUVERING CLEARANCES

33 DOOR OPENINGS SHALL PROVIDE A CLEAR WIDTH OF 32 INCHES MINIMUM. CLEAR OPENING OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES OPENINGS MORE THAN 24 INCHES DEEP SHALL PROVIDE A CLEAR OPENING OF 36 INCHES MINIMUM. THOSE SHALL BE WITH REFLECTIVE TAPE THE REQUIRED CLEAR OPENING WITH LOWER THAN 36 INCHES ABOVE THE FINISH FLOOR OR GROUND. FREQUENTLY USED DOORS SHALL BE 81 INCHES IN BASE AND 80 INCHES ABOVE THE FINISH FLOOR OR GROUND MUST EXCEED 4 INCHES

34 MINIMUM MANEUVERING CLEARANCES AT DOORS AND GATES SHALL COMPLY WITH 11B-404.2.4 MANEUVERING CLEARANCES (SWINGING DOORS AND GATES) SHALL EXTEND THE FULL WIDTH OF THE DOORWAY AND THE REQUIRED LATCH SIDE OR HINGE SIDE CLEAR WIDTH

35 SWINGING DOORS AND GATES SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 11B-404.2.4.1

36 DOORWAYS LESS THAN 36 INCHES WIDE IN THOUT DOORS OR GATES SLIDING DOORS OR FOLDING DOORS SHALL HAVE MANEUVERING CLEARANCES

37 MANEUVERING CLEARANCES FOR DOORWAY APPROACH SHALL BE PROVIDED WITH THE WALL SIDE PERPENDICULAR TO THE LATCH SIDE AND IN THE DIRECTION OF DOORWAY, OR WITHIN 24 INCHES OF THE LATCH SIDE OF AN EXTERIOR DOORWAY. PROJECTS WITH THEIR WALLS WITHIN 24 INCHES OF THE FACE OF THE DOOR, MEASURED PERPENDICULAR TO THE FACE OF THE DOOR OR GATE

38 THRESHOLDS, IF PROVIDED AT DOORWAYS, SHALL BE ½ INCH HIGH MAXIMUM RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH 11B-302 FLOOR OR GROUND SURFACES AND 11B-303 CHANGES IN LEVEL

39 HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL COMPLY WITH 11B309 OPERATION OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES

40 THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE OTHER THAN FIRE DOORS SHALL BE AS FOLLOW

A INTERIOR HINGED DOORS AND GATES 5 POUNDS MAXIMUM

B SLIDING OR FOLDING DOORS 5 POUNDS MAXIMUM

C REQUIRED FIRE DOORS, THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY NOT TO EXCEED 15 POUNDS

D EXTERIOR HINGED DOORS, 5 POUNDS MAXIMUM

41 PARKING DOOR AND GATE SURFACES WITHIN 10 INCHES OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACES SHALL BE WITHIN ⅛ INCH OF THE SAME PLANE AS THE OTHER AND BE FREE OF SHARP OR ABRASIVE EDGES CARPET CREATED BY ADDED NON-PLANES SHALL BE CONFIGURED

RAMPS

42 PROVIDE RAMP DETAILS, INCLUDING SLOPE, LANDINGS AND HANDRAILS

43 RAMP RUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12 (8.33%)

44 CROSS SLOPE OF RAMP RUNS SHALL NOT BE STEEPER THAN 1:48 (2.083%)

45 FLOOR OR GROUND SURFACES AT RAMP RUNS SHALL COMPLY WITH TYPICAL FLOOR OR GROUND SURFACES CHANGES IN LEVEL OF LESS THAN ¼ INCH MAY BE VERTICAL CHANGES IN LEVEL BETWEEN ¼ INCH AND ½ INCH SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2 CHANGES IN LEVEL GREATER THAN ½ INCH SHALL BE RAMPED

46 THE CLEAR WIDTH OF A RAMP RUN SHALL BE 48 INCHES MINIMUM

47 THE RISE FOR ANY RAMP RUN SHALL BE 30 INCHES MAXIMUM

48 RAMPS SHALL HAVE LANDINGS AT THE TOP AND THE BOTTOM OF EACH RAMP RUN

49 LANDINGS SHALL COMPLY WITH 11B-302 FLOOR OR GROUND SURFACES CHANGES IN LEVEL ARE NOT PERMITTED

50 THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING

51 TOP LANDINGS SHALL BE 60 INCHES WIDE MINIMUM

52 THE LANDING CLEAR LENGTH SHALL BE 60 INCHES LONG MINIMUM

53 BOTTOM LANDINGS SHALL EXTEND 72 INCHES MINIMUM IN THE DIRECTION OF RAMP RUN

54 RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING 60 INCHES MINIMUM BY 72 INCHES MINIMUM IN THE DIRECTION OF DOWNWARD TRAVEL FROM THE UPPER RAMP RUN

55 WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY LOCAL BUILDING CODE SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA. WHERE WHEN FULLY OPEN, THE SWING DOOR DOES NOT REDUCE THE LANDING WIDTH BY MORE THAN 3 INCHES. DOORS IN ANY POSITION SHALL NOT REDUCE THE MINIMUM DIMENSION OF THE RAMP LANDING TO LESS THAN 42 INCHES

56 RAMP RUNS SHALL HAVE COMPLIANT HANDRAILS

57 EDGE PROTECTION SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND AT EACH SIDE OF RAMP LANDINGS

58 A CURB 2 INCHES HIGH MINIMUM OR BARRIER SHALL BE PROVIDED THAT PREVENTS THE PASSAGE OF A 4 INCH DIAMETER SPHERE, WHERE ANY PORTION OF THE SPHERE IS WITHIN 4 INCHES OF THE FINISH FLOOR OR GROUND SURFACE TO PREVENT WHEEL ENTRAPMENT. THE CURB OR BARRIER SHALL PROVIDE A CONTINUOUS AND LIGHT-TRAFFIC BARRIER ALONG THE LENGTH OF THE RAMP

59 LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT THE ACCUMULATION OF WATER

HANDRAILS

60 HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS AND RAMPS

61 HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCHBACK OR DOGLEG STAIRS AND RAMPS SHALL BE CONTINUOUS BETWEEN FLIGHTS OR RUNS

62 TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34 INCHES MINIMUM AND 38 INCHES MAXIMUM VERTICALLY ABOVE WALKING SURFACES, STAIR NOSINGS, AND RAMP SURFACES HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE WALKING SURFACES, STAIR NOSINGS, AND RAMP SURFACES

63 CLEARANCE BETWEEN HANDRAIL GRIPPING SURFACES AND ADJACENT SURFACES SHALL BE 1½ INCHES MINIMUM. HANDRAILS MAY BE LOCATED IN A RECESS IF THE RECESS IS 3 INCHES MAXIMUM DEEP AND 18 INCHES MINIMUM CLEAR ABOVE THE TOP OF THE HANDRAIL

64 HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES. THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL NOT BE OBSTRUCTED FOR MORE THAN 20 PERCENT OF THEIR LENGTH. WHERE OBSTRUCTIONS EXIST OR OCCUR THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL BE DETERMINED AT THE MINIMUM GRIPPING SURFACE HANDRAIL GRIPPING SURFACES ARE NOT OBSTRUCTED BY MORE THAN 20 PERCENT OF THEIR LENGTH. WHERE THESE OBSTRUCTIONS OCCUR THE BOTTOMS OF THOSE PORTIONS SHALL BE DETERMINED AT THE MINIMUM GRIPPING SURFACE HANDRAIL GRIPPING SURFACES WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1¼ INCHES MINIMUM AND 2 INCHES MAXIMUM

65 HANDRAIL GRIPPING SURFACES WITH A NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4 INCHES MINIMUM AND 6¼ INCHES MAXIMUM, AND A CROSS-SECTION DIMENSION OF 2¼ INCHES MAXIMUM

66 HANDRAIL GRIPPING SURFACES SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS

67 HANDRAIL GRIPPING SURFACES SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS

WATER CLOSETS AND TOILET COMPARTMENTS CONT'D

35. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH SECTION 11B-309.4 OPERATION. EXCEPT TWENTY SHALL BE LOCATED IN INCHES MAXIMUM ABOVE THE FLOOR. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET EXCEPTION: AMBULATORY ACCESSIBLE COMPARTMENTS

37. TOILET PAPER DISPENSERS SHALL COMPLY WITH SECTION 11B-309.4 OPERATION AND SHALL BE 7 INCHES MINIMUM AND 9 INCHES MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE BELOW THE GRAB BAR, 15 INCHES MINIMUM ABOVE THE FINISH FLOOR AND SHALL NOT BE LOCATED BEHIND THE GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROL DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW

38. WHEELCHAIR ACCESSIBLE COMPARTMENT'S SHALL BE 60 INCHES WIDE MINIMUM MEASURE PERPENDICULAR TO THE SIDE WALL, AND 56 INCHES DEEP MINIMUM FOR WALL HUNG WATER CLOSETS AND 56 INCHES DEEP MINIMUM FOR FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. WHEELCHAIR ACCESSIBLE COMPARTMENTS FOR CHILDREN'S USE SHALL BE 56 INCHES WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 59 INCHES DEEP MINIMUM FOR WALL HUNG AND FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL.

39. IN A WHEELCHAIR ACCESSIBLE COMPARTMENT WITH AN INSWING DOOR, A MINIMUM 60 INCHES WIDE BY 56 INCHES DEEP MANEUVERING SPACE SHALL BE PROVIDED IN FRONT OF THE CLEARANCE REQUIRED IN SECTION 11B-604.8.1.1 WHEELCHAIR ACCESSIBLE COMPARTMENT SIZE.

40. IN A WHEELCHAIR ACCESSIBLE COMPARTMENT WITH A SIDE OPENING DOOR, EITHER AN SWINGING OR SLIDING DOOR A MINIMUM 60 INCHES WIDE AND 60 INCHES DEEP MANEUVERING SPACE SHALL BE PROVIDED IN FRONT OF THE WATER CLOSET

41. IN A WHEELCHAIR ACCESSIBLE COMPARTMENTS WITH DIAGONAL DOOR (FACING WATER CLOSET), EITHER INSWINGING OR OUTSWINGING, A MINIMUM 60 INCHES WIDE AND 60 INCHES DEEP MANEUVERING SPACE SHALL BE PROVIDED IN FRONT OF THE WATER CLOSET.

42. TOILET COMPARTMENT DOORS, INCLUDING DOOR HARDWARE SHALL COMPLY WITH SECTION 11B-404 DOORS, DOORWAYS AND GATES EXCEPT THAT IF THE APPROACH IS FROM THE PUSH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 48 INCHES MINIMUM MEASURED PERPENDICULAR TO THE COMPARTMENT DOOR IN ITS CLOSED POSITION. DOOR SHALL BE LOCATED IN FRONT PARTITION OR IN THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET

43. WHERE TOILET COMPARTMENT DOORS ARE LOCATED IN THE FRONT PARTITION, THE DOOR OPENING SHALL BE 4 INCHES MAXIMUM FROM THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET WHERE LOCATED IN THE SIDE WALL OR PARTITION. THE DOOR OPENING SHALL BE 4 INCHES MAXIMUM FROM THE FRONT PARTITION AND THE DOOR SHALL BE SELF-CLOSING

44. A DOOR PULL COMPLYING WITH SECTION 11B-404.2.7 DOOR AND GATE HARDWARE SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. DOOR SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE. DOORS MAY SWING INTO THAT PORTION OF THROAT/CLEARING SPACE WHICH DOES NOT OVERLAP THE CLEARANCE REQUIRED AT A WATER CLOSET

45. AT LEAST ONE SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9 INCHES MINIMUM ABOVE THE FINISH FLOOR AND 6 INCHES DEEP MINIMUM BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION, EXCLUDING OF PARTITION SUPPORT MEMBERS. PARTITION COMPONENTS AT TOE CLEARANCES SHALL BE SMOOTH WITHOUT SHARP EDGES OR ABRASIVE SURFACES. COMPARTMENTS FOR CHILDREN'S USE SHALL PROVIDE A TOE CLEARANCE OF 12 INCHES MINIMUM ABOVE THE FINISH FLOOR.

46. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL HAVE A DEPTH OF 35 INCHES MINIMUM AND 37 INCHES MAXIMUM

47. WATER CLOSETS AND TOILET COMPARTMENTS FOR CHILDREN'S USE SHALL COMPLY WITH SECTION 11B-604.9 WATER CLOSET'S AND TOILET COMPARTMENTS FOR CHILDREN'S USE AND FOLLOW SUGGESTED DIMENSIONS

48. URINALS SHALL BE STALL-TYPE OR THE WALL-HUNG TYPE WITH THE RIM 17 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. MINIMUM SHALL BE 13 INCHES OR 9 MINIMUM MEASURED FROM THE OUTER FACE OF THE URINAL RIM TO THE BACK OF THE FIXTURE

49. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL SHALL BE MOUNTED AT A MAXIMUM OF 44 INCHES ABOVE THE FINISH FLOOR

50. LAVATORIES AND SINKS SHALL COMPLY WITH LOCAL BUILDING CODE

51. FOR LAVATORIES AND SINKS, A CLEAR FLOOR SPACE COMPLYING WITH SECTION 11B-305 CLEAR FLOOR OR GROUND SURFACE POSITIONED FOR A FORWARD APPROACH AND KNEE AND TOE CLEARANCE SHALL BE PROVIDED

52. LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND

WASHING MACHINE AND CLOTHES DRYERS

53. WASHING MACHINES AND CLOTHES DRYER'S OPERABLE PART'S MUST COMPLY WITH SECTION 11B-308 OPERABLE PARTS

54. TOP LOADING WASHERS SHALL HAVE THE DOOR TO THE LAUNDRY COMPARTMENT LOCATED 36 INCHES MAXIMUM ABOVE THE FINISH FLOOR. FRONT LOADING WASHERS SHALL HAVE THE BOTTOM OF THE OPENING TO THE LAUNDRY COMPARTMENT LOCATED 15 INCHES MINIMUM AND 36 INCHES MAXIMUM ABOVE THE FINISH FLOOR

F. COMMUNICATION ELEMENTS AND FEATURES

FIRE ALARM SYSTEMS

1. WHERE FIRE ALARM SYSTEMS PROVIDE AUDIBLE ALARM COVERAGE, ALARMS SHALL COMPLY WITH LOCAL CODE ALARM SYSTEMS

2. ALARMS IN PUBLIC USE AREAS AND COMMON USE AREAS SHALL COMPLY LOCAL BUILDING CODE

3. WHERE EMPLOYEE WORK AREAS HAVE AUDIBLE ALARM COVERAGE, THE WIRING SYSTEM SHALL BE DESIGNED SO THAT VISIBLE ALARMS CAN BE INTEGRATED INTO THE ALARM SYSTEM

ASSISTIVE LISTENING SYSTEMS

5. ASSISTIVE LISTENING SYSTEMS SHALL BE PROVIDED IN ASSEMBLY AREAS INCLUDING CONFERENCE AND MEETING ROOMS USED FOR THE PURPOSE OF SYSTEMWIDE EDUCATIONAL OR CIVIC GATHERINGS, OR SIMILAR PURPOSES

NOTE: ASSEMBLY AREAS INCLUDE, BUT ARE NOT LIMITED TO, CLASSROOMS LECTURE HALLS, COURTROOMS PUBLIC MEETING ROOMS, PUBLIC HEARING ROOMS LEGISLATIVE CHAMBERS, MOTION PICTURE HOUSES, AUDITORIA, THEATERS PLAYHOUSES, DINNER THEATERS, CONCERT HALLS, CENTERS FOR THE PERFORMING ARTS, AMPHITHEATERS, ARENAS, STADIUMS, GRANDSTANDS, OR COMPETITION ARENAS

6. ASSISTIVE LISTENING SYSTEM SHALL PROVIDE AN AMPLIFICATION SYSTEM UTILIZING TRANSMITTERS, RECEIVERS, AND COUPLING DEVICES TO BYPASS THE ACOUSTICAL SPACE BETWEEN A SOUND SOURCE AND A LISTENER BY MEANS OF AN INDUCTION LOOP, RADIO FREQUENCY, INFRARED, OR DIRECT-WIRED EQUIPMENT

7. PROVIDE ( ) ASSISTIVE LISTENING SYSTEMS. A MINIMUM NUMBER OF RECEIVERS EQUAL TO 4 PERCENT OF THE TOTAL NUMBER OF SEATS, BUT IN NO CASE LESS THAN TWO §11B-219.3

8. WHERE A BUILDING CONTAINS MORE THAN ONE ASSEMBLY AREA UNDER ONE MANAGEMENT, THE TOTAL NUMBER OF REQUIRED RECEIVERS MAY BE CALCULATED USING THE TOTAL NUMBER OF SEATS IN THE ASSEMBLY AREAS PROVIDED THAT ALL RECEIVERS ARE USABLE WITH ALL SYSTEMS §11B219 (NOTE EXCEPTION)

9. TWENTY-FIVE PERCENT MINIMUM OF RECEIVERS PROVIDED FOR ASSISTIVE LISTENING SYSTEMS, BUT NO FEWER THAN TWO SHALL BE HEARING AID COMPATIBLE (NOTE EXCEPT WHERE ALL SEATS IN AN ASSEMBLY AREA ARE SERVED BY MEANS OF AN INDUCTION LOOP, §11B-219.3

10. WHEN ASSISTIVE LISTENING SYSTEMS ARE LIMITED TO SPECIFIC AREAS OR SEATS, SUCH AREAS OR SEATS SHALL BE WITHIN A 100-FOOT VIEWING DISTANCE OF THE STAGE OR PLAYING AREA AND SHALL HAVE A COMPLETE VIEW OF THE STAGE OR PLAYING AREA §11B-219.4

11. PERMANENTLY INSTALLED ASSISTIVE LISTENING SYSTEMS ARE REQUIRED IN AREAS (F 11) THEY HAVE FIXED SEATING AND (SA) THEY ACCOMMODATE AT LEAST 50 PERSONS OR (50) THEY HAVE AUDIO AMPLIFICATION SYSTEMS, EXCEPT THOSE USED EXCLUSIVELY FOR PAGING AND/OR BACKGROUND MUSIC §11B-219.2 § 11B-219.5

ASSISTIVE LISTENING SYSTEMS CONT'D

12. PORTABLE ASSISTIVE-LISTENING SYSTEMS MAY SERVE MORE THAN ONE CONFERENCE OR MEETING ROOMS IF AN ADEQUATE NUMBER OF ELECTRICAL OUTLETS OR OTHER SUPPLEMENTARY WIRING IS PROVIDED AND PERMANENTLY INSTALLED SYSTEMS ARE NOT REQUIRED §11B-219.5

13. RECEIVERS REQUIRED TO BE HEARING AID COMPATIBLE SHALL INTERFACE WITH TELECOILS BY INDUCING AIDS THROUGH THE PROVISION OF NEUTRALIZING § 11B-219.3

14. ASSISTIVE LISTENING SYSTEMS SHALL BE CAPABLE OF PROVIDING A SOUND PRESSURE LEVEL FROM 110 – 118 DB WITH A DYNAMIC RANGE ON THE VOLUME CONTROL OF 50 DB §11B-219.4

15. SIGNAL TO NOISE RATIO FOR INTERNALLY GENERATED NOISE IN ASSISTIVE LISTENING SYSTEMS SHALL BE 18 DB MINIMUM §11B-219.5

17. PEAK CLIPPING SHALL NOT EXCEED 18 DB OF CLIPPING RELATIVE TO THE PEAKS OF SPEECH §11B-708.5

TWO-WAY COMMUNICATION SYSTEMS

16. TWO WAY COMMUNICATION SYSTEMS THAT ARE PROVIDED TO GAIN ADMITTANCE TO A BUILDING OR FACILITY OR TO RESTRICTED AREAS WITHIN A BUILDING OR FACILITY SHALL PROVIDE BOTH AUDIBLE AND VISUAL SIGNALS. HANDSET CORDS, IF PROVIDED, SHALL BE 29 INCHES LONG MINIMUM §11B-708.1, 11B-708

18. COMMON USE OR PUBLIC USE SYSTEM INTERFACE OF COMMUNICATIONS SYSTEMS BETWEEN A RESIDENTIAL DWELLING UNIT AND A SITE, BUILDING OR FACILITY ENTRANCE SHALL INCLUDE THE CAPABILITY OF SUPPORTING VOICE AND TTY COMMUNICATION WITH THE RESIDENTIAL DWELLING UNIT ACCESSIBLE §11B-708.1

20. RESIDENTIAL DWELLING UNIT SYSTEM INTERFACE OF COMMUNICATIONS SYSTEMS BETWEEN A RESIDENTIAL DWELLING UNIT AND A SITE, BUILDING OR FLOOR ENTRANCE SHALL INCLUDE A TELEPHONE JACK CAPABLE OF SUPPORTING VOICE AND TTY COMMUNICATION WITH THE COMMON USE OR PUBLIC USE SYSTEM INTERFACE §11B-708.2

TELEPHONES

21. WHERE COIN OPERATED PUBLIC PAY TELEPHONES, COINLESS PUBLIC PAY TELEPHONES, PUBLIC CLOSED-CIRCUIT TELEPHONES, PUBLIC COURTESY PHONES, OR OTHER TYPES OF PUBLIC TELEPHONES ARE PROVIDED, PUBLIC TELEPHONES SHALL BE PROVIDED IN ACCORDANCE WITH 11B-217 TELEPHONES FOR EACH TYPE OF PUBLIC TELEPHONE PROVIDED. FOR PURPOSES OF THIS SECTION, A BANK OF TELEPHONES SHALL BE CONSIDERED TO BE TWO OR MORE ADJACENT TELEPHONES §11B-217.1

22. EXCEPT DRIVE-UP ONLY PUBLIC TELEPHONES, WHERE PUBLIC TELEPHONES ARE PROVIDED, WHEELCHAIR ACCESSIBLE TELEPHONES COMPLYING WITH 11B-704.2 SHALL BE PROVIDED IN ACCORDANCE WITH TABLE 1 §217.2 § 11B-217.2

23. PROVIDE 3% WHEELCHAIR ACCESSIBLE TELEPHONES IN ACCORDANCE WITH TABLE 11B-217.2

24. ALL PUBLIC TELEPHONES SHALL HAVE VOLUME CONTROLS COMPLYING WITH 11B-704.3 § 11B-217.3

25. TTYS COMPLYING WITH 11B-704.4 SHALL BE PROVIDED IN ACCORDANCE WITH 11B-217.4

26. WHERE A BANK OF TELEPHONES IN THE INTERIOR OF A BUILDING CONSISTS OF THREE OR MORE PUBLIC PAY TELEPHONES, AT LEAST ONE PUBLIC PAY TELEPHONE AT THE BANK SHALL BE PROVIDED WITH A SHELF AND AN ELECTRICAL OUTLET IN ACCORDANCE WITH 11B-704.5 § 11B-217.5 (SEE EXCEPTION)

SIGNS

27. INTERIOR AND EXTERIOR SIGNS IDENTIFYING PERMANENT ROOMS AND SPACES SHALL COMPLY WITH 11B-703.1 GENERAL. 11B-703.2 RAISED CHARACTERS 11B-703.3 BRAILLE AND 11B-703.5 VISUAL CHARACTERS. WHERE PICTOGRAMS ARE PROVIDED AS DESIGNATIONS OF PERMANENT INTERIOR ROOMS AND SPACES, THE PICTOGRAMS SHALL COMPLY WITH 11B-703.6 PICTOGRAMS AND SHALL HAVE TEXT DESCRIPTORS COMPLYING WITH 11B703 (SAME AS 11B-703.5 § 11B-216.2 (SEE EXCEPTION)

36. SIGNS THAT PROVIDE DIRECTION TO OR INFORMATION ABOUT INTERIOR AND EXTERIOR SPACES AND FACILITIES OF THE SITE SHALL COMPLY WITH 11B-703.5 VISUAL CHARACTERS. § 11B-216.3

28. IN EXISTING BUILDINGS AND FACILITIES WHERE NOT ALL ENTRANCES COMPLY WITH 11B-404 DOORS, DOORWAYS, AND GATES, COMPLIANT ENTRANCES SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 11B-703.7.2.1 IBA. DIRECTIONAL SIGNS COMPLYING WITH 11B-703.5 VISUAL CHARACTERS THAT INDICATE THE LOCATION OF THE NEAREST ENTRANCE COMPLYING WITH 11B-404 SHALL BE PROVIDED AT ENTRANCES THAT DO NOT COMPLY WITH 11B-404 DOORS, DOORWAYS, AND GATES, DIRECTIONAL SIGNS COMPLYING WITH 11B-703.5 VISUAL CHARACTERS, INCLUDING THE INFORMATION SYMBOL OF ACCESSIBILITY COMPLYING WITH 11B-703.7.2.1 IBA, INDICATING THE ACCESSIBLE ROUTE TO THE NEAREST ACCESSIBLE ENTRANCE SHALL BE PROVIDED AT LOCATIONS WHEN THE ACCESSIBLE ROUTE DIVERGES FROM THE REGULAR CIRCULATION PATH. § 11B216.3(SEE EXCEPTIONS)

30. DOORWAYS LEADING TO TOILET ROOMS AND BATHING ROOMS COMPLYING WITH 11B-603 TOILET AND BATHING ROOMS SHALL BE IDENTIFIED BY A GRAPHIC SYMBOL COMPLYING WITH 11B-703.7.2 TOILET AND BATHING ROOM OF ONE TRIS SYMBOLS WHERE EXISTING TOILET ROOMS OR BATHING ROOMS DO NOT COMPLY WITH 11B603TOILET AND BATHING ROOMS, DIRECTIONAL SIGNS INDICATING THE LOCATION OF THE NEAREST COMPLIANT TOILET ROOM OR BATHING ROOM WITHIN THE FACILITY SHALL BE PROVIDED. SIGNS SHALL COMPLY WITH 11B-703.5 VISUAL CHARACTERS AND SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 11B-703.7.2.1 IBA. WHERE EXISTING TOILET ROOMS OR BATHING ROOMS DO NOT COMPLY WITH 11B-603 TOILET AND BATHING ROOMS, THE TOILET ROOMS OR BATHING ROOMS COMPLYING WITH 11B-603 TOILET AND BATHING ROOMS SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 11B703.7.2.1IBA. WHERE CLUSTERED SINGLE USER TOILET ROOMS OR BATHING FACILITIES ARE PERMITTED TO USE EXCEPTIONS TO 11B-213.2 TOILET AND BATHING ROOMS, TOILET ROOMS OR BATHING FACILITIES COMPLYING WITH 11B 603 TOILET AND BATHING ROOMS SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 11B-703.7.2.1 IBA UNLESS ALL TOILET ROOMS AND BATHING FACILITIES COMPLY WITH 11B-603 TOILET AND BATHING ROOMS. EXISTING BUILDINGS THAT HAVE BEEN REMODELED TO PROVIDE SPECIFIC TOILET ROOMS OR BATHING ROOMS FOR PUBLIC USE THAT COMPLY WITH THESE BUILDING STANDARDS SHALL HAVE THE LOCATION OF AND THE DIRECTIONS TO THESE ROOMS POSTED AT OR NEAR THE BUILDING ENTRY OR ENTRANCE ON A SIGN COMPLYING WITH 11B-703.5 VISUAL CHARACTERS INCLUDING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 11B703.7.2.1 IBA. §11B-216.9

31. SIGNS WITH TACTILE CHARACTERS SHALL COMPLY WITH 11B703.4 INSTALLATION HEIGHT AND LOCATION. §11B-703.4

A. TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER. IT SHALL BE 60 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER LINE OF RAISED CHARACTERS. § 11B 703.4.1 (SEE EXCEPTION)

B. WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE ACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH BOTH ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT-HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES MINIMUM BY 18 INCHES MINIMUM CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. WHERE PERMANENT IDENTIFICATION SIGNAGE IS PROVIDED FOR ROOMS AND SPACES THEY SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR ABOVE WHERE THE DOOR OR SPACE. SIGNS THAT IDENTIFY EXITS SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE EXITS THE ROOM OR SPACE. 11B- 703.4.1 (SEE EXCEPTION)

32. VISUAL CHARACTERS SHALL COMPLY WITH THE FOLLOWING, EXCEPT WHERE VISUAL CHARACTERS COMPLY WITH 11B-703.7 RAISED CHARACTERS, AND ARE ACCOMPANIED BY BRAILLE COMPLYING WITH 11B-703.3 BRAILLE, THEY SHALL NOT BE REQUIRED TO COMPLY WITH 11B-703.5.2 THROUGH 11B-703.5.9. § 11B-703.5.2 AND 11B-703.5.9

A. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND. §11B-703.5.1

B. CHARACTERS SHALL BE UPPERCASE OR LOWERCASE OR A COMBINATION OF BOTH. §11B703.5.2

C. CHARACTERS SHALL BE CONVENTIONAL IN FORM. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS. § 11B-703.5.3

D. CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER 'O' IS 55 80 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER 'I'. § 11B-703.5.4

E. MINIMUM CHARACTER HEIGHT SHALL COMPLY WITH TABLE 11B-703.5.5. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH TOWARDS THE SIGN. CHARACTER HEIGHT SHALL BE BASED ON THE UPPERCASE LETTER 'I'. § 11B703.5.5(SEE EXCEPTION)

F. VISUAL CHARACTERS SHALL BE 40 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND. §11B-703.5.6 (SEE EXCEPTIONS)

G. STROKE THICKNESS OF THE UPPERCASE LETTER 'I' SHALL BE 10 PERCENT MINIMUM AND 30 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER. §11B-703.5.7

SIGNS CONT'D

H. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT CHARACTERS, EXCLUDING WORD SPACES. SPACING BETWEEN INDIVIDUAL CHARACTERS SHALL BE 10 PERCENT MINIMUM AND 35 PERCENT MAXIMUM OF CHARACTER HEIGHT. §11B-703.5.8

I. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE CHARACTER HEIGHT. §11B703.5.9

J. TEXT SHALL BE IN A HORIZONTAL FORMAT. §11B703.5.10

33. PICTOGRAMS SHALL COMPLY WITH THE FOLLOWING:

A. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES MINIMUM. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD. §11B-703.6.1

B. PICTOGRAMS AND THEIR FIELD SHALL HAVE A NON-GLARE FINISH. PICTOGRAMS SHALL CONTRAST WITH THEIR FIELD EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR A DARK PICTOGRAM ON A LIGHT FIELD. §11B-703.6.2

C. PICTOGRAMS SHALL HAVE TEXT DESCRIPTORS LOCATED DIRECTLY BELOW THE PICTOGRAM FIELD. TEXT DESCRIPTORS SHALL COMPLY WITH 11B703.5 RAISED CHARACTERS, 11B-703.3 BRAILLE AND 11B-703.5 INSTALLATION HEIGHT AND LOCATION. §11B-703.6.3

34. SYMBOLS SHALL COMPLY WITH THE FOLLOWING

A. DOORWAYS LEADING TO TOILET ROOMS AND BATHING ROOMS SHALL BE IDENTIFIED BY A GRAPHIC SYMBOL COMPLYING WITH 11B703.7.2.5 ITOA 5 F AND BATHING FACILITIES GEOMETRIC SYMBOLS. THE SYMBOL SHALL BE MOUNTED AT 60 INCHES MINIMUM AND 65 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED FROM THE CENTERLINE OF THE SYMBOL. WHERE A DOOR IS PROVIDED THE SYMBOL SHALL BE MOUNTED WITHIN 1 INCH OF THE VERTICAL CENTERLINE OF THE DOOR. §11B-703.7.2.5 (SEE EXCEPTION)

B. MEN'S TOILET AND BATHING FACILITIES SHALL BE IDENTIFIED BY AN EQUILATERAL TRIANGLE, 9 INCH THICK WITH EDGES 12 INCHES LONG AND A WIDTH POINTING UPWARD. THE TRIANGLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND. §11B-703.7.2.6 I

C. WOMEN'S TOILET AND BATHING FACILITIES SHALL BE IDENTIFIED BY A CIRCLE, 12 INCH THICK AND 12 INCHES IN DIAMETER. THE CIRCLE SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND §11B-703.7.2.6 II

D. UNISEX TOILET AND BATHING FACILITIES SHALL BE IDENTIFIED BY A CIRCLE, 12 INCH THICK AND 12 INCHES IN DIAMETER WITH A 12 INCH THICK TRIANGLE WITH A VERTEX POINTING UPWARD SUPERIMPOSED ON THE CIRCLE AND WITHIN THE CIRCLE DIAMETER. THE TRIANGLE SYMBOL SHALL CONTRAST WITH THE CIRCLE SYMBOL, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND. THE CIRCLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND §11B-703.7.2.6 III

G. SPECIFIC ROOMS SPACES AND IN EVENTS

KITCHENS, KITCHENETTES AND WET BARS

1. SINKS SHALL COMPLY WITH 11B-606 LAVATORIES AND SINKS §11B-804.4

2. AT LEAST 50 PERCENT OF SHELF SPACE IN STORAGE FACILITIES SHALL COMPLY WITH 11B-811 STORAGE. §11B804.3

3. SINKS WHERE SINKS ARE PROVIDED AT LEAST 5 PERCENT, BUT NO FEWER THAN ONE, OF EACH TYPE PROVIDED IN EACH ACCESSIBLE ROOM OR SPACE SHALL COMPLY WITH SECTION 11B-804.

1 MOP, SERVICE OR SCULLERY SINKS SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-212.3 (SEE EXCEPTION)

2 BOWLS SINKS AS DEFINED IN CALIFORNIA PLUMBING CODE SECTION 221.0, SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-606 (SEE EXCEPTION)

604. BOWLS

4. WHERE WALL BOWLS ARE PROVIDED IN AN INTERIOR LOCATION, AT LEAST 5 PERCENT, BUT NO FEWER THAN ONE, OF EACH TYPE SHALL COMPLY WITH 11B-306 IN RESIDENTIAL FACILITY'S WHERE WALL BOWLS ARE PROVIDED FOR EACH RESIDENTIAL DWELLING UNIT, WALL BOWLS COMPLYING WITH 11B 306 SHALL BE PROVIDED FOR EACH RESIDENTIAL DWELLING UNIT REQUIRED TO PROVIDE MOBILITY FEATURES COMPLYING WITH 11B-809.2 "WORK SURFACES" WHEN 4 AND MORE ARE FEATURES COMPLYING WITH CHAPTER 11A. DIVISION IV. §11B-226.2 WINDOWS

5. WHERE GLAZED OPENINGS ARE PROVIDED IN ACCESSIBLE ROOMS OR SPACES FOR OPERATION BY OCCUPANTS, AT LEAST ONE OPENING SHALL COMPLY WITH 11B-309. EATH GLAZED OPENING REQUIRED BY AN ADMINISTRATIVE AUTHORITY TO BE OPERABLE SHALL COMPLY WITH 11B 309. §11B-226.1 (SEE EXCEPTIONS)

69. BUILT-IN FURNITURE

BENCHES

1. (C) FAR FLOOR OR GROUND SPACE COMPLYING WITH 11B309 SHALL BE PROVIDED AND SHALL BE POSITIONED AT THE END OF THE BENCH SEAT AND PARALLEL TO THE SHORT AXIS OF THE BENCH. §11B-903.2

2. BENCHES SHALL HAVE SEATS THAT ARE 42 INCHES LONG MINIMUM AND 20 INCHES DEEP MINIMUM AND 24 INCHES DEEP MAXIMUM §11B-903.3

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SHEET TITLE

ACCESSIBILITY NOTES (PUBLIC 2)

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO	236
DATE	06/27/17
SCALE	
SHEET NO	A04.06

DIVISION I – APPLICATION

APPLICATION

1. HOUSING ACCESSIBILITY SHALL APPLY TO THE FOLLOWING:

A. ALL NEWLY CONSTRUCTED COVERED MULTIFAMILY DWELLINGS

B. NEW COMMON USE SPACES SERVING, IF EXISTING COVERED MULTIFAMILY DWELLING

C. ADDITIONS TO EXISTING BUILDINGS, WHERE THE ADDITION ALONE MEETS THE DEFINITION OF A COVERED MULTIFAMILY DWELLING.

D. COMMON-USE AREAS SERVING COVERED MULTIFAMILY DWELLINGS.

E. WHERE ANY PORTION OF A BUILDING'S EXTERIOR IS PRE-BUILED, BUT THE BALANCE OF THE BUILDING IS REMOVED, INCLUDING ALL STRUCTURAL PORTIONS OF FLOORS AND CEILINGS, THE BUILDING IS CONSIDERED A NEW BUILDING FOR DETERMINING THE APPLICATION OF THIS CHAPTER.

2. COVERED MULTIFAMILY DWELLINGS SHALL BE MAINTAINED IN COMPLIANCE WITH THE ACCESSIBILITY STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION

3. APARTMENTS CONSTRUCTED PRIOR TO MARCH 13, 1991 SHALL BE MAINTAINED IN COMPLIANCE WITH THE ACCESSIBILITY STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION

4. EXISTING PUBLICLY FUNDED MULTIFAMILY DWELLINGS ARE SUBJECT TO PROVISIONS OF LOCAL BUILDING CODE

MULTISTORY DWELLINGS WITH ONE OR MORE ELEVATORS

5. IF ANY MULTISTORY DWELLING UNITS IN BUILDINGS WITH ELEVATORS, THE STORY OF THE UNIT THAT BEHIND BY THE BUILDING ELEVATOR IS CONSIDERED A GROUND FLOOR AND THE PRIMARY ENTRY FLOOR TO THE UNIT AND SHALL COMPLY WITH THE FOLLOWING:

A. AT LEAST ONE POWDER ROOM OR BATHROOM SHALL BE LOCATED ON THE PRIMARY ENTRY LEVEL

B. ALL ROOMS OR SPACES LOCATED ON THE PRIMARY ENTRY LEVEL SHALL BE SERVED BY AN ACCESSIBLE ROUTE AND SHALL COMPLY WITH LOCAL BUILDING CODE

DIVISION II – EXTERIOR FACILITIES

SITE DEVELOPMENT AND ROUTE OF TRAVEL

NOTE: ACCESSIBLE ROUTE OF TRAVEL IS DEFINED AS "A CONTINUOUS AND UNOBSTRUCTED PATH CONNECTING ALL ACCESSIBLE ELEMENTS AND SPACES IN A ACCESSIBLE BUILDING OR FACILITY THAT CAN BE NEGOTIATED BY A PERSON WITH A SEVERE DISABILITY USING A WHEELCHAIR AND THAT IS ALSO SAFE FOR AND USABLE BY PERSONS WITH OTHER DISABILITIES."

NOTE: EXCEPT WITHIN INDIVIDUAL DWELLING UNITS, AN ACCESSIBLE ROUTE OF TRAVEL SHALL NOT PASS THROUGH KITCHENS, STORAGE ROOMS, RESTROOMS, CLOSETS OR OTHER SPACES USED FOR SIMILAR SPACES

1. SITE DEVELOPMENT AND GRADING SHALL BE DESIGNED TO PROVIDE ACCESS TO ALL ENTRANCES AND EXTERIOR GROUND FLOOR EXITS AND ACCESS TO NORMAL PATHS OF TRAVEL AND WHERE NECESSARY TO PROVIDE ACCESS SHALL INCORPORATE PEDESTRIAN RAMPS, CURB RAMPS, ETC

2. WHEN A BUILDING OR PORTION OF A BUILDING IS REQUIRED TO BE ACCESSIBLE OR ADAPTABLE, AN ACCESSIBLE ROUTE OF TRAVEL SHALL BE PROVIDED TO ALL PORTIONS OF THE BUILDING TO ACCESSIBLE BUILDING ENTRANCES AND BETWEEN THE BUILDING AND THE PUBLIC WAY

3. THE ACCESSIBLE ROUTE OF TRAVEL SHALL BE THE MOST PRACTICAL DIRECT ROUTE BETWEEN ACCESSIBLE BUILDING ENTRANCES, ACCESSIBLE SITE FACILITIES AND THE ACCESSIBLE ENTRANCE TO THE SITE

4. WHERE MORE THAN ONE ROUTE OF TRAVEL IS PROVIDED, ALL ROUTES SHALL BE ACCESSIBLE

5. AT LEAST ONE ACCESSIBLE ROUTE WITHIN THE BOUNDARY OF THE SITE SHALL BE PROVIDED FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING AND ACCESSIBLE PASSENGER LOADING ZONES, PUBLIC STREETS OR SIDEWALKS, TO THE ACCESSIBLE BUILDING ENTRANCE THEY SERVE. THE ACCESSIBLE ROUTE SHALL, TO THE MAXIMUM EXTENT FEASIBLE, COINCIDE WITH THE ROUTE FOR THE GENERAL PUBLIC.

6. WHEN MORE THAN ONE BUILDING OR FACILITY IS LOCATED ON A SITE, ACCESSIBLE ROUTES OF TRAVEL SHALL BE PROVIDED BETWEEN BUILDINGS AND ACCESSIBLE SITE FACILITIES

7. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT TO THE FOLLOWING:

A. ACCESSIBLE BUILDINGS, FACILITIES, ELEMENTS AND SPACES THAT ARE ON THE SAME SITE

B. ACCESSIBLE BUILDING OR FACILITY ENTRANCES WITH ALL ACCESSIBLE SPACES AND ELEMENTS AND WITH ALL ACCESSIBLE DWELLING UNITS WITHIN THE BUILDING OR FACILITY

8. AN ACCESSIBLE ROUTE SHALL CONNECT AT LEAST ONE ACCESSIBLE ENTRANCE OF EACH ACCESSIBLE DWELLING UNIT WITH THOSE EXTERIOR AND INTERIOR SPACES AND FACILITIES THAT SERVE THE ACCESSIBLE DWELLING UNIT

9. AT EVERY PRIMARY PUBLIC ENTRANCE AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AN ACCESSIBLE ROUTE OF TRAVEL, THERE SHALL BE A SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SIGNS SHALL INDICATE THE DIRECTION TO ACCESSIBLE BUILDING ENTRANCES AND FACILITIES.

10. ALL COVERED GROUND FLOOR UNITS IN NON ELEVATOR BUILDINGS MUST BE ADAPTABLE AND ON AN ACCESSIBLE ROUTE.

11. GARAGES, CARPORTS AND OTHER PARKING FACILITIES, WHICH ARE ACCESSORY TO COVERED MULTIFAMILY DWELLING UNITS, SHALL BE ACCESSIBLE AS REQUIRED BY LOCAL BUILDING CODE.

12. TEMPORARY RESTRICTIONS DURING PERIODS OF PARTIAL OR RESTRICTED USE OF A BUILDING OR FACILITY. THE ENTRANCE USED FOR TEMPORARY ACCESS SHALL BE ACCESSIBLE TO AND USABLE BY PERSONS WITH DISABILITIES.

ACCESSIBLE PARKING

13. EACH PARKING FACILITY PROVIDED FOR COVERED MULTIFAMILY DWELLINGS AND FACILITIES (E.G., SWIMMING POOLS, CLUB HOUSE'S, RECREATION AREAS AND LAUNDRY ROOMS) THAT SERVE COVERED MULTIFAMILY DWELLINGS SHALL PROVIDE ACCESSIBLE PARKING

14. PARKING FACILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

A. GARAGES

B. PRIVATE GARAGES

C. CARPORTS

D. OFF-STREET PARKING (PARKING LOTS/SPACES)

15. PRIVATE GARAGES ACCESORY TO COVERED MULTIFAMILY DWELLING UNITS SHALL BE ACCESSIBLE. PRIVATE GARAGES INCLUDE INDIVIDUAL GARAGES AND MULTIPLE INDIVIDUAL GARAGES GROUPED TOGETHER.

16. A SECTION ON AN ATTACHED PRIVATE GARAGE OPEN BY SWINING A SINGLE COMPANY MULTIFAMILY DWELLING UNIT PROVIDING AT LEAST ONE OF THE FOLLOWING OPTIONS:

A. A DOOR LEADING DIRECTLY FROM THE COVERED DWELLING UNIT WHICH IMMEDIATELY ENTERS THE GARAGE. THE DOOR SHALL COMPLY ON BOTH SIDES WITH LOCAL BUILDING CODE

B. AN ACCESSIBLE ROUTE OF TRAVEL FROM THE COVERED DWELLING UNIT TO AN EXTERIOR DOOR ENTERING THE GARAGE. SEE LOCAL BUILDING CODE FOR REQUIREMENTS AT BOTH EXIT DOORS

C. AN ACCESSIBLE ROUTE OF TRAVEL FROM THE DWELLING UNITS PRIMARY ENTRY DOOR TO THE VEHICULAR ENTRANCE AT THE GARAGE. SEE LOCAL BUILDING CODE FOR REQUIREMENTS AT THE PRIMARY ENTRY DOOR

17. ACCESSIBLE PARKING SPACES SHALL BE PROVIDED AT A MINIMUM RATE OF 2 PERCENT OF THE COVERED MULTIFAMILY DWELLING UNITS. AT LEAST ONE SPACE OF EACH TYPE OF PARKING FACILITY SHALL BE MADE ACCESSIBLE EVEN IF THE TOTAL NUMBER EXCEEDS 2 PERCENT

18. WHEN ASSIGNING PARKING SPACES ARE PROVIDED FOR A RESIDENT OR A GROUP OF RESIDENTS, AT LEAST 1 PERCENT OF THE ASSIGNED PARKING ROOMS THAT SERVE COVERED MULTIFAMILY DWELLING UNITS SHALL BE ACCESSIBLE IN EACH TYPE OF PARKING FACILITY. AT LEAST ONE SPACE OF EACH TYPE OF PARKING FACILITY SHALL BE MADE ACCESSIBLE EVEN IF THE TOTAL NUMBER EXCEEDS 2 PERCENT. WHEN ASSIGNED PARKING IS PROVIDED, SIGNAGE AS REQUIRED BY LOCAL BUILDING CODE SHALL NOT BE REQUIRED

19. WHEN PARKING IS PROVIDED FOR COVERED MULTIFAMILY DWELLINGS AND IS NOT ASSIGNED TO A RESIDENT OR A GROUP OF RESIDENTS, AT LEAST 5 PERCENT OF THE PARKING SPACES SHALL BE ACCESSIBLE AND PROVIDE ACCESS TO GRADE LEVEL ENTRANCES OF COVERED MULTIFAMILY DWELLINGS AND FACILITIES (E.G., SWIMMING POOLS, CLUB HOUSE'S, RECREATION AREAS AND LAUNDRY ROOMS) THAT SERVE COVERED MULTIFAMILY DWELLINGS. ACCESSIBLE PARKING SPACES SHALL BE PROVIDED WITH SIGNAGE AS REQUIRED BY LOCAL BUILDING CODE SUCH SIGNAGE SHALL NOT BE BLOCKED FROM VIEW BY A VEHICLE PARKED IN THE SPACE.

20. WHEN ASSIGNED PARKING IS PROVIDED, DESIGNATED ACCESSIBLE PARKING FOR THE DWELLING UNIT SHALL BE PROVIDED ON REQUEST OF RESIDENTS WITH DISABILITIES. ON THE SAME BASIS AND WITH THE FULL RANGE OF CHOICES (E.G., ON STREET PARKING, CARPORT OR GARAGE) THAT ARE AVAILABLE FOR OTHER RESIDENTS.

21. THE LOCATION OF ACCESSIBLE PARKING SPACES SHALL COMPLY WITH THE FOLLOWING:

ACCESSIBLE PARKING CONT'D

A. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE TO AN ACCESSIBLE BUILDING OR COVERED MULTIFAMILY DWELLING UNIT ENTRANCE. AS VAN ACCESSIBLE SPACES MAY BE GROUPED ON ONE LEVEL OF A MULTILEVEL PARKING FACILITY.

B. WHEN PARKING FACILITIES ARE LOCATED ADJACENT TO A BUILDING WITH MULTIPLE ACCESSIBLE ENTRANCES, ACCESSIBLE PARKING SPACES SHALL BE DISPERSED AND LOCATED NEAR THE ACCESSIBLE ALONG ENTRANCES.

C. WHERE PRACTICAL, THE ACCESSIBLE ROUTE SHALL NOT CROSS LANES FOR VEHICULAR TRAFFIC. WHEN CROSSING VEHICLE TRAFFIC LANES IS NECESSARY, THE ACCESSIBLE ROUTE SHALL BE DESIGNATED AND MARKED AS A CROSSWALK.

D. PARKING FACILITIES THAT DO NOT SERVE A PARTICULAR BUILDING SHALL HAVE ACCESSIBLE PARKING SPACES LOCATED ON THE SHORTEST ACCESSIBLE ROUTE TO AN ACCESSIBLE PEDESTRIAN ENTRANCE OF THE PARKING FACILITY.

E. ACCESSIBLE PARKING SPACES SHALL BE LOCATED SO THAT PERSONS WITH SPECIAL DISABILITIES ARE NOT COMPELLED TO WHEEL OR WALK BEHIND PARKED CARS OTHER THAN THEIR OWN.

22. AN ENTRANCE'S, EXITS AND VEHICULAR PASSAGEWAYS TO AND FROM REQUIRED ACCESSIBLE PARKING SPACES WITHIN PARKING FACILITIES, SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 8 FEET 2 INCHES FROM THE FLOOR TO THE LOWEST PROJECTION OF THE CEILING REFLECTING WARNING SIGNS COMPLYING WITH CHAPTER 11B FOR CHANGES IN VERTICAL CLEARANCE LOCATED NO LESS FROM THE 8 FEET 2 INCHES CEILING TO LOWER CEILING HEIGHTS IN VEHICULAR PASSAGEWAYS IN THE SAME PARKING LEVEL.

23. PARKING SPACES SHALL BE ARRANGED TO COMPLY WITH THE FOLLOWING:

A. IN EACH PARKING AREA, A BUMPER OR CURB SHALL BE PROVIDED AND LOCATED TO PREVENT EXCESS OVERHANG OF CARS OVER THE RESERVED WIDTH OF WALKWAYS & RAMPS. INCLUDING CURB RAMPS, SHALL NOT ENCROACH INTO ANY ACCESSIBLE PARKING SPACE OR THE ADJACENT LOADING AND UNLOADING ACCESS AISLE

24. SURFACE SLOPES OF ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE THE MINIMUM POSSIBLE AND SHALL NOT EXCEED ¼ INCH PER 1 FOOT (2 PERCENT) IN ANY DIRECTION

25. WHERE ACCESSIBLE SINGLE SPACES ARE PROVIDED, THEY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING:

A. SINGLE SPACES SHALL BE 11 FEET WIDE AND LINED TO PROVIDE A 8 FOOT WIDE PARKING AREA AND A 5-FOOT WIDE LOADING AND UNLOADING ACCESS AISLE ON THE PASSENGER SIDE OF THE VEHICLE WITH THE VEHICLE PARKED IN THE FORWARD POSITION.

B. WHERE MORE THAN ONE SPACE IS PROVIDED, TWO 8 FOOT WIDE PARKING SPACES MAY BE LINED ON EACH SIDE OF A 5-FOOT WIDE LOADING AND UNLOADING ACCESS AISLE

C. THE MINIMUM LENGTH OF EACH PARKING SPACE SHALL BE 18 FEET

D. THE LOADING AND UNLOADING ACCESS AISLE SHALL BE MARKED BY A BORDER PAINTED BLUE WITH THE BLUE BORDER HATCHED LINES A MAXIMUM OF 36 INCHES ON CENTER SHALL BE PAINTED A COLOR CONTRASTING WITH THE PARKING SURFACE, PREFERABLY BLUE (OR WHITE IF MARKED TWO PARKING SHALL BE PAINTED ON THE GROUND WITH AT LEAST A 6 FOOT WIDE LOADING AND UNLOADING ACCESS AISLE. THIS NOTICE SHALL BE PAINTED IN WHITE LETTERS NO LESS THAN 12 INCHES HIGH AND LOCATED SO THAT IT IS VISIBLE TO PERSONS PARKING IN THE SPACE.

26. ONE IN EVERY EIGHT ACCESSIBLE SPACES BUT NOT LESS THAN ONE SHALL BE VAN ACCESSIBLE AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING:

A. EACH SPACE SHALL BE SERVED BY A LOADING AND UNLOADING ACCESS AISLE AT LEAST 8 FEET WIDE AND LOCATED ON THE PASSENGER SIDE WITH THE VEHICLE PARKED IN THE FORWARD POSITION

B. THE MINIMUM LENGTH OF EACH SPACE SHALL BE 18 FEET

C. EACH SPACE SHALL BE DESIGNATED "VAN ACCESSIBLE" AS REQUIRED BY LOCAL BUILDING CODE

D. ALL VAN ACCESSIBLE SPACES MAY BE GROUPED ON ONE LEVEL OF A MULTILEVEL PARKING FACILITY.

E. THE LOADING AND UNLOADING ACCESS AISLE SHALL BE MARKED BY A BORDER PAINTED BLUE WITH THE BLUE BORDER HATCHED LINES A MAXIMUM OF 36 INCHES ON CENTER SHALL BE PAINTED A COLOR CONTRASTING WITH THE PARKING SURFACE, PREFERABLY BLUE (OR WHITE IF MARKED TWO PARKING SHALL BE PAINTED ON THE GROUND WITH AT LEAST A 6 FOOT WIDE LOADING AND UNLOADING ACCESS AISLE. THIS NOTICE SHALL BE PAINTED IN WHITE LETTERS NO LESS THAN 12 INCHES HIGH AND LOCATED SO THAT IT IS VISIBLE TO PERSONS PARKING IN THE SPACE.

27. PARKING SPACES ADJACENT TO ACCESSIBLE PARKING SPACES SHALL NOT BE CONSIDERED AS LOADING AND UNLOADING ACCESS AISLES.

28. EACH ACCESSIBLE PARKING SPACE BE SIGNED FOR PERSONS WITH DISABILITIES SHALL BE IDENTIFIED BY A REFLECTIVE SIGN PERMANENTLY POSTED IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE, CONSISTING OF THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SIGNS SHALL INDICATE THAT VIOLATORS OF THE SIGN SHALL NOT BE SHALL'S THAN 70 SQUARE INCHES IN AREA AND, WHEN IN A PATH OF TRAVEL, SHALL BE POSTED AT A MINIMUM HEIGHT OF 80 INCHES FROM THE BOTTOM OF THE SIGN. PARKING SPACE SYMBOL SIGNS MAY ALSO BE CENTERED ON THE WALL AT THE INTERIOR END OF THE PARKING SPACE AT A MINIMUM HEIGHT OF 36 INCHES FROM THE PARKING SURFACE FINISHED GRADE GROUND OR SIDEWALK. VAN ACCESSIBLE SPACES COMPLYING WITH SECTION 11B-502.6 AND SHALL HAVE AN ADDITIONAL LANGUAGE STATING "VAN ACCESSIBLE" BELOW THE SYMBOL OF ACCESSIBILITY.

NOTE: WHEN ASSIGNED RESIDENT PARKING IS PROVIDED, SIGNAGE IS NOT REQUIRED EXCEPT FOR UNASSIGNED OR VISITOR PARKING SPACES

29. ALL ACCESSIBLE SPACES SHALL HAVE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF STREET PARKING FACILITIES OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH ACCESSIBLE STALL OR SPACE. THE SIGN SHALL NOT BE LESS THAN 17 INCHES BY 22 INCHES IN SIZE WITH LETTERING NOT LESS THAN 1 INCH IN HEIGHT, AND SHALL CLEARLY AND CONSPICUOUSLY STATE THE FOLLOWING: "UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR SPECIAL LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT OWNER'S EXPENSE. TOWED VEHICLES MAY BE RECLAIMED AT _____ OR BY TELEPHONING _____."

30. IN ADDITION TO THE ABOVE REQUIREMENTS, THE SURFACE OF EACH ACCESSIBLE PARKING SPACE SHALL HAVE A SURFACE IDENTIFICATION CLEARLY EITHER OF THE FOLLOWING DESIGNS:

A. BY CUTTING OR PAINTING THE SYMBOL OF ACCESSIBILITY IN WHITE ON A LIGHT BACKGROUND. THE "INTERNATIONAL SYMBOL OF ACCESSIBILITY" SHALL BE LOCATED SO THAT IT IS NOT IN A TRAFFIC LANE. BORDERS AROUND THE SYMBOL SHALL BE PROPERLY PAINTED IN THE SPACE AND SHALL BE 36 INCHES HIGH BY 36 INCHES WIDE WHITE AND BORDERLESS

B. BY CUTTING AND PAINTING BLUE WITH A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING ½".

32. SIDEWALKS SERVING INDIVIDUAL DWELLING UNITS IN COVERED MULTIFAMILY BUILDING SHALL BE 36" MINIMUM IN CLEAR WIDTH. ALL OTHER SIDEWALKS SHALL BE 48" MINIMUM IN CLEAR WIDTH.

33. WALK AND SIDEWALK SURFACE CROSS SLOPES SHALL NOT EXCEED ¼" PER FOOT (2 PERCENT) SLOPE, WHERE DUE TO LOCAL CONDITIONS CREATE UNREASONABLE HARDSHIP, THE SLOPES IS OFF GRADE SHALL BE PERMITTED TO A MAXIMUM OF ½" PER FOOT (4.2 PERCENT SLOPE) FOR DISTANCES NOT TO EXCEED 20 FEET

34. WALK AND SIDEWALK SURFACES SHALL BE SLIP RESISTANT AS FOLLOWS

A. SURFACES WITH A SLOPE OF LESS THAN 5 PERCENT GRADIENT SHALL BE AT LEAST AS SLIP RESISTANT AS THAT DESCRIBED AS A MEDIUM SALTED FINISH

B. SURFACES WITH A SLOPE OF 5 PERCENT OR GREATER GRADIENT SHALL BE IS PRESTANT AS

35. WALK, SIDEWALKS, AND PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. WHERE GRATINGS LOCATED IN THE PATH OF TRAVEL OF ANY OF THESE ARE ALL GRATINGS IN GRATINGS SHALL BE LIMITED TO ½" IN THE DIRECTION OF TRAFFIC FLOW

36. WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 1 UNIT VERTICAL TO 20 UNITS HORIZONTAL (5 PERCENT), IT SHALL COMPLY WITH THE PROVISIONS OF SECTION 11-224.1 AS A PEDESTRIAN RAMP

37. WALKS SHALL BE PROVIDED WITH A LEVEL AREA NOT LESS THAN 60" BY 60" AT A DOOR OR GATE, AND SHALL EXTEND 24 INCHES ON THE HINGE AND NOT LESS THAN 48" WIDE BY 48" DEEP AT A DOOR OR GATE THAT SWINGS AWAY FROM THE WALK. SUCH AREAS SHALL EXTEND 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALK

CURB RAMPS

NOTE: CURB RAMP IS DEFINED AS A SLOPING PEDESTRIAN WAY, INTENDED FOR PEDESTRIAN TRAFFIC WHICH PROVIDES ACCESS BETWEEN A WALK OR SIDEWALK AND A SURFACE LOCATED ABOVE OR BELOW AN ADJACENT CURB FACE

NOTE: CURB RAMPS WITHIN THE BOUNDARY OF THE SITE SHALL BE CONSTRUCTED AT EACH CORNER OF STREET INTERSECTIONS AND WHERE A PEDESTRIAN WAY CROSSES A CURB. THE PREFERRED AND RECOMMENDED LOCATION FOR CURB RAMPS IS IN THE CENTER OF THE CROSSWALK OF EACH STREET CORNER. WHERE IT IS NECESSARY TO LOCATE A CURB RAMP IN THE CENTER OF THE CURB RETURN, THE STREET SURFACE SHALL BE MARKED TO IDENTIFY PEDESTRIAN CROSSWALKS. AND THE LOWER END OF THE CURB RAMP SHALL TERMINATE WITHIN SUCH CROSSWALK AREAS. CURB RAMPS DO NOT REQUIRE HANDRAILS

38. CURB RAMPS SHALL BE A MINIMUM OF 48 INCHES IN WIDTH

39. THE SLOPE OF CURB RAMPS SHALL NOT EXCEED 1 UNIT VERTICAL TO 12 UNITS HORIZONTAL (8.33 PERCENT SLOPE)

40. TRANSITIONS FROM RAMPS TO WALK, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES

41. CURB RAMP LOCATED WHERE THE PEDESTRIAN MUST WALK ACROSS THE RAMP SHALL HAVE FLARED SIDES. THE MAXIMUM SLOPE OF THE FLARE SHALL BE ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10 PERCENT SLOPE). CURB RAMP WITH RETURNED CURBS CAN BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP

42. A LEVEL LANDING 4' DEEP SHALL BE PROVIDED AT THE UPPER END OF EACH CURB RAMP OVER ITS FULL WIDTH TO PERMIT SAFE EGRESS FROM THE RAMP SURFACE, OR THE SLOPE OF THE HANDED OF FLARED SIDES OF THE CURB RAMP SHALL NOT EXCED 1 UNIT VERTICAL TO 10 UNITS HORIZONTAL (8.33 PERCENT) SLOPE

43. THE SURFACE OF EACH CURB RAMP AND ITS FLARED SIDES SHALL BE STABLE, FIRM, AND SLIP-RESISTANT AND SHALL BE OF CONTRASTING FINISH FROM THAT OF THE ADJACENT SIDEWALK

44. CURB RAMPS SHALL BE LOCATED TO PREVENT THEIR OBSTRUCTION BY PARKED CARS. WALK-UP CURB RAMPS SHALL BE THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES

45. ALL CURB RAMPS SHALL HAVE A GROOVED BORDER 12 INCHES WIDE AT THE LEVEL SURFACE OF THE SIDEWALK AT BOTH THE TOP AND EACH SIDE APPROXIMATELY 34 INCHES ON CENTER. ALL CURB RAMPS CONSTRUCTED BETWEEN THE FACE OF THE CURB AND THE STREET SHALL HAVE A GROOVED BORDER AT THE LEVEL SURFACE OF THE SIDEWALK SEE FIGURES 11B-24 THROUGH 11B-26.

46. FOR DETECTABLE WARNING REQUIREMENTS, SEE CHAPTER 11B, SECTION 11B-705 ITEM 7

RAMPS (EXTERIOR OR INTERIOR)

NOTE: ANY PAIR OF "RAMPS" SHALL BE CONSIDERED A RAMP IF ITS SLOPE IS GREATER THAN 1 UNIT VERTICAL IN 20 UNITS HORIZONTAL (5-PERCENT SLOPE)

47. THE WIDTH OF RAMPS SHALL BE CONSISTENT WITH THE REQUIREMENTS FOR EXITS IN CHAPTER 10 OF THIS CODE, BUT IN NO CASE SHALL THE RAMP WIDTH BE LESS THAN THE FOLLOWING:

A. RAMPS SERVING ACCESSIBLE ENTRANCES TO COVERED SMALL MULTIFAMILY DWELLINGS WHERE THE RAMP IS THE ONLY EXIT DESCRIBING PATH AND SERVES AN OCCUPANT LOAD OF 30 OR MORE SHALL HAVE A MINIMUM CLEAR WIDTH OF 30 INCHES.

B. RAMPS SERVING AN ACCESSIBLE ENTRANCES TO COVERED SMALL MULTIFAMILY DWELLINGS WITH AN OCCUPANT LOAD OF 10 OR LESS MAY BE 36 INCHES IN CLEAR WIDTH.

C. ALL OTHER PARTS SHALL HAVE A MINIMUM CLEAR WIDTH OF 48 INCHES

48. HANDRAILS, CURBS, WHEEL GUIDES AND OR APPURTENANCES SHALL NOT PROJECT INTO THE REQUIRED CLEAR WIDTH OF A RAMP

49. THE MAXIMUM SLOPE OF RAMPS ON AN ACCESSIBLE ROUTE SHALL BE NO GREATER THAN 1 UNIT VERTICAL IN 12 UNITS HORIZONTAL

50. ALL RAMPS SLOPES SHALL BE CONSTANT WITHOUT VERTICAL CURVES

51. THE CROSS SLOPE OF RAMP SURFACES SHALL NOT EXCEED ¼ INCH PER FOOT (2 PERCENT SLOPE)

52. RAMP LANDINGS SHALL BE LEVEL AND COMPLY WITH THE FOLLOWING:

A. LANDINGS SHALL BE PROVIDED AT THE TOP AND BOTTOM OF EACH RAMP ALTERNATIVELY LANDINGS SHALL BE PROVIDED AT MAXIMUM VERTICAL RISE OF NOT MORE THAN 30 INCHES OF VERTICAL RISE AND AT EACH CHANGE OF DIRECTION. LANDINGS ARE NOT CONSIDERED IN DETERMINING THE MAXIMUM HORIZONTAL DISTANCE OF EACH RAMP

B. TOP LANDINGS SHALL NOT BE LESS THAN 60 INCHES WIDE. TOP LANDINGS SHALL HAVE A MINIMUM DIMENSION OF 60 INCHES MEASURED IN THE DIRECTION OF THE RAMP RUN SEE SECTION 11B-304 FOR MANEUVERING CLEARANCES AT DOORS

C. THE MINIMUM WIDTH OF BOTTOM AND INTERMEDIATE LANDINGS SHALL NOT BE LESS THAN THE WIDTH OF THE RAMP

D. DOORS IN ANY POSITION SHALL NOT REDUCE THE MINIMUM DIMENSION OF THE LANDING TO LESS THAN 42 INCHES AND SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 3 INCHES WHEN FULLY OPEN

E. THE WIDTH OF THE LANDING SHALL COMPLY WITH SECTION FOR STRIKE EDGE EXTENSION AND MANEUVERING SPACE AT DOORS

F. WHEN RAMPS AND BOTTOM LANDINGS AT A CHANGE OF DIRECTION IN EXCESS OF 20 DEGREES SHALL HAVE A LENGTH IN THE DIRECTION OF RAMP RUN OF NOT LESS THAN 72 INCHES

G. OTHER INTERMEDIATE LANDINGS SHALL HAVE A DIMENSION IN THE DIRECTION OF RAMP RUN OF NOT LESS THAN 60 INCHES

53. RAMPS MORE THAN 30 INCHES ABOVE THE ADJACENT FLOOR OR GROUND AND OPEN ON ONE OR BOTH SIDES SHALL BE PROVIDED WITH GUARDRAILS 8 AS REQUIRED BY SECTION 1013. GUARDRAILS SHALL BE CONTINUOUS FROM THE TOP OF THE RAMP TO THE BOTTOM OF THE RAMP

54. RAMPS SHALL BE PROVIDED WITH THE FOLLOWING:

A. HANDRAILS SHALL BE PROVIDED AT EACH SIDE OF RAMPS WHEN THE SLOPE EXCEEDS 1 UNIT VERTICAL IN 20 UNITS HORIZONTAL (5-PERCENT SLOPE). HANDRAILS ON ALL RAMPS SHALL BE CONTINUOUS

B. HANDRAIL CONFIGURATION

i. THE TOP OF HANDRAILS SHALL BE 34 TO 38 INCHES ABOVE THE RAMP SURFACE

ii. HANDRAIL ENDS SHALL BE RETURNED

iii. HANDRAILS SHALL EXTEND A MINIMUM OF 12 INCHES BEYOND THE TOP AND BOTTOM OF THE RAMP AND THE TOP AND BOTTOM GRADE LEVEL AT THE TERMINATION OF THE EXTENSION SHALL BE ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL OR POST

iv. HANDRAILS PROJECTING FROM A WALL SHALL HAVE A SPACE OF 1½ INCHES BETWEEN THE WALL AND THE HANDRAILS. HANDRAILS SHALL NOT REDUCE THE REQUIRED WIDTH OF RAMPS

v. HANDRAILS MAY BE LOCATED IN A RECESS IF THE RECESS IS A MAXIMUM OF 3 INCHES DEEP AND EXTENDS AT LEAST 18 INCHES MORE THE TOP OF THE RAIL ANY WALL OR OTHER SURFACE ADJACENT TO THE HANDRAIL SHALL BE FREE OF SHARP ABRASIVE ELEMENTS

vi. THE HANDGRIP PORTION OF HANDRAILS SHALL NOT BE LESS THAN 1¼ INCHES NOR MORE THAN 2 INCHES IN CROSS DIMENSION OR SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. THE HANDGRIP PORTION OF HANDRAILS SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS. THE HANDGRIP PORTION OF HANDRAILS SHALL BE CIRCULAR

vii. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8 INCH. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS

55. RAMPS AND RAMP LANDINGS SHALL BE PROVIDED WITH CONTINUOUS AND UNINTERRUPTED BARRIER ON EACH SIDE ALONG THE ENTIRE LENGTH IN COMPLIANCE WITH LOCAL BUILDING CODE

STAIRWAYS (INTERIOR AND EXTERIOR)

NOTE: EXTERIOR AND EXTERIOR STAIRWAYS ALONG ACCESSIBLE ROUTE'S ARE REQUIRED TO BE ACCESSIBLE

56. EXCEPT WITHIN AN INDIVIDUAL DWELLING UNIT, STAIRWAYS SHALL HAVE HANDRAILS ON EACH SIDE. INTERMEDIATE HANDRAILS SHALL BE LOCATED EQUIDISTANT FROM THE SIDES OF THE STAIRWAY AND COMPLY WITH LOCAL BUILDING CODE.

57. HANDRAILS SHALL BE 34" TO 38" ABOVE THE NOSING OF THE TREADS

58. HANDRAILS SHALL STAND A MINIMUM OF 12" BEYOND THE TOP NOSING AND 12" PLUS THE TREAD WIDTH BEYOND THE BOTTOM NOSING AND ENDS SHALL BE RETURNED OR TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS

59. WHERE THE ELEVATION OF THE HANDRAIL IN THE DIRECTION OF THE STAIR RUN WOULD CREATE A HAZARD, THE TERMINATION OF THE EXTENSION SHALL BE MADE EITHER ROUNDED OR RETURNED SMOOTHLY TO THE FLOOR, WALL OR POST. ANYWHERE THE STAIRS ARE CONTINUOUS FROM LANDING TO LANDING, THE HANDRAIL SHALL BE CONTINUOUS AND NEED NOT EXTEND OUT INTO THE LANDING

60. THE HANDGRIP PORTION OF HANDRAILS SHALL BE NOT LESS THAN 1¼" NOR MORE THAN 2" IN CROSS SECTIONAL DIMENSION OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. THE HANDGRIP PORTION OF HANDRAILS SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS. THE HANDGRIP PORTION OF HANDRAILS SHALL BE CIRCULAR OR SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".

61. HANDRAILS SHALL HAVE A SPACE OF 1½" BETWEEN THE WALL AND THE HANDRAIL. HANDRAILS MAY BE LOCATED IN A RECESS IF THE RECESS IS A MAXIMUM OF 3" DEEP AND EXTENDS AT LEAST 18" ABOVE THE TOP OF THE RAIL. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS

62. ALL TREAD SURFACES SHALL BE SLIP-RESISTANT. TREADS SHALL HAVE SMOOTH ROUNDED, OR CHAMFERED EXPOSED EDG

BATHING FACILITIES CONT'D

66 SHOWER COMPARTMENT FLOOR SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT. THE MAXIMUM SLOPE OF THE FLOOR SHALL BE 1 INCH PER FOOT (2 82 PERCENT SLOPE) IN ANY DIRECTION, WHEN DRAINS ARE PROVIDED. GRATE OPENINGS SHALL BE ¼ INCH MAXIMUM AND LOCATED FLUSH WITH THE FLOOR SURFACE.

67 CONTROLS, FAUCETS AND SHOWER SPRAY UNITS IN SHOWER COMPARTMENTS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM. ALL CONTROLS AND FAUCETS SHALL BE OF A SINGLE LEVER DESIGN

68 (IN STANDARD AND 3/4 SHOWER COMPARTMENTS)

A OPERABLE PARTS OF CONTROLS AND FAUCETS SHALL BE INSTALLED ON THE BACK WALL OF THE COMPARTMENT ADJACENT TO THE SEAT WALL, 18 INCHES MINIMUM AND 27 INCHES MAXIMUM FROM THE SEAT WALL

B OPERABLE PARTS OF CONTROLS AND FAUCETS SHALL BE LOCATED ABOVE THE GRAB BAR, BUT NO HIGHER THAN 48 INCHES ABOVE THE SHOWER FLOOR, WITH THEIR CENTERLINE AT 39 INCHES MINIMUM AND 41 INCHES MAXIMUM ABOVE THE SHOWER FLOOR

C OPERABLE PARTS OF THE SHOWER SPRAY UNIT, INCLUDING THE HANDLE, SHALL BE INSTALLED ON THE BACK WALL ADJACENT TO THE SEAT WALL, 15 INCHES MINIMUM AND 27 INCHES MAXIMUM FROM THE SEAT WALL

D OPERABLE PARTS OF THE SHOWER SPRAY UNIT, INCLUDING THE HANDLE, SHALL BE LOCATED ABOVE THE GRAB BAR, BUT NO HIGHER THAN 48 INCHES ABOVE THE SHOWER FLOOR (MEASURED TO THE TOP OF THE MOUNTING BRACKET)

69 AN ALTERNATE ROLL-IN SHOWER COMPARTMENTS

A OPERABLE PARTS OF CONTROLS AND FAUCETS SHALL BE INSTALLED ON THE SIDE WALL OF THE COMPARTMENT ADJACENT TO THE SEAT WALL, 18 INCHES MINIMUM AND 27 INCHES MAXIMUM FROM THE SEAT WALL

B OPERABLE PARTS OF CONTROLS AND FAUCETS SHALL BE LOCATED ABOVE THE GRAB BAR, BUT NO HIGHER THAN 48 INCHES ABOVE THE SHOWER FLOOR, WITH THEIR CENTERLINE AT 39 INCHES MINIMUM AND 41 INCHES MAXIMUM ABOVE THE SHOWER FLOOR

C OPERABLE PARTS OF THE SHOWER SPRAY UNIT, INCLUDING THE HANDLE, SHALL BE LOCATED ABOVE THE GRAB BAR, BUT NO HIGHER THAN 48 INCHES ABOVE THE SHOWER FLOOR (MEASURED TO THE TOP OF THE MOUNTING BRACKET)

D A FLEXIBLE HAND HELD SHOWER SPRAY UNIT WITH A HOSE AT LEAST 59 INCHES LONG THAT CAN BE USED BOTH AS A FIXED SHOWER HEAD AND AS A HANDHELD SHOWER SHALL BE PROVIDED THE SHOWER SPRAY UNIT SHALL HAVE ON/OFF CONTROL WITH A NON-POSITIVE SHUT-OFF IF AN ADJUSTABLE HEIGHT SHOWER HEAD ON A VERTICAL BAR IS USED, THE BAR SHALL BE INSTALLED SO AS NOT TO OBSTRUCT THE USE OF GRAB BARS

70 WHEN ACCESSIBLE SHOWER FACILITIES ARE PROVIDED IN AREAS SUBJECT TO EXCESSIVE WASHDOWN, IN LIEU OF PROVIDING THE FIXED FLEXIBLE HOSE, TWO WALL-MOUNTED SHOWER HEADS SHALL BE INSTALLED, EACH WITH A FLEXIBLE HOSE NOT LESS THAN 5 FEET 0 INCHES LONG, ONE INSTALLED INDEPENDENTLY OF THE OTHER AND SHALL HAVE SHOWER ANGLE ADJUSTMENTS BOTH VERTICAL AND HORIZONTALLY ONE SHOWER HEAD SHALL BE LOCATED AT A HEIGHT OF 48 INCHES MAXIMUM ABOVE THE FLOOR

71 A SEAT 24 INCHES STANDARD ROSS AN SHOWER COMPARTMENT SHALL BE A FOLDING TYPE, INSTALLED ON THE SIDE WALL ADJACENT TO THE CONTROLS THE SEAT SHALL EXTEND FROM THE BACK WALL TO A POINT WITHIN 3 INCHES OF THE COMPARTMENT ENTRY A SEAT IN AN ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS SHALL BE A FOLDING TYPE, INSTALLED ON THE FRONT WALL WHERE THE BACK WALL AND SHALL EXTEND FROM THE ADJACENT SIDE WALL TO A POINT WITHIN 3 INCHES OF THE COMPARTMENT ENTRY

72 SHOWER COMPARTMENT SEATS SHALL COMPLY WITH SECTION 11 2064 AND SHALL BE LOCATED WITHIN 27 INCHES OF THE SHOWER CONTROLS THE TOP OF THE SEAT SHALL BE 17 INCHES MINIMUM AND 19 INCHES MAXIMUM ABOVE THE BATHROOM FINISH FLOOR WHEN FOLDED THE SEAT SHALL NOT EXTEND MORE THAN 9 INCHES INTO THE SHOWERING THAN

73 THE REAR EDGE OF A RECTANGULAR SEAT SHALL BE 23 INCHES MAXIMUM FROM THE SEAT WALL THE FRONT EDGE OF ANY SHAPED SEAT SHALL BE 15 INCHES MINIMUM AND 16 INCHES MAXIMUM FROM THE SEAT WALL THE SEAT DEPTH OF THE SEAT SHALL BE 15 INCHES MINIMUM AND 16 INCHES MAXIMUM FROM THE WALL THE END OF THE "L" SHALL BE 22 INCHES MINIMUM AND 23 INCHES MAXIMUM FROM THE MAIN SEAT WALL

74 ACCESSIBLE SHOWER COMPARTMENTS SHALL BE PROVIDED WITH GRAB BARS INSTALLED IN ACCORDANCE WITH LOCAL BUILDING CODE GRAB BARS SHALL ALSO COMPLY WITH LOCAL BUILDING CODE

76 WHEN MULTIPLE GRAB BARS ARE USED, REQUIRED HORIZONTAL GRAB BARS SHALL BE INSTALLED AT THE SAME HEIGHT ABOVE THE FINISH FLOOR WHEN SEPARATE GRAB BARS ARE REQUIRED ON ADJACENT WALLS AT A COMMON MOUNTING HEIGHT, L SHAPED OR U SHAPED GRAB BARS MEETING THE DIMENSIONAL REQUIREMENTS OF LOCAL BUILDING CODE

77 IN DIAMOND ROLL-IN SHOWER COMPARTMENTS GRAB BARS SHALL BE INSTALLED ON ONE BACK WALL AND ON THE SIDE WALL OPPOSITE THE SEAT A GRAB BAR ABOVE THE SEAT ARE NOT PERMITTED GRAB BARS SHALL BE INSTALLED 3 INCHES MAXIMUM FROM ADJACENT WALLS

78 IN ALTERNATE ROLL-IN SHOWER COMPARTMENTS, GRAB BARS SHALL BE INSTALLED ON THE BACK WALL AND THE SIDE WALL FARTHEST FROM THE CONTROLS GRAB BARS ABOVE THE SEAT ARE NOT PERMITTED GRAB BARS SHALL BE INSTALLED 3 INCHES MAXIMUM FROM ADJACENT WALLS

79 WHEN A BOAP DISH IS PROVIDED, IT SHALL BE LOCATED ON THE CONTROL WALL AT A MAXIMUM HEIGHT OF 48 INCHES ABOVE THE SHOWER FLOOR, AND WITHIN THE REACH LIMITS FROM THE SEAT

80 WHEN NO SEPARATE SHOWER COMPARTMENTS ARE PROVIDED, THE SHOWER FOR PERSONS WITH DISABILITIES SHALL BE LOCATED IN A CORNER WITH L-SHAPED GRAB BARS EXTENDING ALONG TWO ADJACENT WALLS WITH A FOLDING SEAT ADJACENT TO THE L-SHAPED CONTROLS

81 WHEN TWO OR MORE ACCESSIBLE SHOWERS ARE PROVIDED WITHIN THE SAME FUNCTIONAL AREA, THERE SHALL BE AT LEAST ONE SHOWER CONSTRUCTED OPPOSITE HAND FROM THE OTHER OR OTHERS E G , ONE LEFT HAND CONTROL, REVERSE HIGHTHAND CONTROLS)

LOCKERS

82 WHERE LOCKERS ARE PROVIDED FOR RESIDENTS OR GUESTS, AT LEAST ONE LOCKER IN EACH UNIT, BUT NOT LESS THAN 5 PERCENT OF ALL LOCKERS SHALL BE PROVIDED FOR PERSONS WITH DISABILITIES AN ACCESSIBLE ROUTE NOT LESS THAN 36 INCHES IN CLEAR WIDTH SHALL BE PROVIDED TO THESE LOCKERS SEE LOCAL BUILDING CODE FOR REQUIRED CLEAR SPACE ALLOWABLE REACH RANGES & REQUIREMENTS FOR CONTROL AND OPERATING MECHANISMS

SIGNS

83 ALL ACCESSIBLE TOILET AND BATHING FACILITIES SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGNS NEED NOT BE PROVIDED FOR FACILITIES WITHIN A DWELLING UNIT OR GUEST ROOM

84 SIGNAGE INDICATING THE SANITARY FACILITIES (TOILET OR BATHING ROOM) SHALL BE IDENTIFIED BY A GEOMETRIC SYMBOL IN COMPLIANCE WITH THIS SECTION GEOMETRIC SYMBOLS SHALL BE CENTERED HORIZONTALLY ON THE DOOR AT A HEIGHT OF 58 INCHES MINIMUM AND 60 INCHES MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE CENTER OF THE SYMBOL WHEN A DOOR IS PROVIDED, THE SYMBOL SHALL BE LOCATED WITHIN 1 INCH OF THE VERTICAL CENTERLINE OF THE DOOR DIRECTIONAL SIGNS INDICATING THE LOCATION OF THE NEAREST ACCESSIBLE TOILET OR BATHING ROOMS SHALL BE PROVIDED SUCH DIRECTIONAL SIGNS SHALL COMPLY WITH LOCAL BUILDING CODE AND SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGNAGE SHALL BE ROUNDED, CHAMFERED OR EXCO CORNERS SHALL HAVE A MINIMUM RADIUS OF 1/8 INCH SEE LOCAL BUILDING CODE FOR ADDITIONAL SIGNAGE REQUIREMENTS APPLICABLE TO SANITARY FACILITIES

85 MEN'S SANITARY FACILITIES SHALL BE IDENTIFIED BY AN EQUILATERAL TRIANGLE 12 INCH THICK WITH EDGES 12 INCHES LONG AND A VERTICAL POINTING UPWARD THE TRIANGLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND

86 WOMEN'S SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE 12 INCHES IN DIAMETER THE CIRCLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND

87 UNISEX SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE 12 INCH THICK AND 12 INCHES IN DIAMETER WITH A ½ INCH THICK TRIANGLE SUPERIMPOSED ON THE CIRCLE AND WITH THE TO INCH DIAMETER, THE TRIANGLE SYMBOL SHALL CONTRAST WITH THE CIRCLE SYMBOL, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND THE CIRCLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND

TOILET ROOMS FIXTURES AND ACCESSORIES

88 WHERE TOWEL, SANITARY NAPKINS, WASTE RECEPTACLES, AND OTHER SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED AT LEAST ONE OF EACH TYPE SHALL BE LOCATED WITH ALL OPERABLE PARTS INCLUDING DOORS SITED WITHIN 48 INCHES TIMES 30 INCHES FLOOR CONTROLS AND OPERATING MECHANISMS SHALL COMPLY WITH LOCAL BUILDING CODE

89 TOILET TISSUE DISPENSERS SHALL BE LOCATED ON THE WALL OR PARTITION CLOSEST TO THE WATER CLOSET, 7 INCHES MINIMUM AND 9 INCHES MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER THE OUTLET OF THE DISPENSER SHALL BE BELOW THE GRAB BAR, 19 INCHES MINIMUM ABOVE THE FINISH FLOOR THE OUTLET OF THE DISPENSER SHALL NOT BE LOCATED BEHIND GRAB BARS DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW

88 (MIRRORS AND MIRRORED, AT LEAST ONE SHALL BE ACCESSIBLE) MIRRORS LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTIVE SURFACE AT INCHES MAXIMUM ABOVE THE FINISH FLOOR MIRRORS NOT LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES MAXIMUM ABOVE THE FINISH FLOOR

COMMON ACCESSIBLE LAUNDRY ROOMS

91 WHERE COMMON USE LAUNDRY ROOMS ARE PROVIDED AT LEAST ONE OF EACH TYPE OF APPLIANCE PROVIDED IN EACH LAUNDRY AREA SHALL BE ACCESSIBLE SHALL BE ON AN ACCESSIBLE ROUTE, AND COMPLY WITH THIS SECTION SUCH APPLIANCES INCLUDE CLOTHES WASHING MACHINES DRYERS, SOAP DISPENSERS, AND ANY SIMILAR FEATURES SUCH AS WASH SINKS TABLES AND STORAGE AREAS

WHERE LAUNDRY ROOMS ARE PROVIDED ON FLOORS OF AN ELEVATOR BUILDING EACH LAUNDRY ROOM SHALL BE ACCESSIBLE WHERE THERE IS NO ELEVATOR SERVICE TO A GROUND FLOOR OR BASEMENT IN EACH BUILDING, SUCH LAUNDRY ROOM SHALL BE ACCESSIBLE WHERE THERE IS A LAUNDRY ROOM ON THE GROUND FLOOR OF A BUILDING AND ANOTHER LOCATED IN THE BASEMENT, IT IS ACCEPTABLE TO MAKE ONLY THE GROUND FLOOR LAUNDRY ROOM ACCESSIBLE

92 THERE SHALL BE A MINIMUM CLEAR SPACE 30 INCHES PERPENDICULAR BY 48 INCHES PARALLEL IN FRONT OF CLOTHES WASHERS AND DRYERS REQUIRED TO BE ACCESSIBLE THESE SPACES SHALL BE CLEAR SPACE 36 INCHES BY 48 INCHES PROVIDED FOR AT LEAST ONE OF EACH TYPE OF FIXTURE OR APPLIANCE PROVIDED IN THE LAUNDRY ROOM (E G , SOAP DISPENSERS, WASH SINKS TABLES STORAGE AREAS)

93 CLOTHES WASHERS AND DRYERS INCLUDING STACKED CLOTHES WASHERS AND DRYERS REQUIRED TO BE ACCESSIBLE SHALL HAVE CONTROLS AND OPERATING MECHANISMS (INCLUDING DOORS) COMPLY WITH THIS SECTION CONTROLS, DETERGENT AND BLEACH COMPARTMENTS WITHIN THE REACH RANGE OF A SEATED USER CONTROLS AND OPERATING MECHANISMS SHALL BE LOCATED NO HIGHER THAN 48 INCHES AND NO LOWER THAN 15 INCHES, ABOVE THE FINISHED FLOOR MEASURED TO THE CENTERLINE OF THE ITEM IF THE CLEAR FLOOR OR GROUND SPACE ALLOWS A FORWARD OR SIDE APPROACH, OPERATING MECHANISMS SHALL BE LOCATED WITHIN THE REACH RANGE SPECIFIED IN LOCAL BUILDING CODE CONTROLS AND OPERATING MECHANISMS THAT DO NOT SATISFY THESE SPECIFICATIONS ARE ACCEPTABLE, PROVIDED THAT COMPARABLE MECHANISMS, CONTROLS OR OUTLETS THAT PERFORM THE SAME FUNCTIONS ARE PROVIDED WITHIN THE SAME AREA AND ARE ACCESSIBLE

94 CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST THE FORCE REQUIRED TO ACTIVATE CONTROLS AND OPERATING MECHANISMS SHALL BE NO GREATER THAN 5 POUNDS

95 IN LIVING MACHINES AND CLOSES DRYERS WASHING MACHINES AND CLOTHES DRYERS IN ACCESSIBLE, COMMON USE LAUNDRY ROOMS SHALL BE FRONT LOADING

96 THE BOTTOM OF THE OPENING TO THE LAUNDRY COMPARTMENT SHALL BE LOCATED 15 INCHES MINIMUM AND 36 INCHES MAXIMUM ABOVE THE FINISH FLOOR.

STORAGE

97 IF FIXED STORAGE FACILITIES SUCH AS CABINETS SHALL BE PROVIDED, AT LEAST ONE SHALL BE ACCESSIBLE ADDITIONAL STORAGE MAY BE PROVIDED OUTSIDE OF THE REACH RANGES SPECIFIED IN LOCAL BUILDING CODE

98 A CLEAR FLOOR SPACE AT LEAST 30 INCHES BY 48 INCHES COMPLYING WITH LOCAL BUILDING CODE THAT ALLOWS A FORWARD OR PARALLEL APPROACH BY A PERSON USING A WHEELCHAIR SHALL BE PROVIDED AT ACCESSIBLE STORAGE FACILITIES

99 ACCESSIBLE STORAGE SPACES AND CLOTHES RODS SHALL BE WITHIN AT LEAST ONE OF EACH TYPE OF REACH RANGES SPECIFIED IN LOCAL BUILDING CODE

100 HARDWARE FOR ACCESSIBLE STORAGE FACILITIES SHALL COMPLY WITH LOCAL BUILDING CODE TOUCH LATCHES AND U-SHAPED PULLS ARE ACCEPTABLE

FIXED OR BUILT-IN SEATING, TABLES, AND COUNTERS

101 WHERE FIXED OR BUILT-IN SEATING, TABLES, OR COUNTERS ARE PROVIDED FOR RESIDENTS OR GUESTS, 5 PERCENT BUT NOT LESS THAN ONE, SHALL BE ACCESSIBLE AS PROVIDED IN THIS SECTION

102 WHERE SEATING SPACES FOR PERSONS IN WHEELCHAIRS ARE PROVIDED AT FIXED TABLES OR COUNTERS, CLEAR FLOOR SPACE COMPLYING WITH SECTION 11364 IS POSITIONED FOR A FORWARD APPROACH SHALL BE PROVIDED SUCH SPACES SHALL BE LOCATED ADJACENT TO AN ACCESSIBLE ROUTE AND NOT SPACE BY MORE THAN 9 18 INCHES

103 WHEN SEATING FOR PERSONS IN WHEELCHAIRS IS PROVIDED AT FIXED TABLES OR COUNTERS, KNEE AND TOE SPACE COMPLYING WITH SECTION 11364 2 SHALL BE PROVIDED

104 THE TOPS OF TABLES AND COUNTERS SHALL BE 28 INCHES TO 34 INCHES FROM THE FINISH FLOOR

DIVISION IV - DWELLING UNIT FEATURES

1 AN ACCESSIBLE ROUTE SHALL BE PROVIDED THROUGH ALL BUYERS AND SPACES OF THE DWELLING UNIT AS REQUIRED BY SECTION 2 3 AND SHALL COMPLY WITH SECTION 4 PRIMARY ENTRY DOOR, AND SHALL CONFORM WITH ALL ADDITIONAL ENTERING DOORS REQUIRED FOR ENTRY OF APARTMENTS AT KITCHEN AREAS AND BATHROOM FIXTURES FOR THE PURPOSES OF THIS SECTION "ACCESSIBLE ROUTES" MAY INCLUDE HALLWAYS, CORRIDORS, AND RAMPS

2 THE ACCESSIBLE ROUTE MAY BE THROUGH-OUT COVERED MULTIFAMILY DWELLING UNITS SHALL BE AT LEAST 36 INCHES WIDE

CHANGES IN LEVELS, ON ACCESSIBLE ROUTES

3 ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED ¼ INCH WHEN CHANGES IN LEVEL EXCEED ½ INCH, THEY SHALL BE BEVELED WITH A SLOPE NOT EXCEEDING ONE UNIT VERTICAL IN 2 UNITS HORIZONTAL (50% SLOPE) CHANGES IN LEVEL NOT EXCEEDING ¼ INCH MAY BE VERTICAL

4 CHANGES IN LEVEL GREATER THAN ½ INCH SHALL BE MADE BY MEANS OF A RAMP, PLATFORM OR PLATFORM LIFT (SEE 7 , LIMITS OF

DOORS

5 THE WIDTH AND HEIGHT OF PRIMARY ENTRY DOORS AND ALL REQUIRED ENTRY DOORS SHALL COMPLY WITH THE REQUIREMENTS OF SECTIONS 11A 3 SHALL APPLY TO MANEUVERING CLEARANCES AT THE SIDE OF THE DOOR LATCHED TO CONFORM WITH THE REQUIREMENTS OF SECTION 11A 3 THE DOOR SHALL BE LOCATED WITHIN 10 FEET 0 INCHES OF THE ENTRANCE TO THE DWELLING UNIT'S HALLWAY OR LOBBY, OR DIRECTLY TO THE OUTSIDE)

6 EXCEPT AS ALLOWED BY LOCAL BUILDING CODE IN THROUGH-DOORS IN THROUGH-FOR DETERMINATION OF MINIMUM CLEAR WIDTH OF DOORS, DOORS COMPLY WITH THIS SECTION THE PROVISIONS OF THIS SECTION SHALL APPLY TO THE DWELLING UNIT ENTRANCE DOOR AND ALL DOORS ACROSS THE PATH OF TRAVEL OF THE DWELLING UNIT'S AND TO AN UNENCLOSED BASEMENT OR AN ATTACHED GARAGE

7 DOORS SHALL COMPLY WITH THE FOLLOWING

A DOORS SHALL NOT BE LESS THAN 3 FEET 0 INCHES IN HEIGHT

B SWINGING DOORS SHALL PROVIDE A NET CLEAR OPENING WIDTH OF NOT LESS THAN 29 INCHES MEASURED WITH THE DOOR OR DOOR'S PORTION SET AT AN ANGLE OF 90 DEGREES FROM THE DOOR'S CLOSED POSITION THE MEASUREMENT SHALL BE MADE BETWEEN THE PRIMARY ENTRY DOOR AND ALL ACQUIRED EXIT DOORS SHALL COMPLY WITH THE REQUIREMENTS OF LOCAL BUILDING CODE

C SWINGING DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES

D A NOMINAL 30 INCH CLEAR OPENING PROVIDED BY A STANDARD 6-FOOT 0-INCH SWING PATIO DOOR ASSEMBLY IS ACCEPTABLE

E A PAIR OF DOORS, MANUAL OR AUTOMATIC, MUST HAVE AT LEAST ONE LEAF WHICH PROVIDES A CLEAR WIDTH OF NOT LESS THAN 32 INCHES MEASURED WITH THE DOOR OPEN 90 DEGREES AT AN ANGLE TO THE OPENING IS EXPIRES FROM ITS CLOSED POSITION

F THE WIDTH OF ANY COMPONENT IN THE MEANS OF EGRESS SYSTEM SHALL NOT BE LESS THAN THE MINIMUM WIDTH REQUIRED BY LOCAL BUILDING CODE

8 THE FLOOR OR LANDING ON EACH SIDE OF A DOOR SHALL BE LEVEL PRIMARY ENTRY DOORS SHALL OPEN ONTO A LANDING THAT HAS DIMENSIONS MEASURED PERPENDICULAR TO THE DOOR'S CHANGES IN HEIGHT BETWEEN THE INTERIOR SURFACE OR FLOOR LEVEL AND THE EXTERIOR SURFACE OR FLOOR LEVEL SHALL COMPLY WITH THE FOLLOWING

A EXTERIOR LANDINGS OF MASONRY CONSTRUCTION (E G , CONCRETE, BRICK, FLAGSTONE) FLAGSTONE) SERVING PRIMARY ENTRY DOORS AND REQUIRED EXIT DOORS ARE ACCEPTABLE PROVIDED THAT THEY DO NOT EXCEED THE MAXIMUM HEIGHT OF FLOOR SURFACES CHANGES SHALL COMPLY WITH LOCAL BUILDING CODE

B EXTERIOR LANDINGS OF PORCELAIN CONSTRUCTION (E G , WOOD DECKING WITH SPACES) SHALL BE THE SAME LEVEL AS THE INTERIOR LANDING EXCEPT THAT SECONDARY EXTERIOR DOORS MAY HAVE NO MORE THAN ½ INCH OF CHANGE IN HEIGHT BETWEEN THE DOOR SURFACES CHANGES IN LEVEL SHALL COMPLY WITH LOCAL BUILDING CODE

C SECONDARY EXTERIOR DOORS OPEN ONTO DECKS, PATIOS OR BALCONY SURFACES CONSTRUCTED OF SUPERVISOR MATERIALS (E G , CONCRETE, BRICK, FLAGSTONE) MAY HAVE A MAXIMUM CHANGE IN HEIGHT FROM THE INTERIOR LANDING OF 3 INCH PROVIDED A RAMP WITH MAXIMUM SLOPE OF 1 8 IS PERMANENTLY INSTALLED

9 IN BUILDINGS CONTAINING CONFIRED MULTIFAMILY DWELLING UNITS, THE DOOR OF LANDING A RANDOM FULLY OUTSIDE THE ENTRY MAY BE SLOPED UP TO 4 INCH PER FOOT (12 INCHES) IN A DIRECTION AWAY FROM THE PRIMARY ENTRANCE OF THE DWELLING UNIT FOR DRAINAGE.

DOORS CONT'D

9 THRESHOLDS AT THE PRIMARY ENTRY AND REQUIRED EXIT DOORS SHALL BE NO HIGHER THAN ½ INCH THRESHOLDS AT SECONDARY EXTERIOR DOORS, INCLUDING SLIDING DOOR THRESH, SHALL BE NO HIGHER THAN ¾ INCH CHANGES IN HEIGHT AT INTERIOR DOOR THRESHOLDS (E G , FLOOR MATERIAL CHANGES) AT DOOR THRESHOLDS SHALL NOT EXCEED ½ INCH THRESHOLDS SHALL COMPLY WITH THE FOLLOWING

A THRESHOLDS WITH A CHANGE IN HEIGHT OF NOT MORE THAN ¼ INCH MAY BE VERTICAL

B THRESHOLDS WITH A CHANGE HEIGHT BETWEEN ¼ INCH AND 3/4 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1 UNIT VERTICAL IN 2 UNITS HORIZONTAL (50 PERCENT SLOPE)

10 HANDWASHING CLEARANCES AT INTERIOR DOORS SHALL PROVIDE A MINIMUM LENGTH ON BOTH SIDES OF THE DOOR OF AT LEAST 42 INCHES MEASURED AT A RIGHT ANGLE TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION

A A 30 INCH LENGTH IS ACCEPTABLE WHEN A MINIMUM CLEAR OPENING WIDTH OF 34 INCHES IS PROVIDED

B THE FLOOR OR LANDING ON THE DWELLING UNIT SIDE OF THE PRIMARY ENTRY DOOR AND ANY REQUIRED EXIT DOOR SHALL HAVE A MINIMUM LENGTH OF NOT LESS THAN 42 INCHES SECTION 11A 3 SHALL APPLY TO MANEUVERING CLEARANCES AT THE SIDE OF THE DOOR EXPOSED TO CONFORM WITH THIS REQUIREMENT

C THE DOOR SHALL BE LOCATED WITHIN 10 FEET 0 INCHES OF THE ENTRANCE TO THE DWELLING UNIT'S HALLWAY OR LOBBY, OR DIRECTLY TO THE OUTSIDE

11 THE WIDTH OF THE LEVEL AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 48 INCHES PAST THE STRIKE EDGE FOR ALL DOORS THE WIDTH OF THE LEVEL AREA AT THE EXTERIOR SIDE OF THE PRIMARY ENTRY DOOR AND ANY REQUIRED EXIT DOORS SHALL COMPLY WITH SECTION 11A3

12 MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS SUCH PULL OR PUSH EFFORT SHALL BE APPLIED TO THE DOOR LATCH HARDWARE FOR SWINGING DOORS, AND TO THE LEADING EDGE FOR SLIDING OR FOLDING DOORS COMPONENTING DEVICES OF AUTOMATIC DOOR OPERATORS MAY BE ADJUSTED TO MEET THE SET STANDARDS WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MINIMUM ALLOWABLE BY THE APPROPRIATE ENFORCEMENT AGENCY NOT TO EXCEED 15 POUNDS

13 THE TYPE OF LATCH AND LOCK REQUIRED FOR ALL DOORS SHALL BE IN ACCORDANCE WITH SECTION 11326 3 AND CHAPTER 16, SECTION 1008

14 HAND ACTUATED DOOR LATCHING, LOCKING, AND OPENING HARDWARE SHALL BE ON LEVER BE STYLE IN SHAPE AND NO MORE ABOVE THE FLOOR LATCHING AND LOCKING DOORS THAT ARE HAND-ACTUATED AND ON AN ACCESSIBLE ROUTE SHALL BE EQUIPPED WITH LEVER EXTENSION FLUSH TYPE HARDWARE, PANIC BARS, PUSH-UP ACTING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING SHE ABILITY TO GRASP THE OPPOSING HARDWARE LOCKED 8 SET DOORS SHALL COMPLY WITH CONSISTENT WITH SECTION 11326 4, IN THE DIRECTION OF EGRESS

15 THE LEVER OR LEVER OF ACTUATED LATCHES OR LOCKS SHALL BE CURVED WITH A RETURN TO WITHIN ½ INCH OF THE DOOR TO PREVENT CATCHING ON THE CLOTHING OF PERSONS PUSHING DOORS IN GROUP 8 AND 10 OCCUPANCIES WITH AN OCCUPANT LOAD GREATER THAN 50

16 THE BOTTOM 10 INCHES OF ALL DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE THAT SHALL NOT BE INTERRUPTED BY PROTECTIVE PLATES BELOW THE LOCKSET TO AVOID CREATING A TRAP OR ENTRAPPING CONDITION WHERE NARROW FRAME DOORS ARE USED, A 10 INCH HIGH SMOOTH PANEL SHALL BE INSTALLED ON THE PUSH SIDE OF THE DOOR, EXTENDING DOWN FROM THE TOP OF THE DOOR TO A POINT NOT MORE THAN 1 INCH ABOVE THE LATCH SIDE OF THE DOOR WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION

17 (SELF) PRIMARY ENTRANCE TO A CONFIRED MULTIFAMILY DWELLING UNIT SHALL BE EQUIPPED WITH A PEEPHOLE, CHIME OR EQUIVALENT THE ACTIVATING MECHANISM SHALL BE MOUNTED A MAXIMUM OF 48 INCHES ABOVE THE FLOOR AND CONNECTED TO PERMANENT WIRING

KITCHENS

18 KITCHENS SHALL BE ON AN ACCESSIBLE ROUTE

19 CLEAR FLOOR SPACE AT KITCHENS SHALL COMPLY WITH THE FOLLOWING

A A CLEAR FLOOR SPACE AT LEAST 30 INCHES BY 48 INCHES THAT ALLOWS A PARALLEL APPROACH BY A PERSON IN A WHEELCHAIR SHALL BE PROVIDED AT THE RANGE OR COOKTOP

B A CLEAR FLOOR SPACE AT LEAST 30 INCHES BY 48 INCHES THAT ALLOWS EITHER A PARALLEL OR A FORWARD APPROACH BY A PERSON IN A WHEELCHAIR SHALL BE PROVIDED AT THE SINK AND ALL OTHER FIXTURES OR APPLIANCES INCLUDING THE OVEN DISHWASHER REFRIGERATOR/FREEZER AND TRASH COMPACTOR

C THE CENTERLINE OF THE 30 INCH BY 48 INCH CLEAR FLOOR SPACE PROVIDED FOR THE RANGE OR COOKTOP FOR A FORWARD APPROACH SHALL BE ALIGNED WITH THE CENTERLINE OF THE APPLIANCE OR FIXTURE

20 KITCHENS SHALL HAVE A MINIMUM CLEAR WORK WIDTH MEASURED BETWEEN ANY CABINET, APPLIANCE, OR OTHER FIXTURE OF ANY APPLIANCE (EXCLUDING HANDLES AND CONTROLS) THAT PROJECTS INTO THE KITCHEN AND THE OPPOSING CABINET, COUNTERTOP, APPLIANCE OR WALL AS FOLLOWS

A 40 INCHES WHERE DESIGNED WITH A PARALLEL APPROACH AT A RANGE OR COOKTOP AS DESCRIBED AT THE BASE OF THE U SHALL HAVE A MINIMUM CLEAR WIDTH OF AT LEAST 60 INCHES

B ARMRED KITCHENS, DESIGNED WITH A COOKTOP OR SINK LOCATED AT THE BASE OF THE U, SHALL HAVE A MINIMUM CLEAR WIDTH OF 60 INCHES MEASURED FROM THE FRONT EDGE OF THE BATHTUB TO ANY CABINET OR FIXTURE FOR A FORWARD APPROACH, SHALL HAVE A CLEAR WIDTH OF AT LEAST 48 INCHES

C ALL OTHER KITCHEN DESIGNS SHALL PROVIDE A MINIMUM CLEAR WIDTH OF AT LEAST 40 INCHES

21 BASE CABINETS DIRECTLY UNDER THE KITCHEN SINK COUNTER AREA, INCLUDING TOEKICKED AND SHELVING, SHALL BE REMOVABLE WITHOUT THE USE OF SPECIALIZED TOOLS FOR MECHANICAL REMOVAL, SUCH AS THE REMOVAL OF BOLTS OR SCREWS FOR A PANEL OVER THE FINISH FLOOR BENEATH THE KITCHEN SINK COUNTER AREA SHALL BE EXPOSED OR BE FINISHED WITH

22 KITCHEN COUNTERTOPS SHALL BE PROVIDED WITH THE FOLLOWING

A A MINIMUM LINEAR LENGTH OF 30 INCHES OF COUNTERTOP SHALL BE PROVIDED FOR THE KITCHEN SINK AREA

B A MINIMUM LINEAR LENGTH OF 30 INCHES OF COUNTERTOP SHALL BE PROVIDED FOR A WORK SURFACE

C THE SINK AND WORK SURFACE MAY BE A SINGLE INTEGRAL UNIT A MINIMUM OF 45 INCHES SHALL BE PROVIDED FOR THE COMBINED UNIT

EXCEPTION: TWO 15 INCH MINIMUM WIDTH BREADBOARDS MAY BE PROVIDED IN LIEU OF THE REQUIRED 30 INCHES OF COUNTERTOP WORK SURFACE

23 REPOSITIONABLE COUNTERTOPS SHALL BE PROVIDED IN A MINIMUM OF FIVE PERCENT OF THE COVERED MULTI-FAMILY DWELLING UNITS REPOSITIONABLE COUNTERTOPS SHALL COMPLY WITH THE FOLLOWING

A THE KITCHEN SINK AND WORK SURFACE SPACE REQUIRED BY LOCAL BUILDING CODE SH

ACCESSIBLE DRINKING FOUNTAINS CONT'D

22. DRINKING FOUNTAINS SHALL BE LOCATED COMPLETELY WITHIN ALCOVES, RECESSES, OR OTHERWISE POSITIONED SO AS NOT TO ENCROACH INTO PEDESTRIAN WAYS. THE ALCOVE FOR OTHERWISE PROTECTED AREA IN WHICH THE DRINKING FOUNTAIN IS LOCATED SHALL NOT BE LESS THAN 32 INCHES (81 CM) WIDE AND 18 INCHES (46 CM) DEEP, WHERE THE DEPTH OF THE PROTECTED AREA AWAY THE DRINKING FOUNTAIN IS LOCATED EXCEEDS 24 INCHES. ADDITIONAL MANEUVERING CLEARANCE SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL BUILDING CODE

23. WHEN PROVIDED, WING WALLS SHALL PROJECT OUT FROM THE SUPPORTING WALL AT LEAST AS FAR AS THE DRINKING FOUNTAIN TO WITHIN 3 INCHES VERTICALLY FROM THE FINISH FLOOR

24. PROTRUDING OBJECTS LOCATED IN ALCOVES OR DRINKING FOUNTAINS FOR HOUSED SO AS TO LIMIT ENCROACHMENT INTO PEDESTRIAN WAYS ARE PERMITTED TO PROJECT 6 INCHES INTO WALLS, HALLS CORRIDORS, PASSAGEWAYS OR AISLES

ACCESSIBLE TELEPHONES

IF PUBLIC TELEPHONES ARE PROVIDED, THEY SHALL COMPLY WITH LOCAL BUILDING CODE

ACCESSIBLE SWIMMING POOLS

25. SWIMMING POOLS IN COMMON-USE AREAS SHALL COMPLY WITH THE PROVISIONS OF LOCAL BUILDING CODE

26. SWIMMING POOL DECK AREAS MUST BE ACCESSIBLE, AND A MECHANISM TO ASSIST PERSONS WITH DISABILITIES GAIN ENTRY INTO THE POOL AND EXIT FROM THE POOL SHALL BE PROVIDED. SUCH A MECHANISM MAY CONSIST OF A SWIMMING POOL LIFT DEVICE AS LONG AS THE DEVICE MEETS ALL OF THE FOLLOWING CRITERIA

A. HAS A SEAT THAT MEETS ALL OF THE FOLLOWING

I. THE SEAT MUST BE RIGID

II. THE SEAT MUST BE NOT LESS THAN 17 INCHES AND NOT MORE THAN 19 INCHES INCLUSIVE OF ANY CUSHIONED SURFACE. THIS WIDTH SHALL BE PROVIDED ABOVE THE POOL DECK

III. THE SEAT MUST HAVE TWO ARMRESTS. THE ARMREST ON THE SIDE OF THE SEAT BY WHICH ACCESS IS GAINED SHALL BE 24 INCHES MINIMUM AND 30 INCHES O.C. MAXIMUM. THE SEAT

IV. THE SEAT MUST HAVE A BACK SUPPORT THAT IS AT LEAST 12 INCHES TALL

V. THE SEAT MUST HAVE AN OCCUPANT RESTRAINT FOR USE BY THE OCCUPANT OF THE SEAT AND THE RESTRAINT MUST MEET THE STANDARDS FOR OPERABLE CONTROLS IN COMPLIANCE WITH SECTION 1139.6.4.4

B. BE CAPABLE OF UNASSISTED OPERATION FROM BOTH THE DECK AND WATER LEVELS

C. BE STABLE AND NOT PERMIT UNINTENDED MOVEMENT WHEN A PERSON IS GETTING INTO OR OUT OF THE SEAT

D. BE DESIGNED TO HAVE A MINIMUM CAPACITY OF NOT LESS THAN 300 POUNDS

E. BE POSITIONED SO THAT IF THE POOL HAS WATER OF DIFFERENT DEPTHS, IT WILL PLACE THE OPERATOR INTO WATER THAT IS AT LEAST 3 FEET DEEP

F. BE CAPABLE OF LOWERING THE OPERATOR AT LEAST 18 INCHES BELOW THE SURFACE OF THE WATER

ELECTRICAL RECEPTACLE, SWITCH AND CONTROL HEIGHTS

SIGNAGE

NOTE: SEE SECTION 1110A.7 FOR ADDITIONAL SIGNAGE REQUIREMENTS APPLICABLE TO SANITARY FACILITIES AND SECTION 1104A FOR ADDITIONAL SIGNAGE REQUIREMENTS APPLICABLE TO ELEVATORS

27. WHEN SIGNS AND/OR IDENTIFICATION DEVICES ARE PROVIDED THEY SHALL COMPLY WITH LOCAL BUILDING CODE. WHEN BOTH VISUAL AND TACTILE CHARACTERS ARE REQUIRED (I.E. ON ONE SIGN, A RAISED VISUAL AND TACTILE CHARACTERS, OR TWO SEPARATE SIGNS - ONE WITH VISUAL, AND ONE WITH TACTILE CHARACTERS), SHALL BE PROVIDED

28. WHEN SIGNS IDENTIFY PERMANENT ROOMS AND SPACES OF A BUILDING OR SITE THEY SHALL COMPLY WITH LOCAL BUILDING CODE

29. WHEN SIGNS DIRECT TO OR GIVE INFORMATION ABOUT PERMANENT ROOMS AND SPACES OF A BUILDING OR SITE, THEY SHALL COMPLY WITH LOCAL BUILDING CODE

30. WHEN SIGNS IDENTIFY, DIRECT OR GIVE INFORMATION ABOUT ACCESSIBLE ELEMENTS AND FEATURES OF A BUILDING OR SITE, THEY SHALL INCLUDE THE APPROPRIATE SYMBOL OF ACCESSIBILITY AND SHALL COMPLY WITH LOCAL BUILDING CODE

31. SIGNS WITH VISUAL CHARACTERS SHALL COMPLY WITH THE FOLLOWING:

A. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND EITHER A LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND

B. CHARACTERS SHALL BE UPPERCASE, LOWERCASE OR A COMBINATION OF BOTH. CHARACTERS SHALL BE COMPOSITIONAL IN FORM AND SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE OR OF OTHER UNUSUAL FORMS

C. CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I"

D. VISUAL CHARACTERS SHALL BE SIZED IN ACCORDANCE WITH LOCAL BUILDING CODE. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH TOWARDS THE SIGN. CHARACTERS HEIGHT SHALL BE MEASURED ON THE UPPERCASE LETTER "I"

E. VISUAL CHARACTERS SHALL BE 40 INCHES MINIMUM ABOVE THE FINISH FLOOR

F. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 30 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER. CHARACTERS ON SIGNS SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT CHARACTERS, EXCLUDING WORD SPACES. STROKE THICKNESS FOR INDIVIDUAL CHARACTERS SHALL BE 10 PERCENT MINIMUM AND 30 PERCENT MAXIMUM OF CHARACTER HEIGHT

G. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE CHARACTER HEIGHT

H. TEXT SHALL BE IN A HORIZONTAL FORMAT

32. WHEN RAISED CHARACTERS ARE REQUIRED OR WHEN PICTORIAL SYMBOLS (PICTOGRAMS) ARE USED ON SUCH SIGNS, THEY SHALL COMPLY WITH THIS SECTION. RAISED CHARACTERS AND PICTORIAL SYMBOLS SHALL BE DUPLICATED IN BRAILLE COMPLYING WITH LOCAL BUILDING CODE

A. RAISED CHARACTERS ON SIGNS SHALL BE 1 INCH MINIMUM ABOVE THEIR BACKGROUND. CHARACTERS SHALL BE SANS SERIF UPPERCASE, AND SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE OR OF OTHER UNUSUAL FORMS

B. CHARACTERS HEIGHT, MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER, SHALL BE 5/8 INCH MINIMUM AND 2 INCHES MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I"

C. CHARACTERS AND BRAILLE SHALL BE IN A HORIZONTAL FORMAT

D. RAISED CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I"

E. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER

F. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES. WHEN CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM. WHEN CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/16 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDERS AND DECORATIVE ELEMENTS 3/8 INCH MINIMUM

G. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT

H. WHEN A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHEN A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHEN A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHEN THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES MINIMUM BY 18 INCHES MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. WHEN PERMANENT IDENTIFICATION SIGNAGE IS PROVIDED FOR ROOMS AND SPACES THEY SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE ENTERS THE ROOM OR SPACE. SIGNS THAT IDENTIFY EXITS SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE EXITS THE ROOM OR SPACE

SIGNAGE CONT'D

I. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES. WHEN CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM. WHEN CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/16 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDERS AND DECORATIVE ELEMENTS 3/8 INCH MINIMUM

J. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT

K. WHEN A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHEN A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHEN A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHEN THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES MINIMUM BY 18 INCHES MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. WHEN PERMANENT IDENTIFICATION SIGNAGE IS PROVIDED FOR ROOMS AND SPACES THEY SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE ENTERS THE ROOM OR SPACE. SIGNS THAT IDENTIFY EXITS SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE EXITS THE ROOM OR

L. SIGNS WITH RAISED CHARACTERS SHALL BE LOCATED 48 INCHES MINIMUM ABOVE THE FINISH FLOOR, MEASURED FROM THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60 INCHES MAXIMUM DIRECTLY BELOW THE PICTOGRAM FIELD. THE TEXT DESCRIPTION SHALL COMPLY WITH LOCAL BUILDING CODE. THE OUTSIDE DIMENSION OF THE PICTOGRAM FIELD SHALL BE 6 INCHES MINIMUM IN HEIGHT. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD

M. PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY A TEXT DESCRIPTION LOCATED DIRECTLY BELOW THE PICTOGRAM FIELD. THE TEXT DESCRIPTION SHALL COMPLY WITH LOCAL BUILDING CODE. THE OUTSIDE DIMENSION OF THE PICTOGRAM FIELD SHALL BE A MINIMUM OF 6 INCHES IN HEIGHT. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD

33. CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE IS REQUIRED IN OTHER PORTIONS OF THESE STANDARDS

34. BRAILLE DOTS SHALL HAVE A DOMED OR ROUNDED SHAPE AND SHALL COMPLY WITH LOCAL BUILDING CODE. THE INDICATION OF AN UPPERCASE LETTER OR LETTERS SHALL ONLY BE USED BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS AND ACRONYMS

35. BRAILLE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT. FLUSH LEFT OR CENTERED. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8 INCH MINIMUM AND ½ INCH MAXIMUM FROM ANY OTHER TACTILE CHARACTERS AND 3/8 INCH MINIMUM FROM RAISED BORDERS AND DECORATIVE ELEMENTS

36. SYMBOLS OF ACCESSIBILITY AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. SYMBOLS OF ACCESSIBILITY SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER A LIGHT SYMBOL ON A DARK BACKGROUND OR A DARK SYMBOL ON A LIGHT BACKGROUND. SYMBOLS OF ACCESSIBILITY SHALL COMPLY WITH THE FOLLOWING:

A. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE COLOR NO. 15090 IN FEDERAL STANDARD 595B

B. INTERNATIONAL SYMBOL OF TTY

C. VOLUME CONTROL TELEPHONES

D. ASSISTIVE LISTENING SYSTEMS

E. CLEANER AID SYMBOL

F. "DEAF" AND BATHING FACILITIES DESIGNATING SYMBOLS

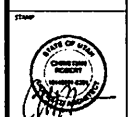
DIVISION V - SITE INFRASTRUCTURE "2012

GENERAL

COVERED MULTIFAMILY DWELLINGS IN BUILDINGS WITHOUT AN ELEVATOR LOCATED ON SITES WITH DIFFICULT TERRAIN CONDITIONS OR UNUSUAL CHARACTERISTICS MAY DEPLOY THE SITE INFRACTUALITY TESTS IN THIS DIVISION OR "LIMITING THE ACCESSIBILITY AND ADAPTABILITY PROVISIONS REQUIRED BY THE CHAPTER 4 SUBP" AS PROVIDED FOR IN LOCAL BUILDING CODE THE PROVISIONS OF THIS SECTION DO NOT APPLY TO MULTI-STORY DWELLING UNITS IN NON-ELEVATOR BUILDINGS. I.E. "DWELLINGS

R&A
4765 Sequoia Boulevard Suite 100
Provo Ut. 84601
tel 319 730 5999
www.ra-a.com

STAMP



NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ACCESSIBILITY NOTES (HOUSING 3)

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

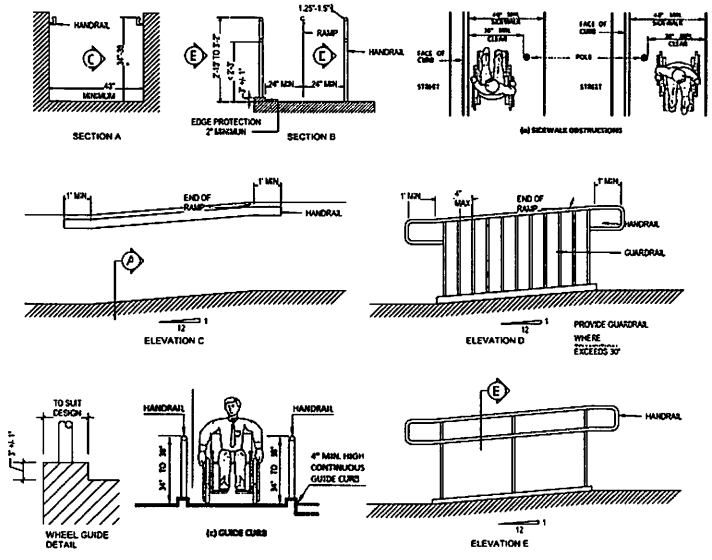
JOB NO. 236

DATE 06/27/17

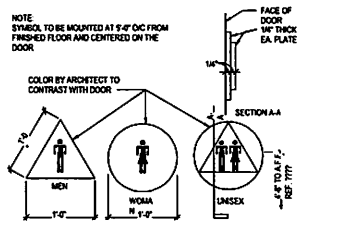
SCALE

SHEET NO. A04.09

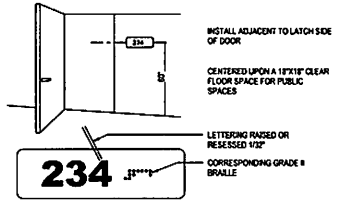
6/26/2017 11:21:14 AM



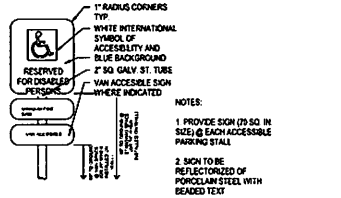
RAMP RAILING | 1/2" = 1'-0" | 15



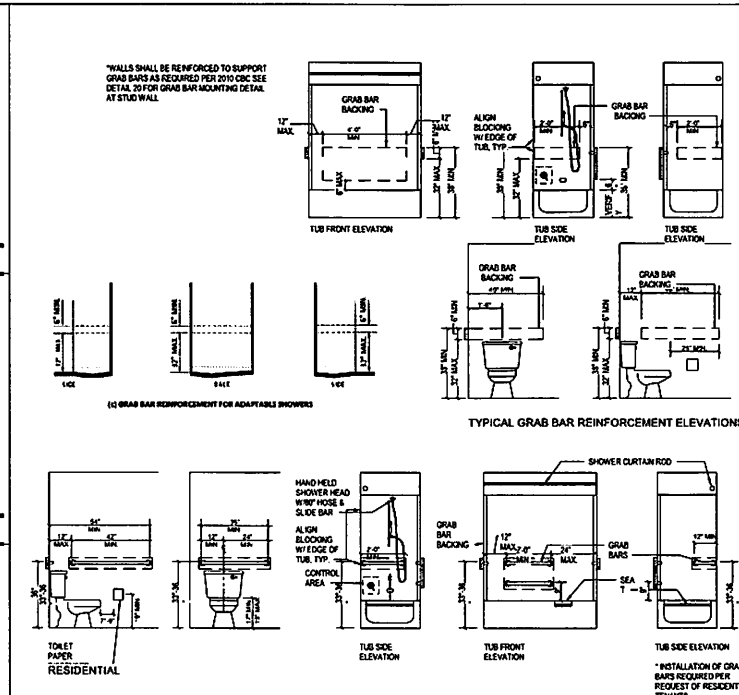
SANITARY FACILITY SYMBOL | N.T.S. | 10



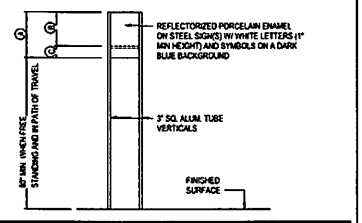
INTERIOR SIGN | N.T.S | 9



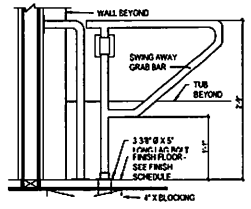
ACCESIBLE PARKING SIGN | N.T.S. | 8



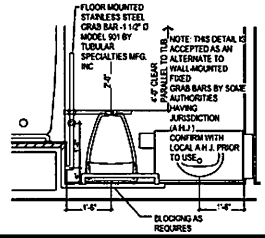
GRAB BAR ELEVATIONS & CLEARANCES, TOILET, TUB & LABATORY SINK | 1/8" = 1'-0" | 5



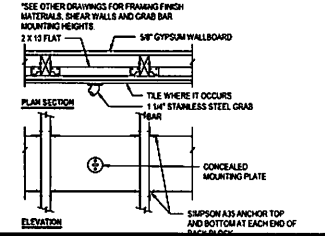
ADA11_ACCESS SIGN CUSTOM | N.T.S. | 14



SWING GRAB BAR ELEV. | N.T.S. | 12

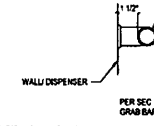


GRAB BAR SWING | 1/8" = 1'-0" | 7



GRAB BAR MOUNTING | N.T.S. | 4

NOTES:
1. ONE AT SIDE 42" LONG EXTENDING 24" IN FRONT OF WATER CLOSET. ONE AT REAR OF WATER CLOSET 36" LONG, BOTH MOUNTED 33" ABOVE FLOOR. (EXCEPTION: REAR GRAB BAR OVER TANK TYPE WATER CLOSER MAY BE UP TO 36" ABOVE FLOOR)
2. BARS SHALL BE 1-1/4" TO 1-1/2" IN DIAMETER WITH 1-1/2" CLEARANCE TO WALL.
3. BAR FASTENERS AND MOUNTING SUPPORT SHALL BE ABLE TO WITHSTAND 250 LBS. POINT LOAD IN BENDING, SHEAR TENSION ROTATION IN FITTING NOT ALLOWED.
4. SURFACE OF WALL ADJACENT TO GRAB BAR IS TO BE FREE OF SHARP OR ABRASIVE ELEMENTS



GRAB BAR | N.T.S. | 2

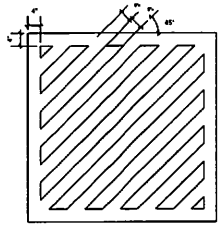
THE SYMBOL, ABOVE SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND THE BLUE SHALL BE EQUAL TO COLOR No. 15090 IN THE FEDERAL STANDARD

ALL HANDICAP SPACES SHALL BE IDENTIFIED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY ON A REFLECTORIZED SIGN (70 SQ IN. MIN.) POSTED AT +80" MIN OR AFFIXED TO A WALL AT +36" MIN

SURFACE OF HANDICAP PARKING SPACE SHALL HAVE THE OUTLINE OF A WHEELCHAIR WITH OCCUPANT (INTERNATIONAL SYMBOL OF ACCESSIBILITY) AT 36" X 36" SIZE.

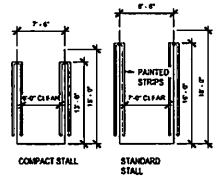
VAN ACCESSIBLE PARKING SPACES SHALL HAVE AN ADDITIONAL SIGN STATING "VAN ACCESSIBLE" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY

ADA PARKING SIGN | N.T.S. | 13



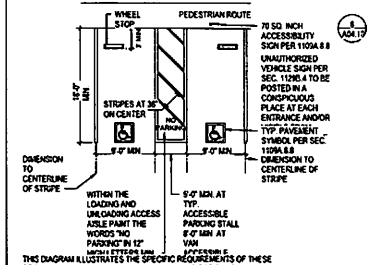
STRIPING SHALL CONSIST OF 4" WIDE STRIPES ON A 45° ANGLE WITH A BORDER OF 1" WIDTH COLOR SHALL BE DEPARTMENT OF TRANSPORTATION APPROVED WHITE, YELLOW OR BLUE.

NON ADA WALK STRIPING | N.T.S. | 11

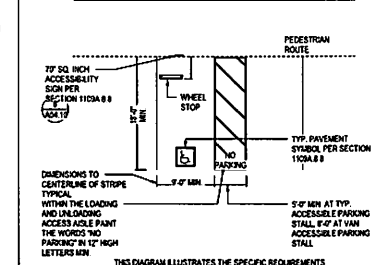


DOUBLE STRIPING OF STALLS SHALL BE PER FIG. 7 OF THE CITY OF WEST HOLLYWOOD DEPT. STANDARDS

PARKING STRIPING DETAIL | N.T.S. | 6



DOUBLE PARKING STALLS | N.T.S. | 3



SGL STALL H.C. ACCESSIBLE | N.T.S. | 1

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ACCESSIBILITY DETAILS

No.	Description	Date
	ISSUED FOR FOUNDATION	2017-0
	2'S INSET	27

PROJECT NO
236

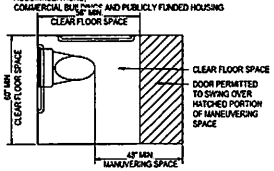
DATE
06/27/17

SCALE
As indicated

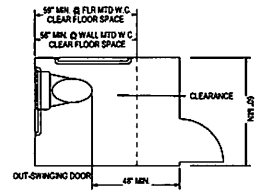
SHEET NO
A04.10

CLEARANCES AT WATER CLOSETS

ACCESSIBILITY TO PUBLIC BUILDINGS, PUBLIC ACCOMMODATIONS, COMMERCIAL BUILDINGS AND PUBLICLY FUNDED HOUSING

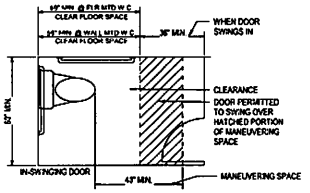


(a) CLEARANCES AT WATER CLOSET



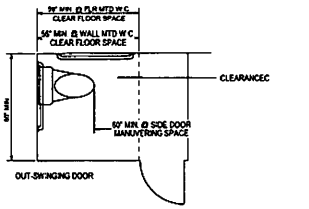
(b) CLEARANCES AT WATER CLOSET IN COMPARTMENT WITH OUT-SWINGING END-OPENING DOOR

FIGURE 11B-604.8.1.1.3



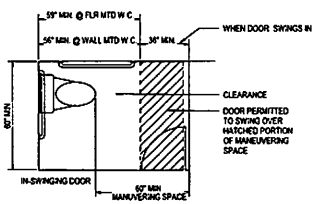
(c) CLEARANCES AT WATER CLOSET IN COMPARTMENT WITH IN-SWINGING END-OPENING DOOR

FIGURE 11B-604.8.1.1.3



(d) CLEARANCES AT WATER CLOSET IN COMPARTMENT WITH OUT-SWINGING SIDE-OPENING DOOR

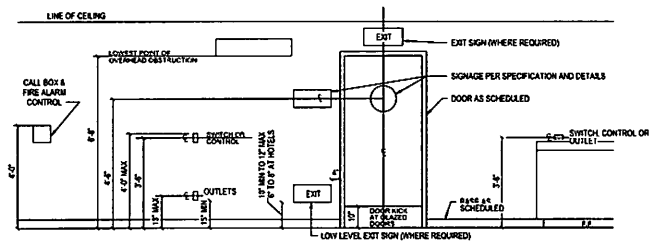
FIGURE 11B-604.8.1.1.2



(e) CLEARANCES AT WATER CLOSET IN COMPARTMENT WITH IN-SWINGING SIDE-OPENING DOOR

FIGURE 11B-604.8.1.1.2

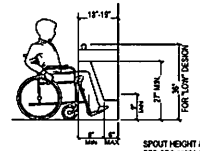
PUBLIC WC CLEARANCE | N.T.S. | 7



EQUIPMENT ELEVATIONS | 1/8" = 1'-0" | 6

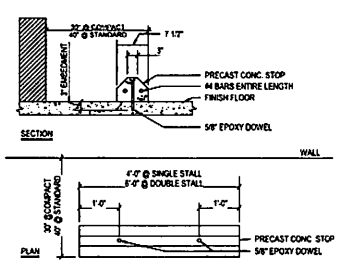
NOTES:

A LOCATED IN AN ALCOVE NOT LESS THAN 32" WIDE X 18" DEEP
B 13"-19" DEPTH OF THE FOUNTAIN.
C CLEAR AND UNOBSTRUCTED KNEE SPACE A MINIMUM OF 27" HIGH BY 8" DEEP UNDER THE FOUNTAIN (MEASURED FROM FRONT EDGE)
D TOE CLEARANCE A MINIMUM OF 9" HIGH BY 17" DEEP.
E LEVER OF PUSH BAR TYPE CONTROL IS LOCATED 6" MAXIMUM FROM FRONT EDGE
F BUBBLER OUTLET IS LOCATED 6" MAXIMUM FROM FRONT EDGE.
G BUBBLER OUTLET IS LOCATED 36" MAXIMUM HEIGHT FROM FLOOR.
H STREAM FROM BUBBLER IS SUBSTANTIALLY PARALLEL TO FRONT EDGE.
I STREAM FROM BUBBLER IS A MINIMUM OF 4" HIGH.
J WHERE ONE FOUNTAIN IS PROVIDED, USE A "HI-LOW" FOUNTAIN DESIGN

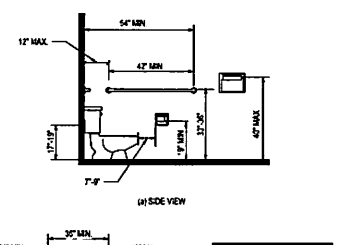


SPOUT HEIGHT AND KNEE CLEARANCE PER SEC 1133A.5 & 1133A.4.1 ACCESSIBLE DRINKING

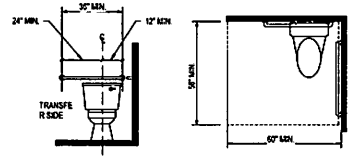
LAVATORY CLEARANCE | N.T.S. | 5



PRE-CAST WHEEL STOP | N.T.S. | 2



(a) SIDE VIEW

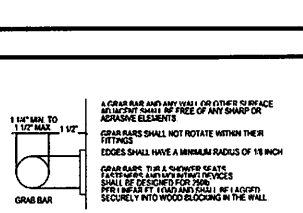


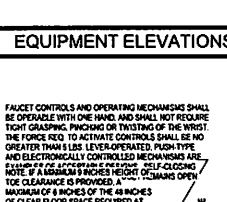
(b) FRONT VIEW (c) CLEAR FLOOR SPACE AT WATER CLOSETS

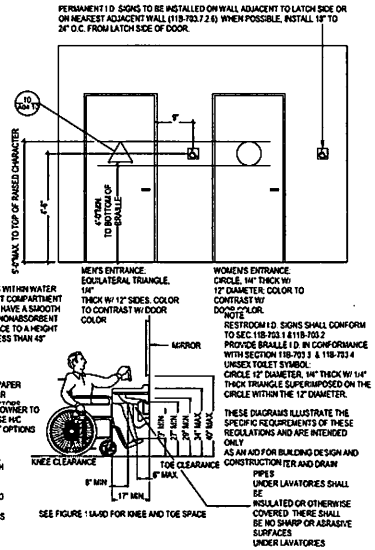
FIGURE 11A-80 WATER CLOSETS

FOR PRIVATELY FUNDED HOUSING (SECTION 114)

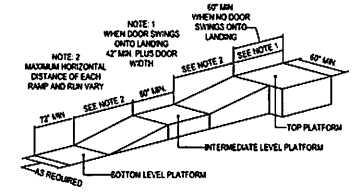
PRIVATE WC CLEARANCE | 1/8" = 1'-0" | 3



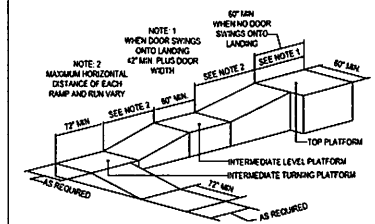




SINGLE ACCOMODATION TOILET STALL | 1/8" = 1'-0" | 4



(a) STRAIGHT RAMP RUN



(a) RAMP WITH TURNING PLATFORM

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION

ADA RAMP | N.T.S. | 1

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ACCESSIBILITY DETAILS

No	Description	Date
	ISSUED FOR FOUNDATION PERMIT	2017-6-27

JOB NO. 236

DATE 06/27/17

SCALE As indicated

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6/26/2017 11:21:24 AM

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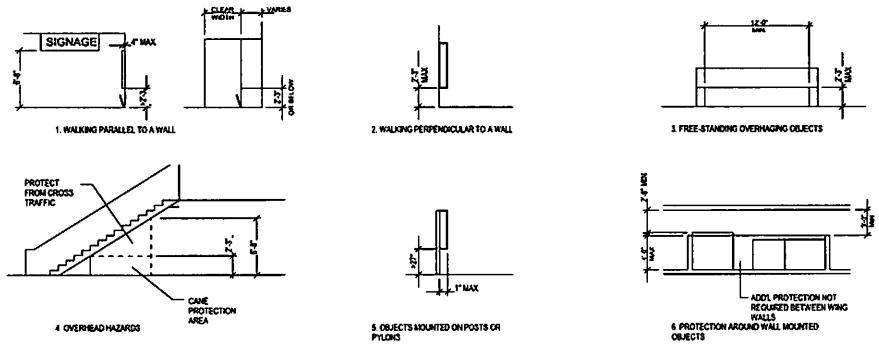
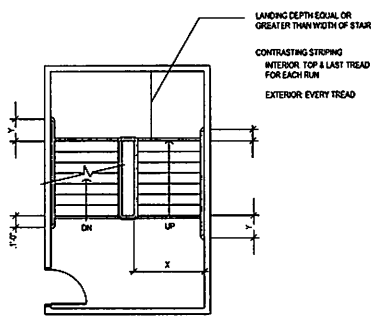
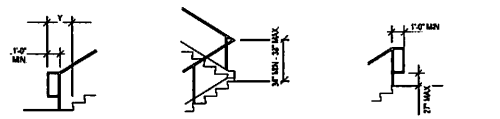


PROTRUDING OBJECTS | 1/8" = 1'-0" | 4

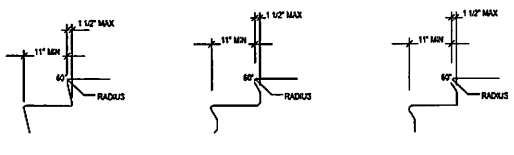


NOTES:

1. X= 44" MIN. WIDTH. SEE PLANS FOR ACTUAL DIMENSIONS
2. Y= WIDTH OF ONE TREAD PLUS 12"

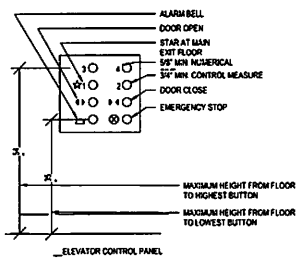


_STAIR HANDRAILS

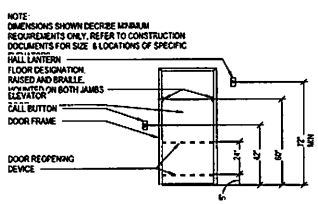


_ACCEPTABLE NOSINGS

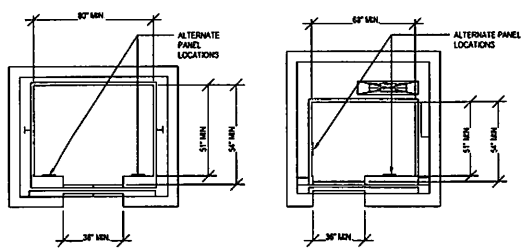
STAIRS | 1/8" = 1'-0" | 3



_ELEVATOR CONTROL PANEL



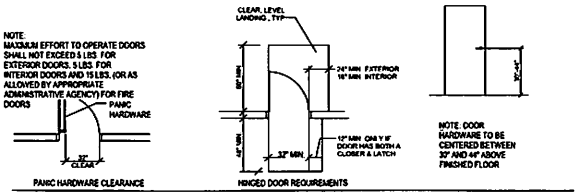
_ELEVATOR ENTRANCE



_CENTER OPENING DOOR

_SIDE OPENING DOOR

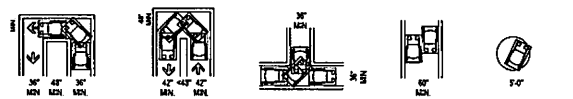
ELEVATORS | 1/8" = 1'-0" | 2



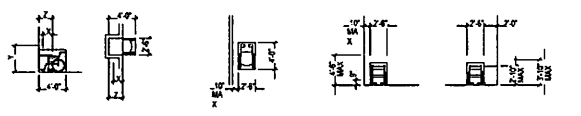
_HINGED SIDE APPROACHES

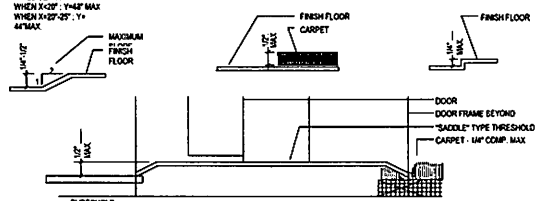
_LATCH SIDE APPROACHES

_DOORWAY REQUIREMENTS

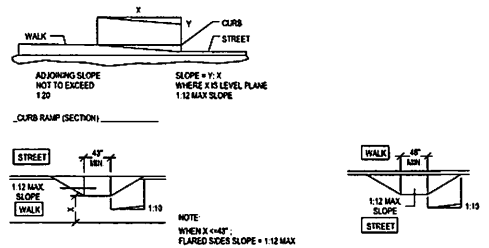


_WHEELCHAIR TURNING REQUIREMENTS IN AN ACCESSIBLE ROUTE





_CHANGES OF ELEVATION ALONG ACCESIBLE ROUTE



_CURB RAMP WITH FLARED SIDES (PLAN)

_BUILT-UP CURB RAMP (PLAN)

_CURB RAMPS

ACCESIBLE ROUTE | 1/8" = 1'-0" | 1

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ACCESSIBILITY DETAILS

No.	Description	Date
	ISSUED FOR FOUNDATION PERMIT	2017-6-27

JOB NO 236

DATE 06/27/17

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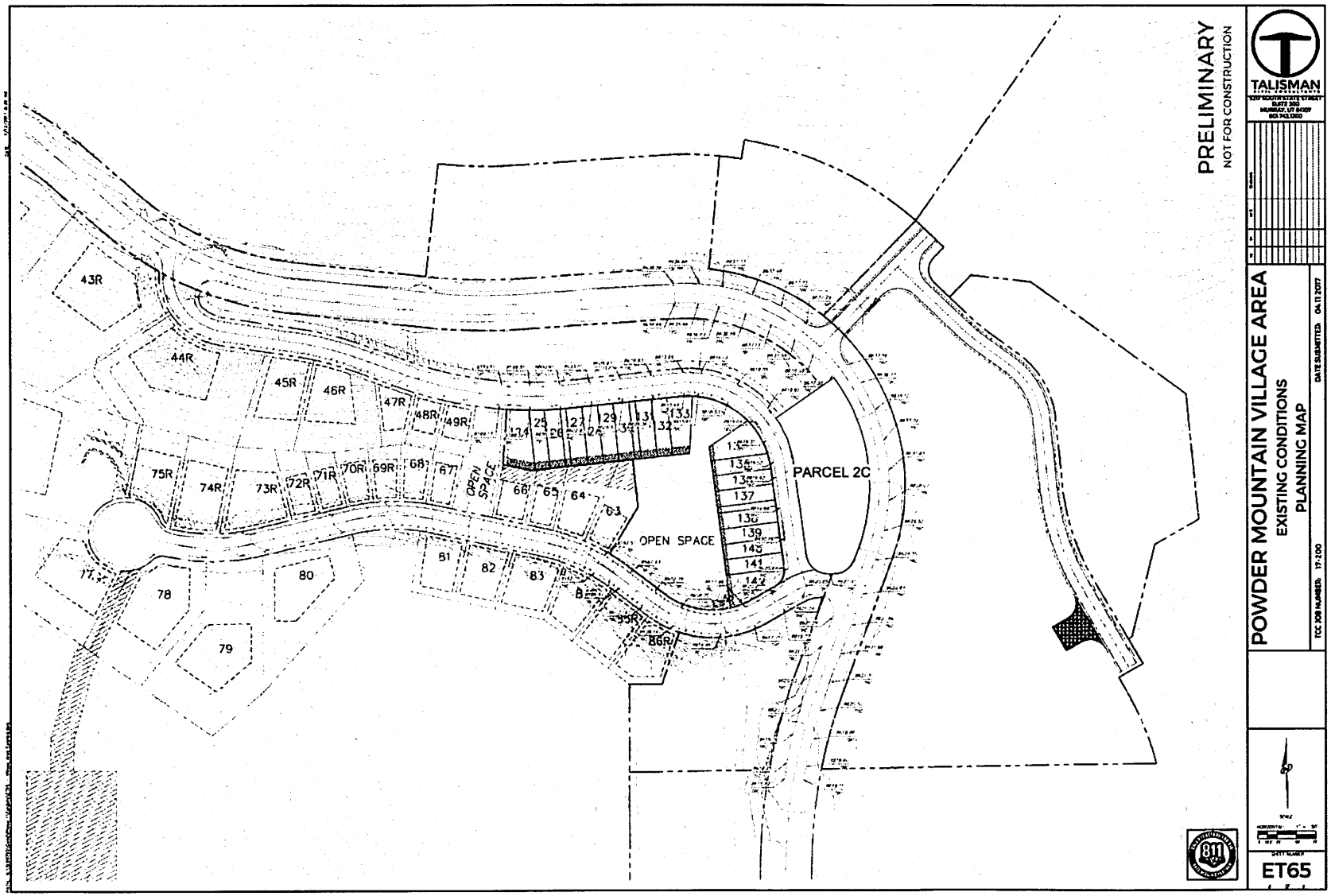

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TALISMAN

POWDER MOUNTAIN VILLAGE AREA
EXISTING CONDITIONS
PLANNING MAP

DATE SUBMITTED: 04.17.2017
TCC JOB NUMBER: 17-100

SHEET NUMBER
ET65

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
SURVEY PLAN

No.	Description	Date
1	ISSUED FOR PLANNING REVIEW	2017-06-27

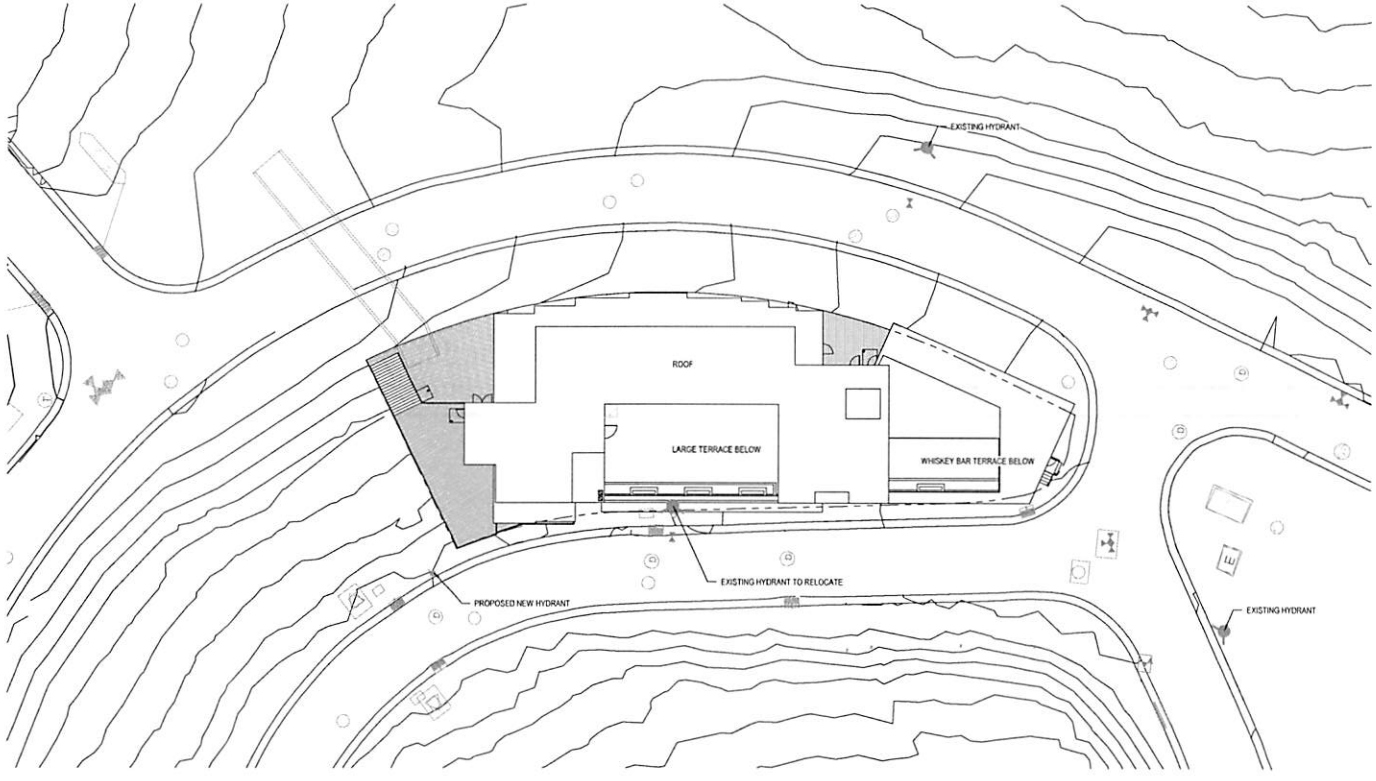
JOB NO.
236

DATE
06/27/17

SCALE
1" = 50'-0"

SHEET NO.
A05.01

6/29/2017 11:21:34 AM



SITE PLAN | 1/16" = 1'-0" | 1

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
SITE PLAN

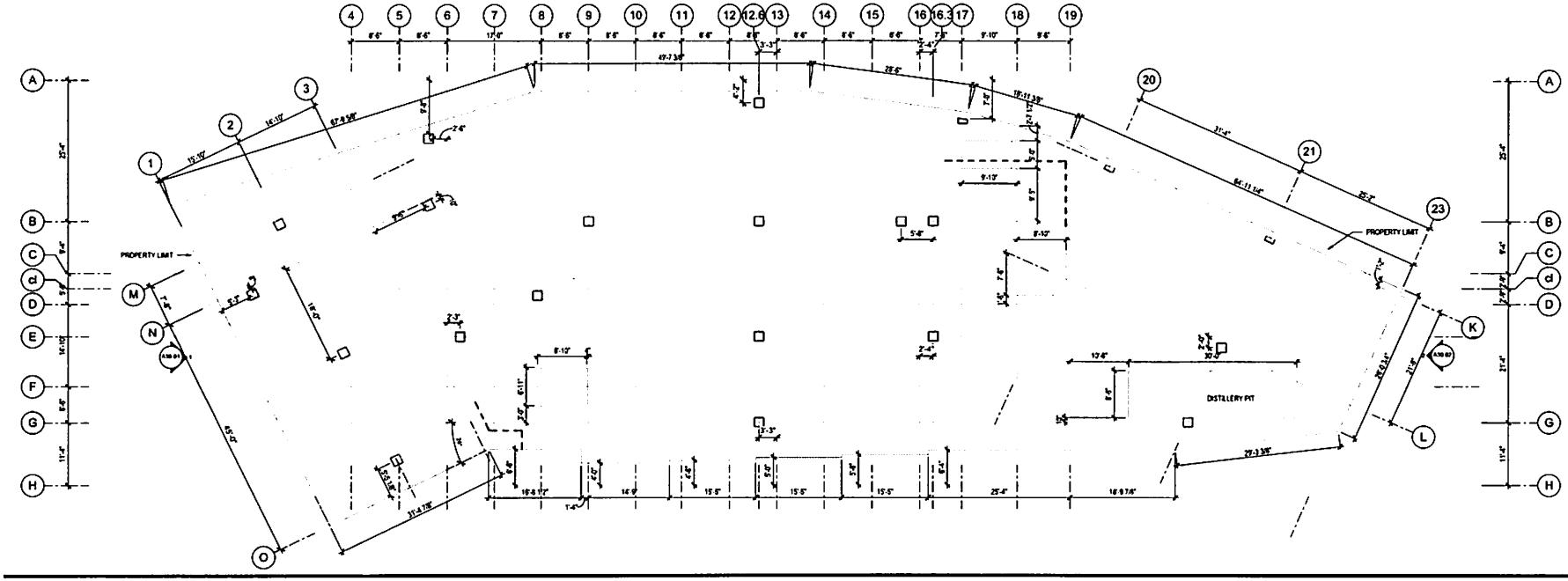
No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO
236

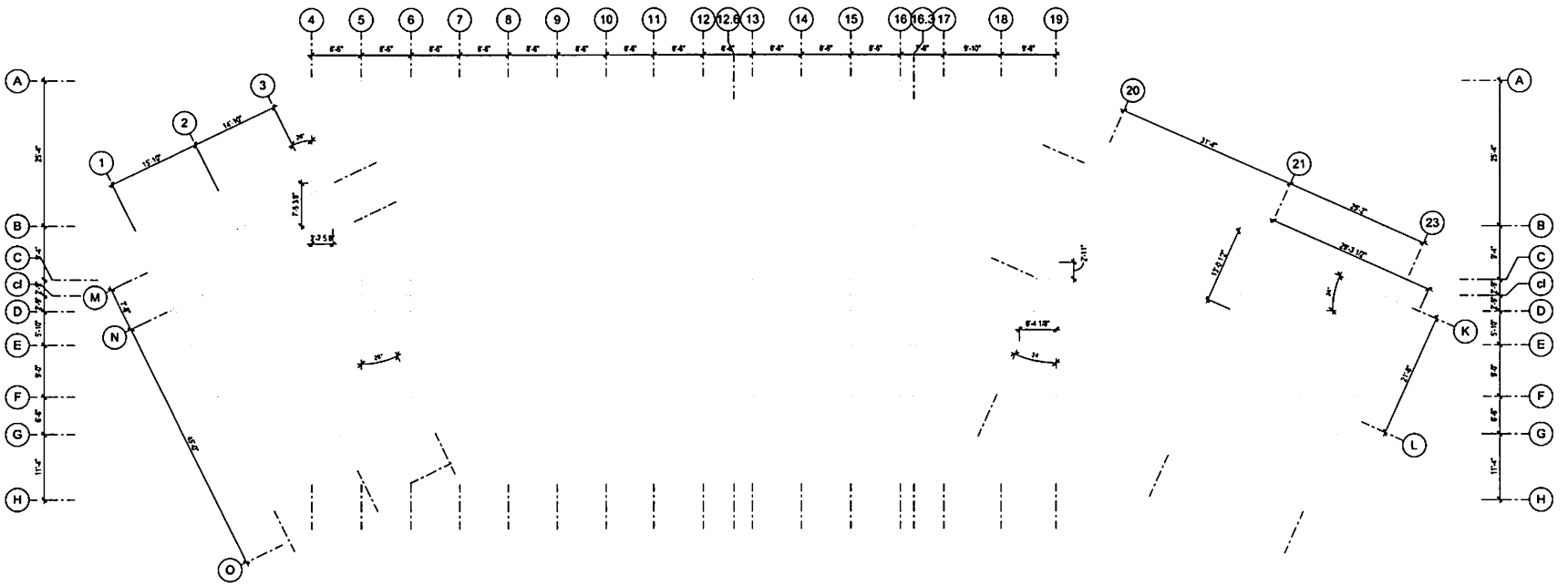
DATE
06/27/17

SCALE
1/16" = 1'-0"

SHEET NO.
A05.02



LEVEL 1 FLOOR PLAN SLAB 1/8" = 1'-0" 2



GRID CONTROL PLAN 1/8" = 1'-0" 1

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE

GRID CONTROL PLAN & SLAB PLAN

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO. 236

DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO. A20.00

5/26/2017 11:21:47 AM

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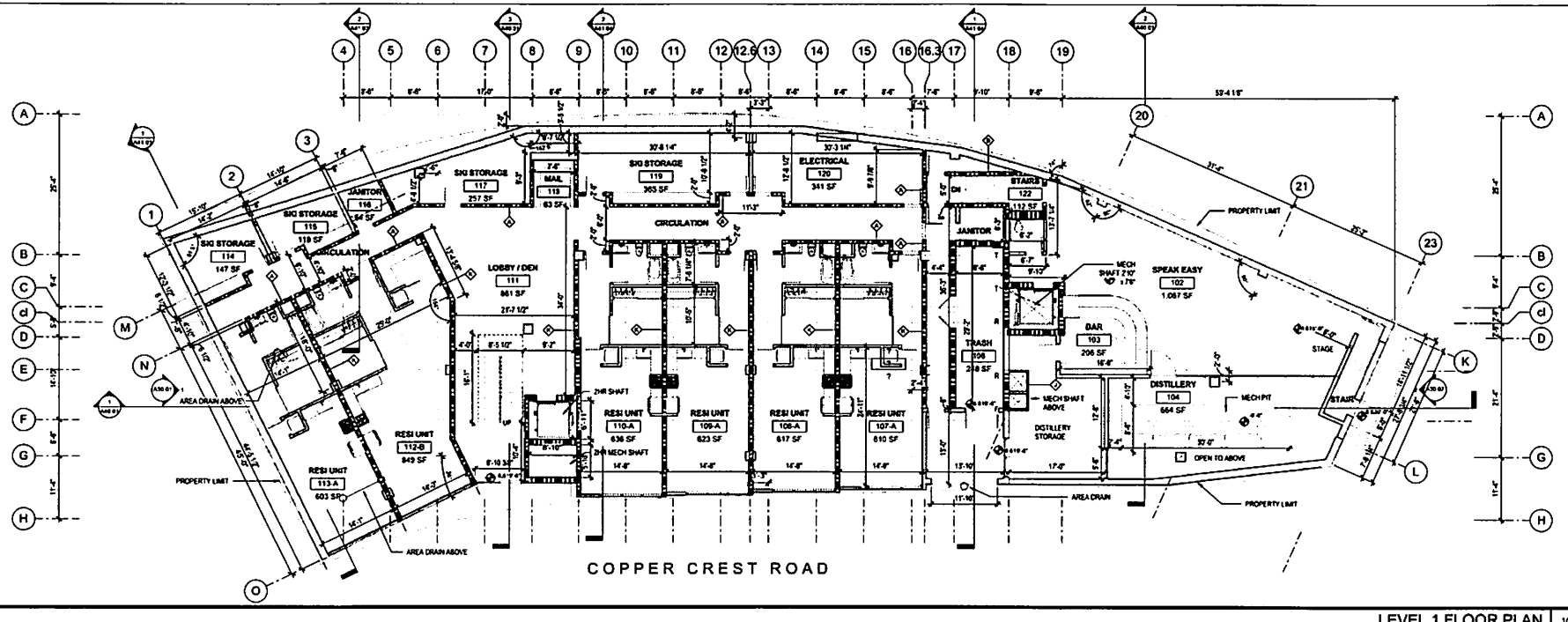
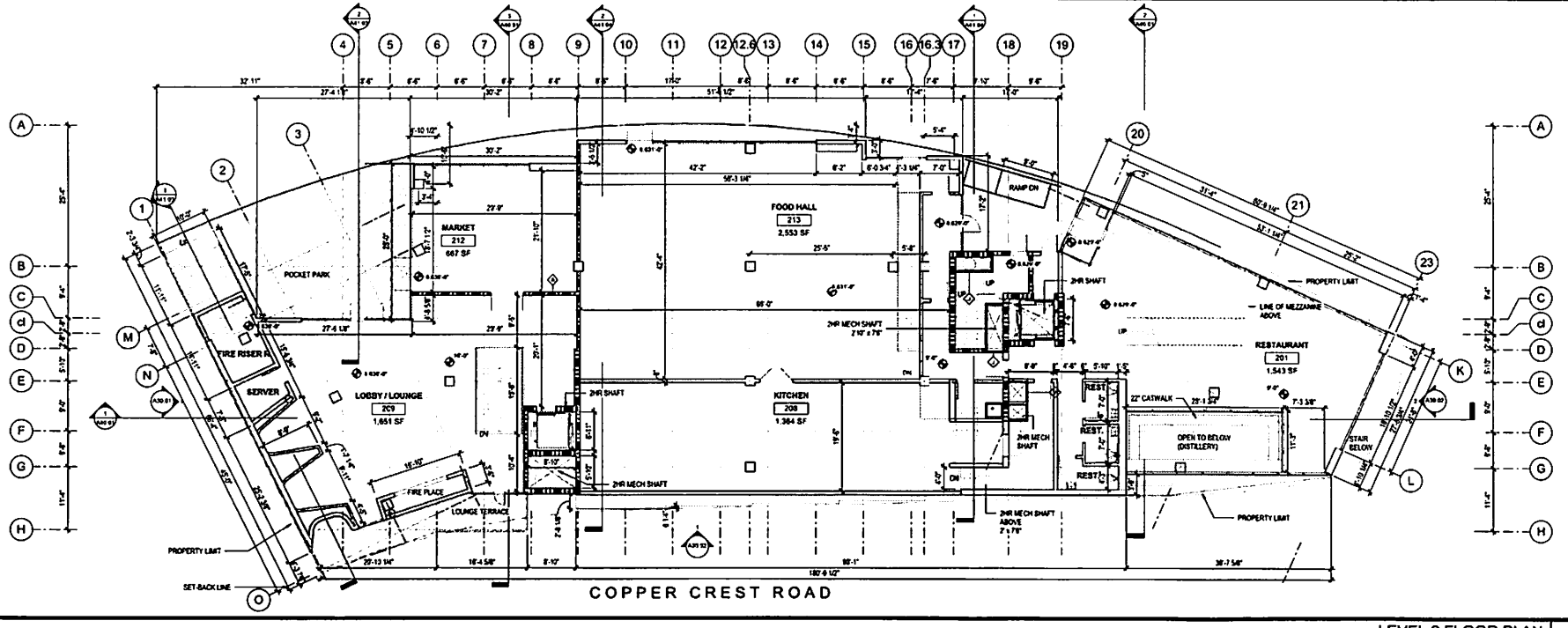


LEVEL 1 FLOOR PLAN 1/8" = 1'-0" 1



LEVEL 2 FLOOR PLAN 1/8" = 1'-0" 2

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SHEET TITLE

LEVEL 1 & 2 LEVEL FLOOR PLANS

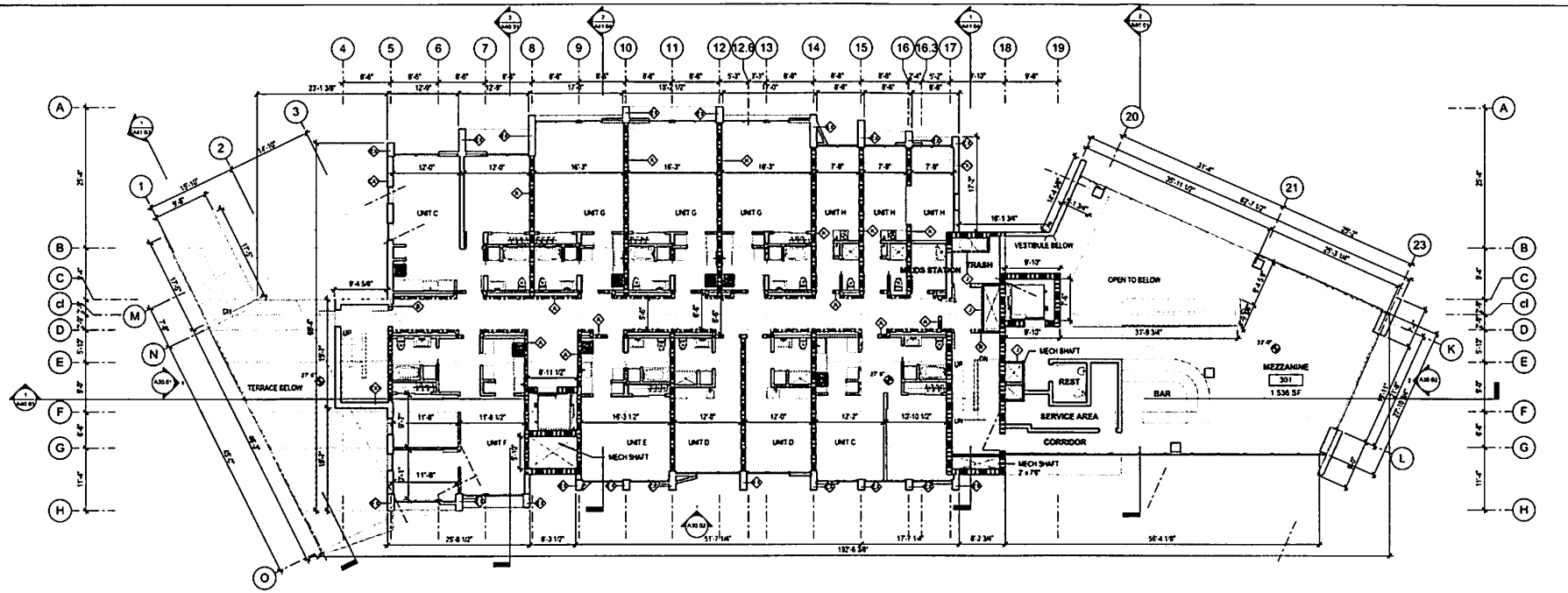
No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-0

JOB NO 236

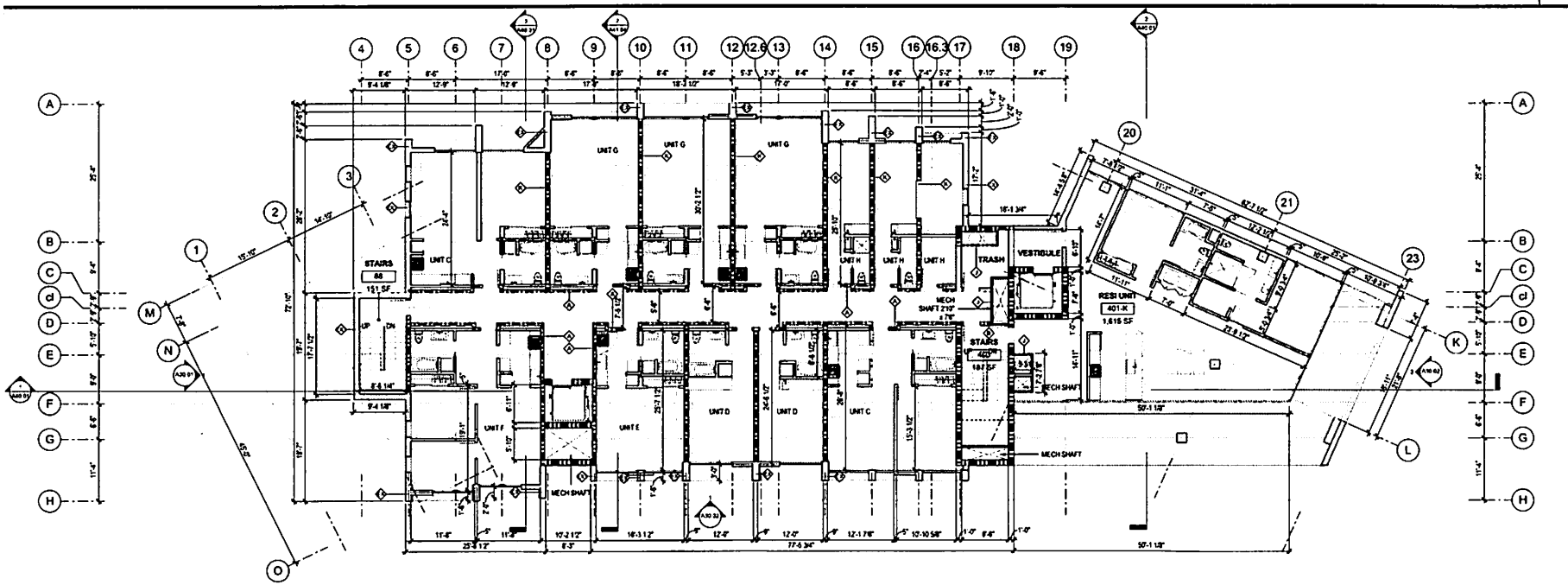
DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO A20.01



LEVEL 3 FLOOR PLAN | 1/8" = 1'-0" | 1



LEVEL 4 FLOOR PLAN | 1/8" = 1'-0" | 2

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
LEVEL 3 & 4 FLOOR PLANS

No.	Description	Date
1	ISSUED FOR PLANNING COMMISSION	2017-06-27

236

DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO. A20.02

6/26/2017 11:22:10 AM

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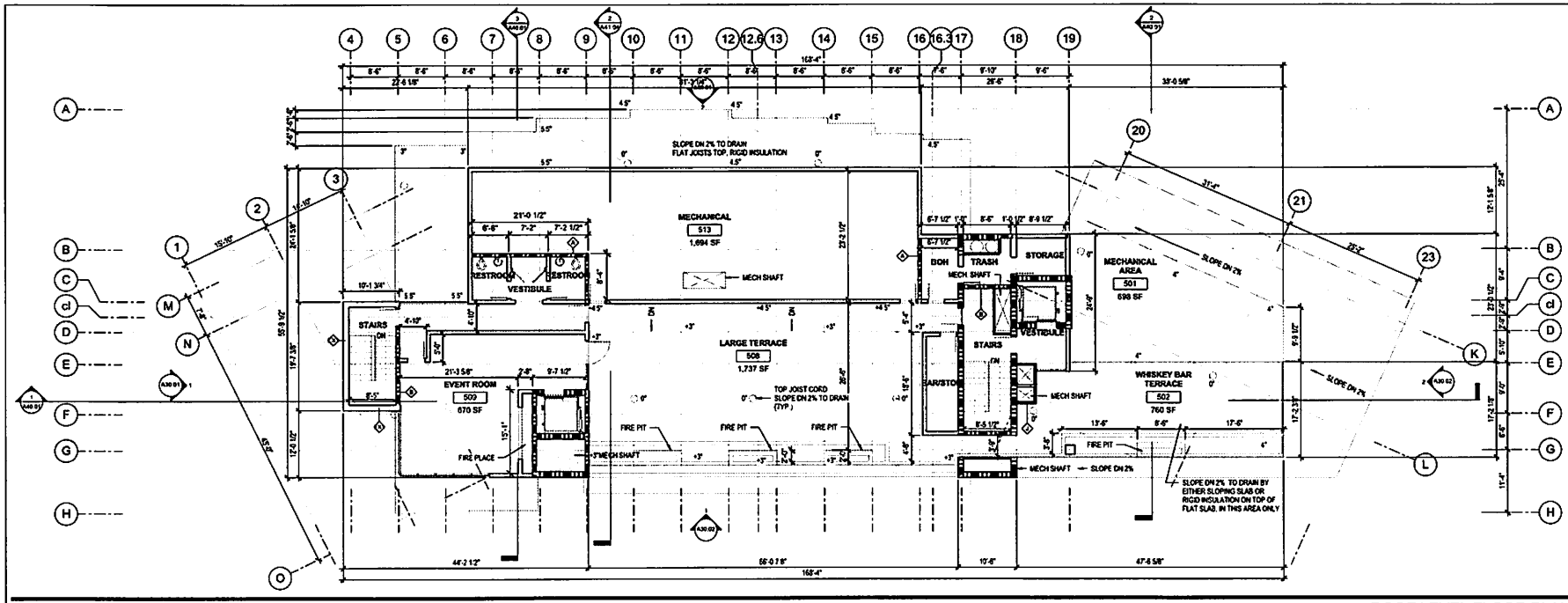
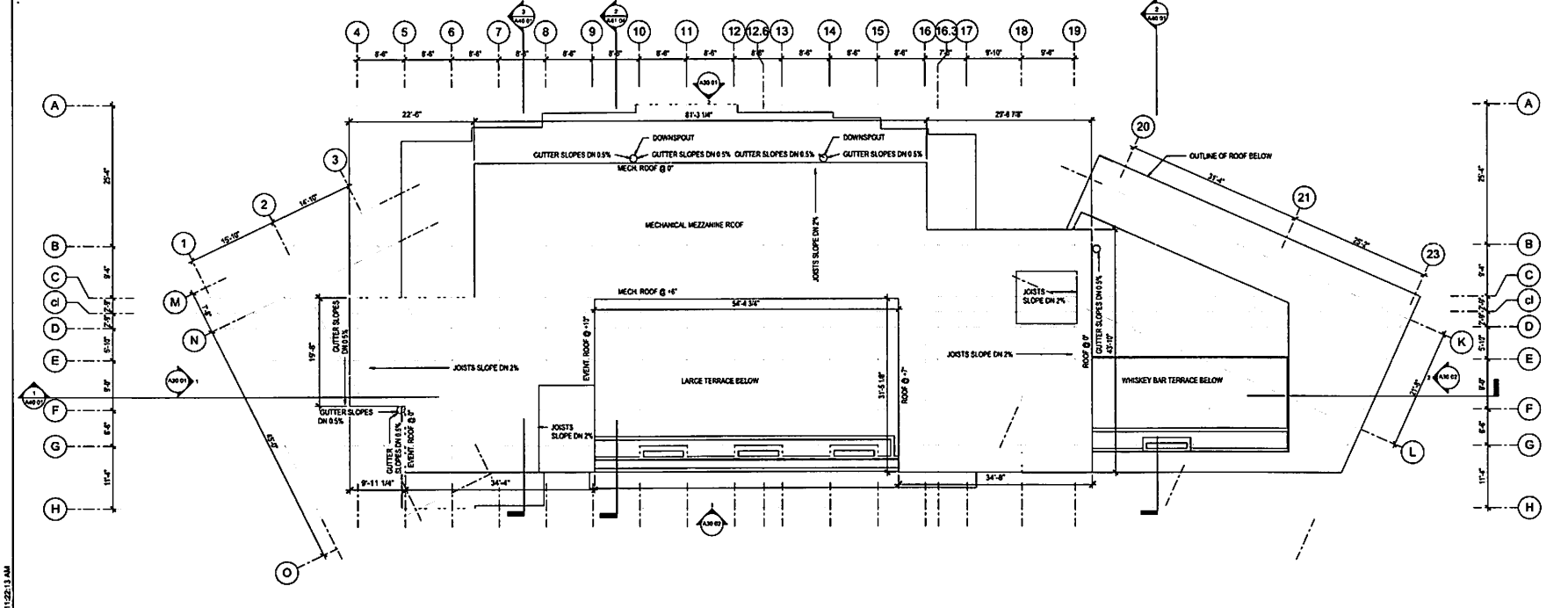


ROOF LEVEL FLOOR PLAN | 1/8" = 1'-0" | 2



BULKHEAD LEVEL FLOOR PLAN | 1/8" = 1'-0" | 1

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CHRISTIAN ROBERT
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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ROOF LEVEL & ROOF PLANS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO 236

DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO A20.03

6/26/2017 11:22:13 AM

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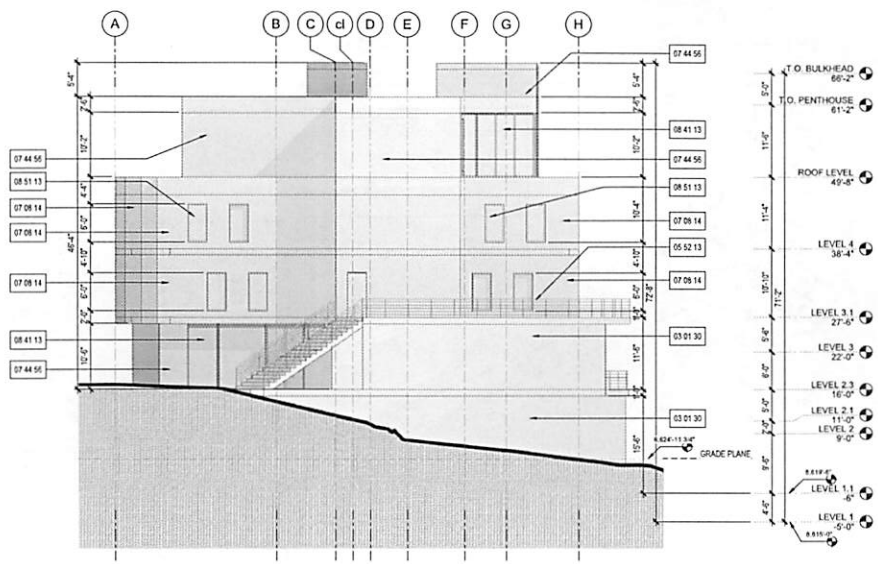
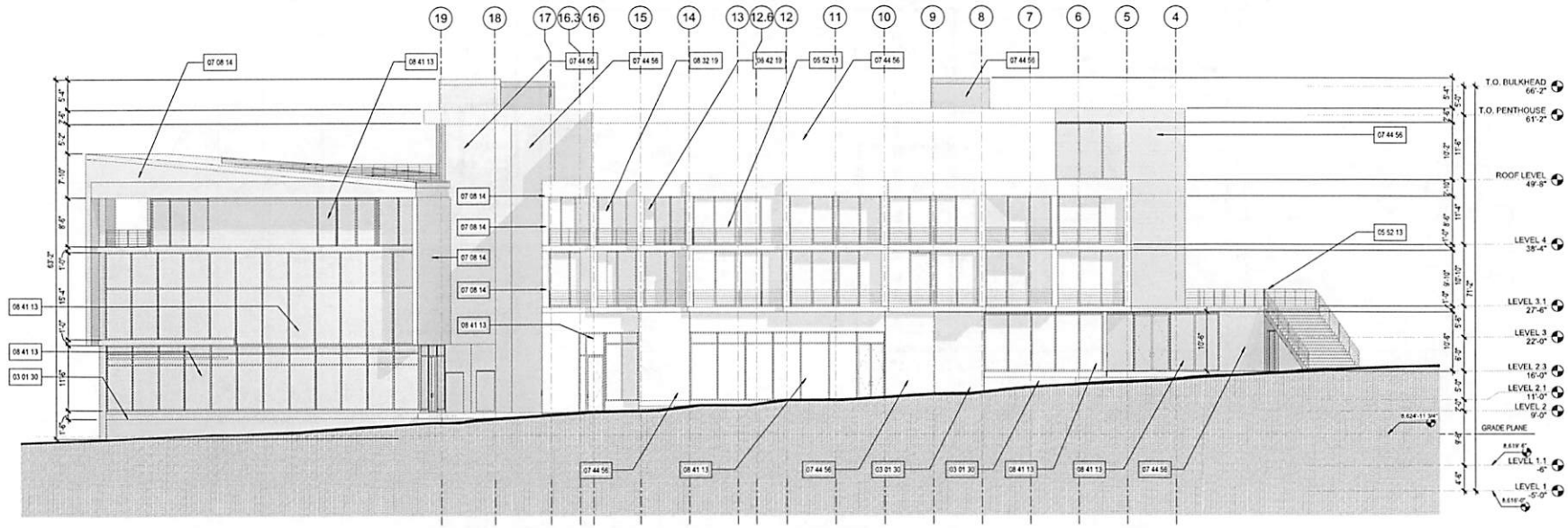
EXTERIOR FINISHES

03 01 30	CAST-IN-PLACE CONCRETE
05 52 13	PIPE AND TUBE RAILINGS
06 42 19	PLASTIC-LAMINATE-FACED WOOD PANELING
07 08 14	STANDING SEAM FAÇADE - SPECIFICATION
07 44 56	MINERAL FIBER REINFORCED CEMENTITIOUS PANELS
08 32 19	SLIDING ALUMINUM-FRAMED GLASS DOORS
08 41 13	ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
28 01 16	STANDING SEAM ROOF - SPECIFICATION



NORTH ELEVATION 1/8" = 1'-0" 1



EAST ELEVATION 1/8" = 1'-0" 2

6/28/2017 11:22:43 AM

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Architecture and Design
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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE

NORTH & EAST EXTERIOR ELEVATIONS

No.	Description	Date
	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO. 236

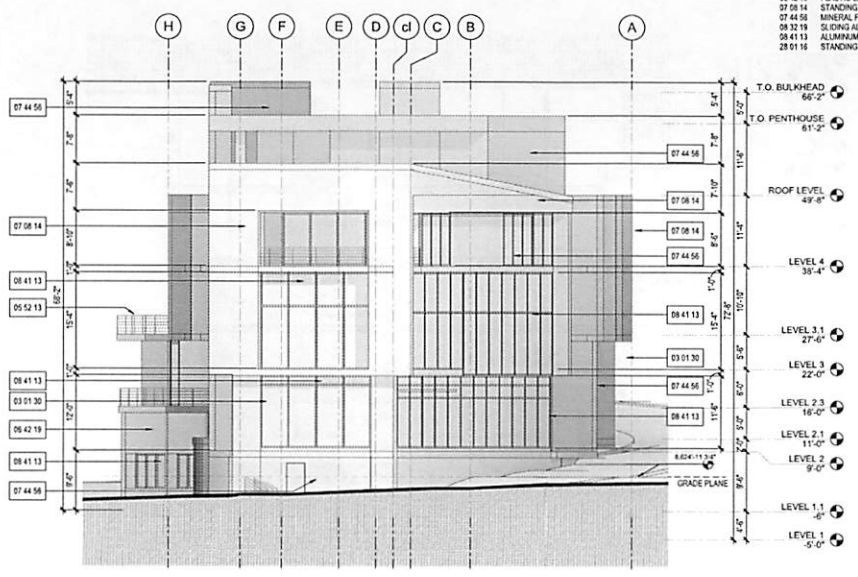
DATE 06/27/17

SCALE 1/8" = 1'-0"

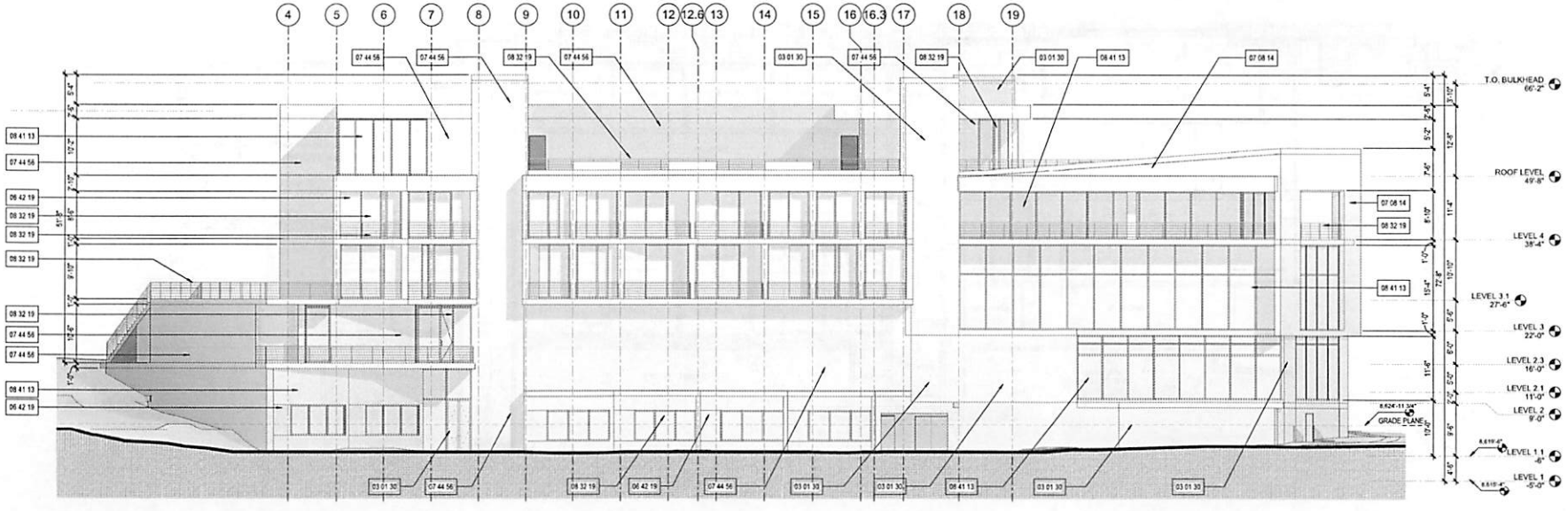
SHEET NO. A30.01

EXTERIOR FINISHES

03 01 30	CAST-IN-PLACE CONCRETE
05 52 13	PIPE AND TUBE RAILINGS
06 42 19	PLASTIC-LAMINATE-FACED WOOD PANELING
07 08 14	STANDING SEAM FAÇADE - SPECIFICATION
07 44 56	MINERAL FIBER REINFORCED CEMENTITIOUS PANELS
08 32 19	SLIDING ALUMINUM FRAMED GLASS DOORS
08 41 13	ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
28 01 16	STANDING SEAM ROOF - SPECIFICATION



SOUTH ELEVATION | 1/8" = 1'-0" | 2



WEST ELEVATION | 1/8" = 1'-0" | 1

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R&A Architecture and Design
4590 Equimalt Boulevard, Suite 100
Culver City, CA 90230
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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
SOUTH & WEST EXTERIOR ELEVATIONS

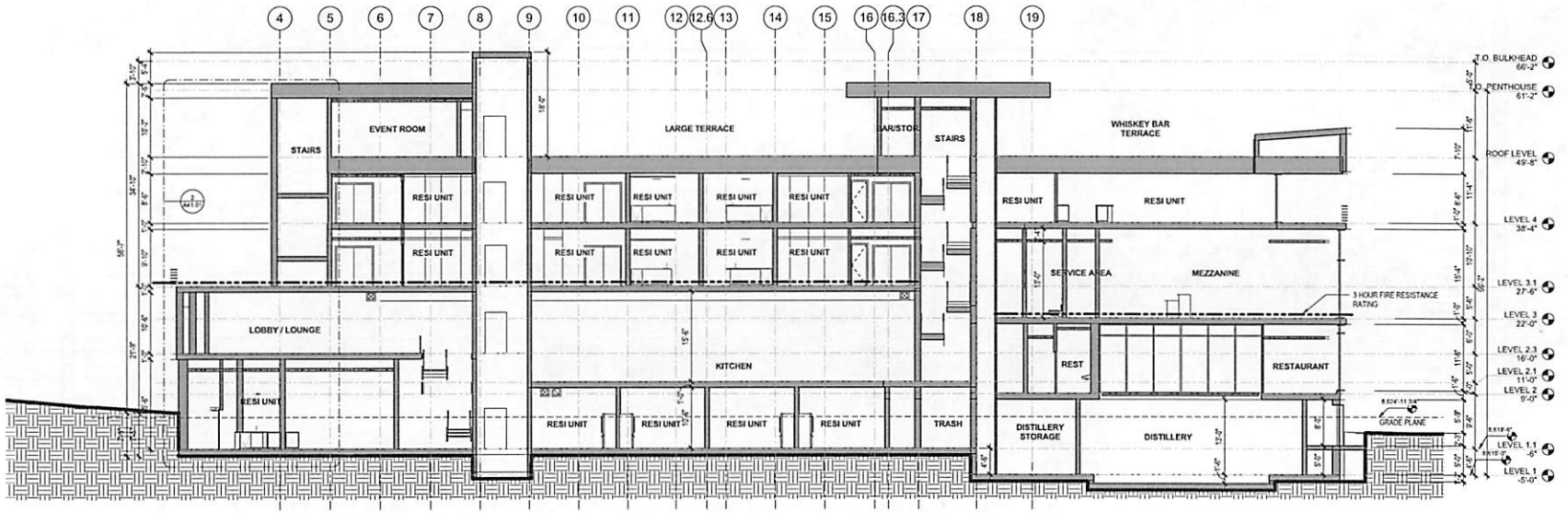
No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

PROJECT NO.
236

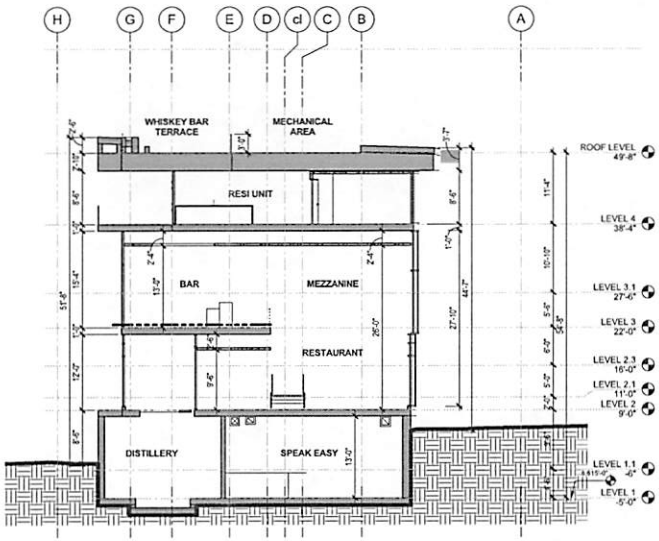
DATE
06/27/17

SCALE
1/8" = 1'-0"

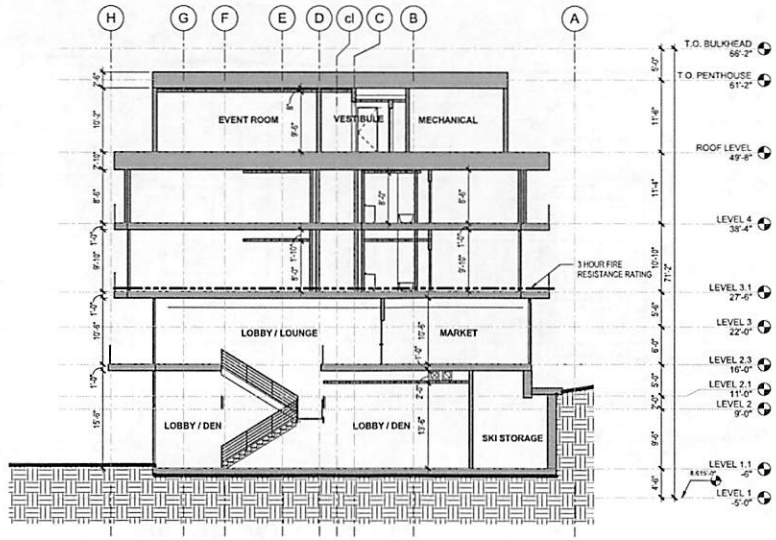
SHEET NO.
A30.02



SECTION 1 | 1/8" = 1'-0" | 1



SECTION 2 | 1/8" = 1'-0" | 2



SECTION 3 | 1/8" = 1'-0" | 3

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
BUILDING SECTIONS

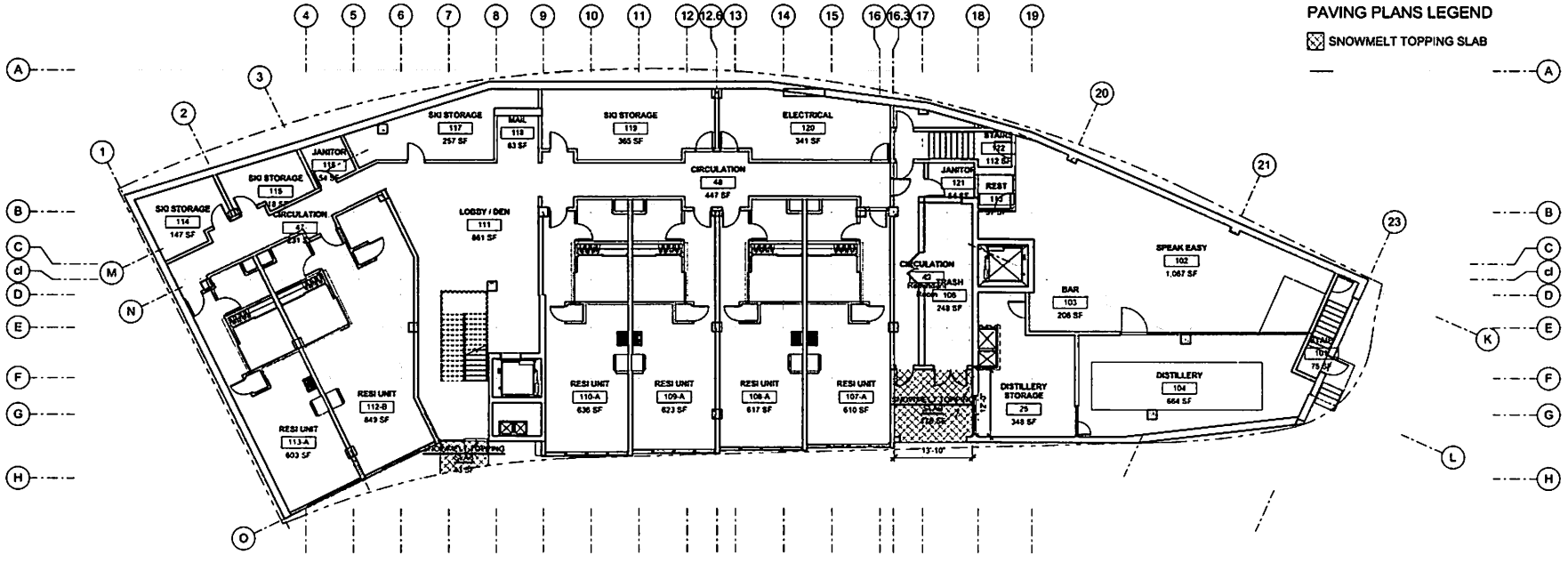
No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO. 236

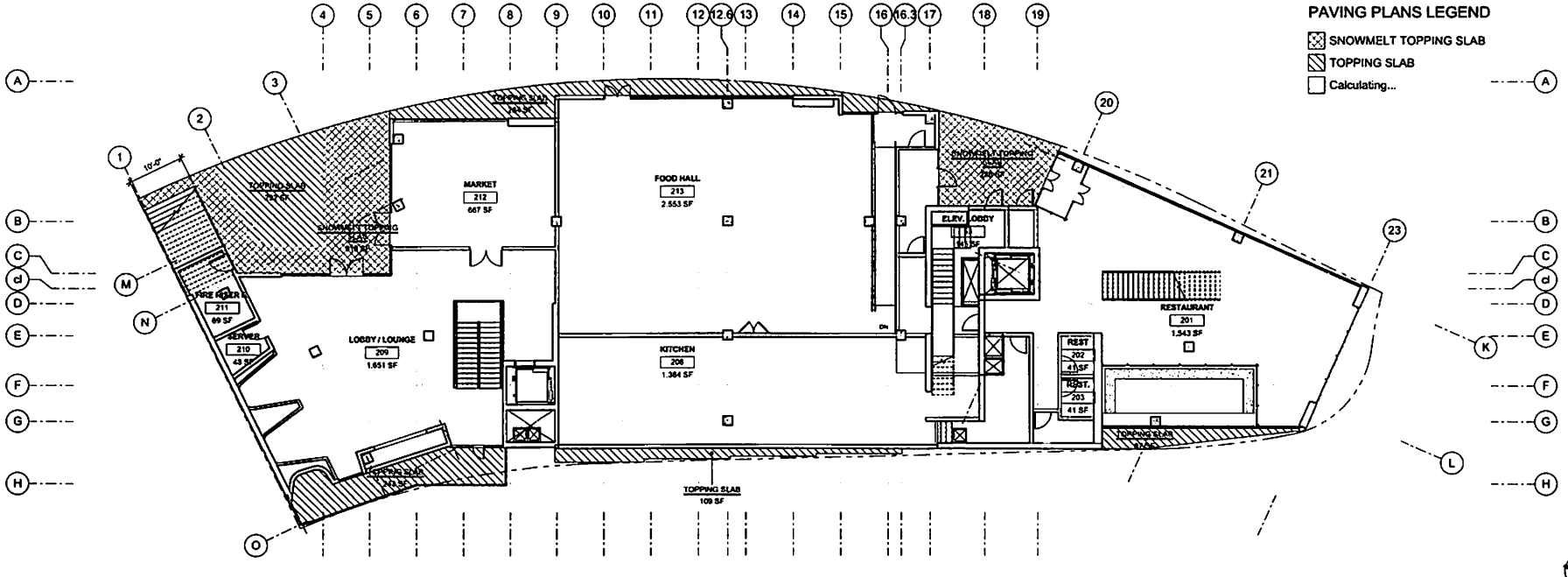
DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO. A40.01



LEVEL 1.1 | 1/8" = 1'-0" | 1



LEVEL 2.1 | 1/8" = 1'-0" | 2

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
LEVEL 1 & 2
PAVING PLAN

No.	Description	Date
1	CODIFIED FOR FOUNDATION PERMIT	2017-06-27

JOB NO. 236

DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO. A51.01

6/28/2017 11:23:30 AM

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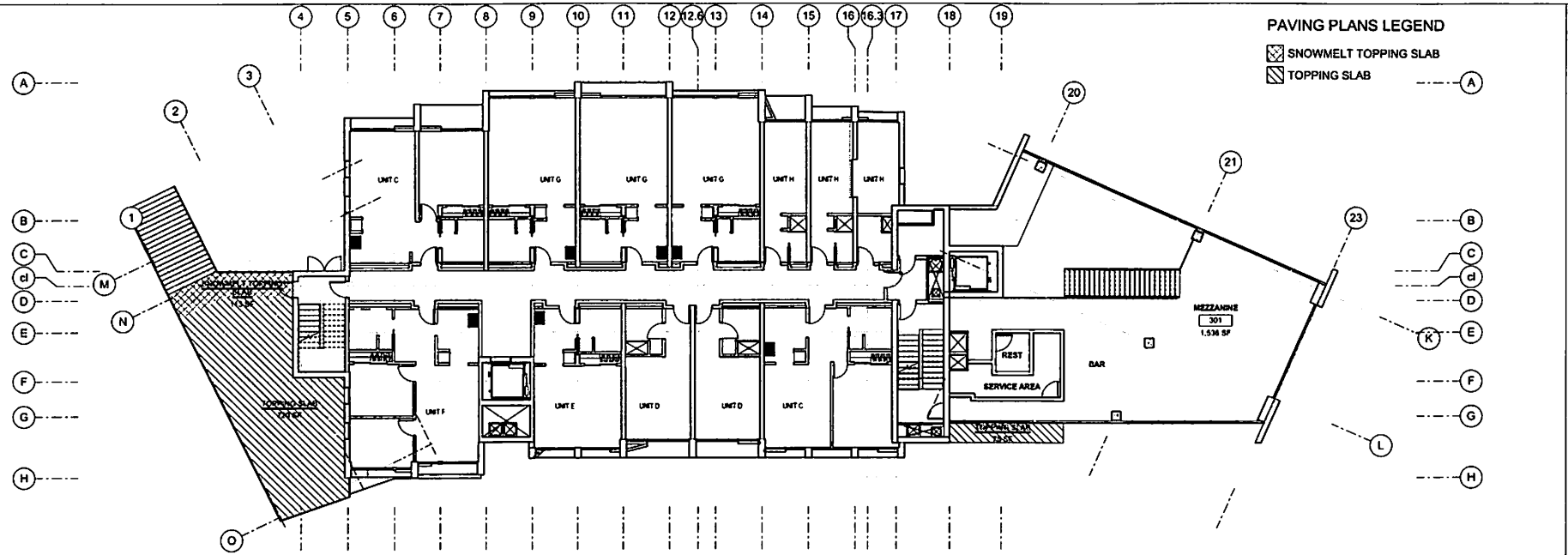
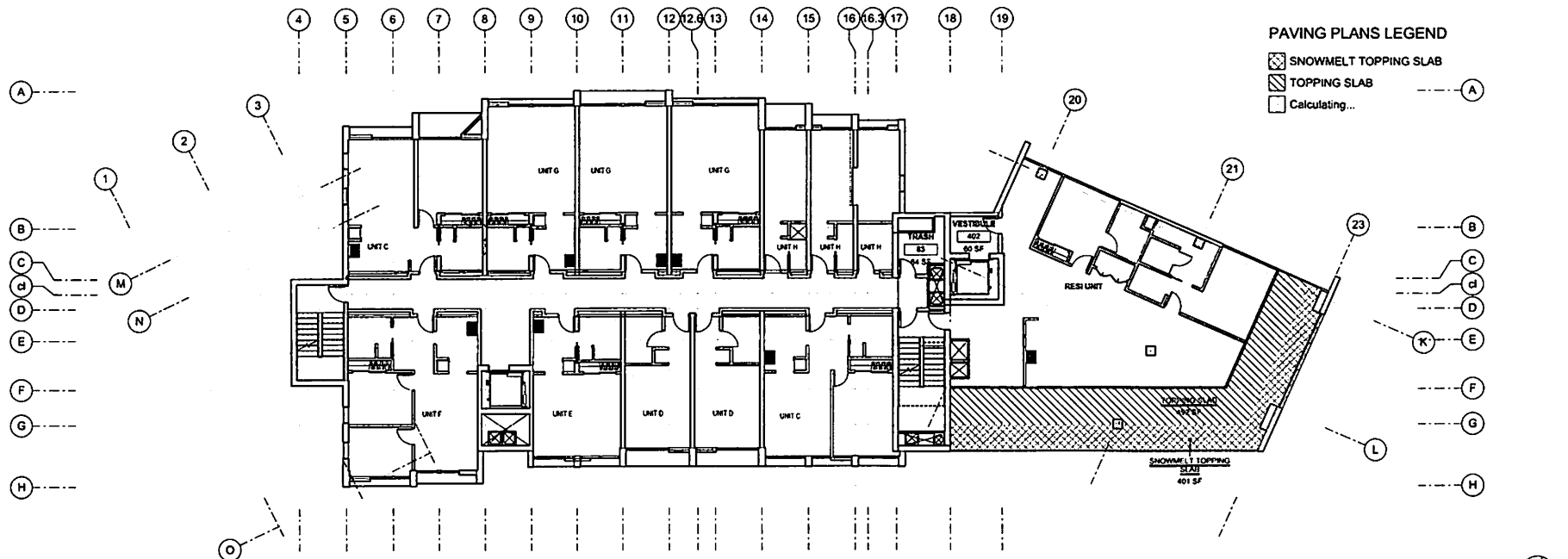


LEVEL 3.1 | 1/8" = 1'-0" | 1



LEVEL 4 | 1/8" = 1'-0" | 2

R&A

4795 Tamarack Boulevard, Suite 100
Coeur d'Alene, ID 83815
tel 208.765.5484
www.rnaarch.com

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
3 & 4 LEVEL PAVING PLAN

No.	Description	Date
	ISSUED FOR PLAN NOTATION	06/27/17

JOB NO. 236

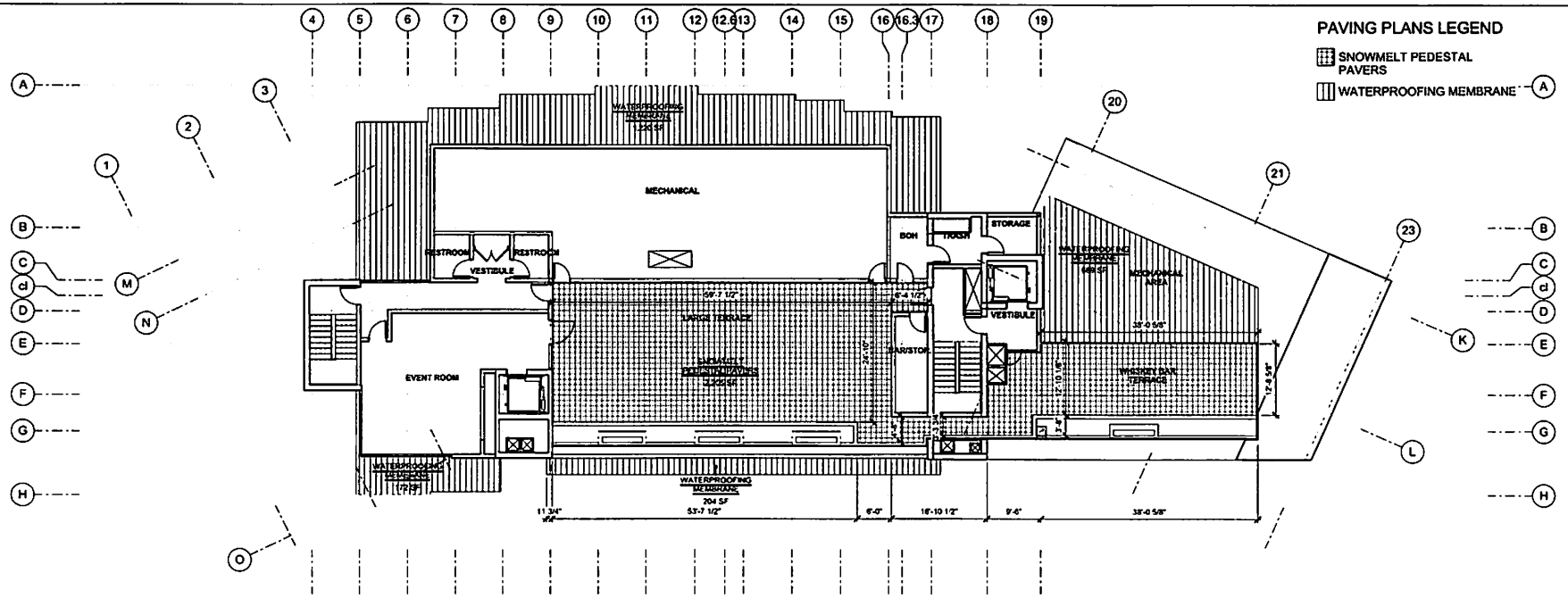
DATE 06/27/17

SCALE 1/8" = 1'-0"

SHEET NO. A51.02

6/28/2017 11:23:40 AM

R&A IF THIS SHEET IS NOT 30" x 42" IT IS A REDUCED PRINT



ROOF LEVEL | 1/8" = 1'-0" | 1

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ROOF LEVEL PAVING PLAN

No.	Description	Date
1	REVISED FOR FOUNDATION PERMIT	7/31/17

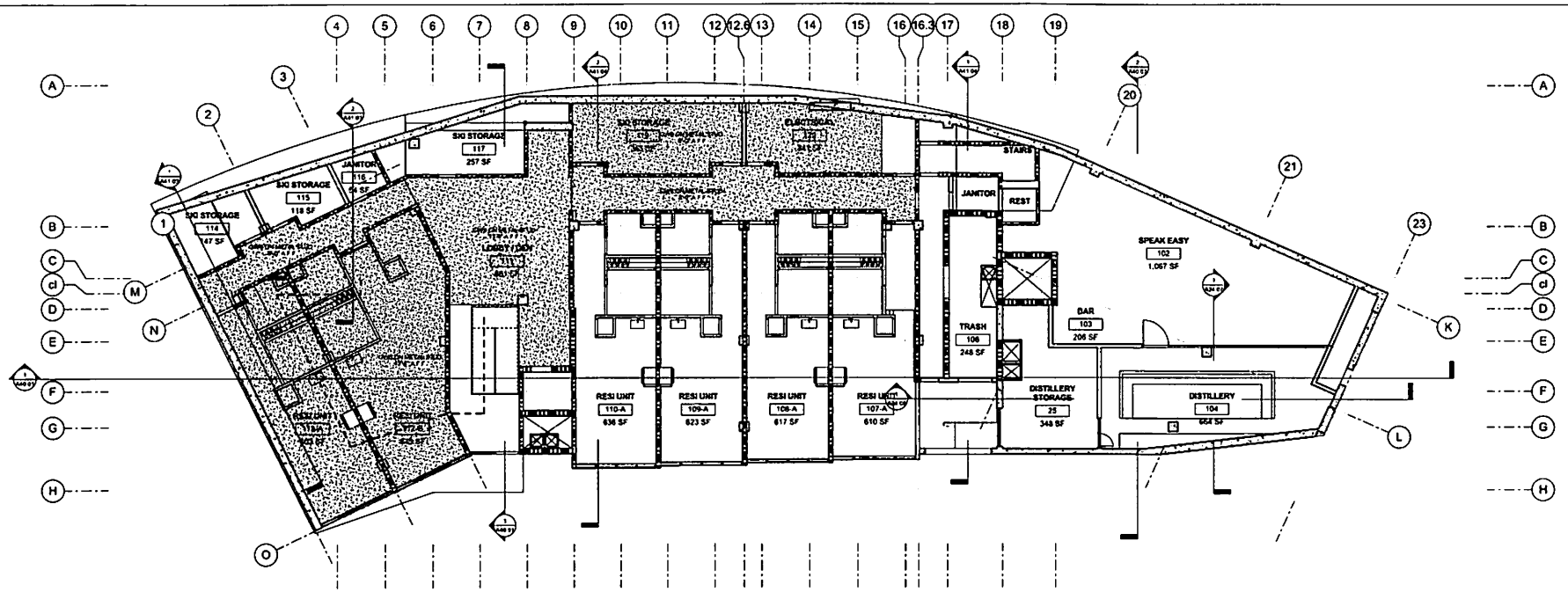
JOB NO. 236

DATE 06/27/17

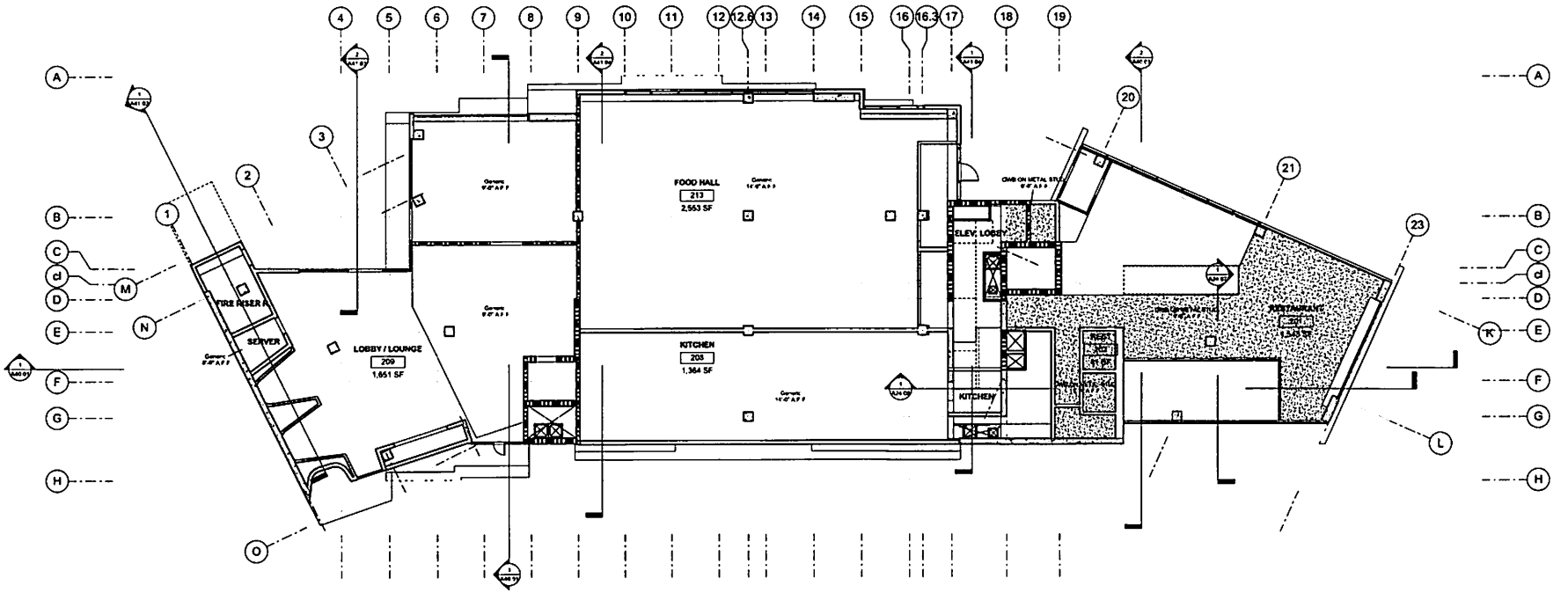
SCALE 1/8" = 1'-0"

SHEET NO. A51.03

6/28/2017 11:23:44 AM



RCP LEVEL 1.1 | 1/8" = 1'-0" | 1



RCP LEVEL 2.1 | 1/8" = 1'-0" | 2

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
RCP 1 & 2 LEVEL

No.	Description	Date
	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO
236

DATE
06/27/17

SCALE
1/8" = 1'-0"

SHEET NO
A80.01

6/29/2017 11:24:03 AM

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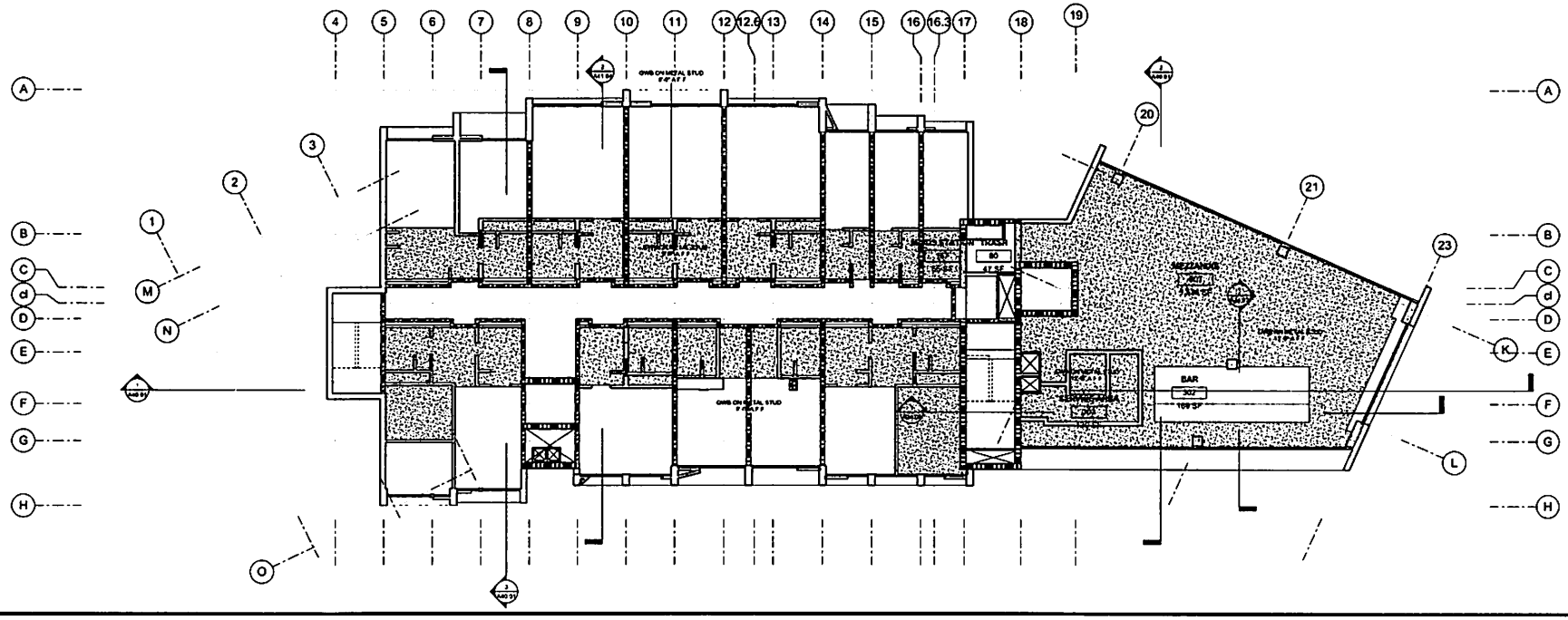
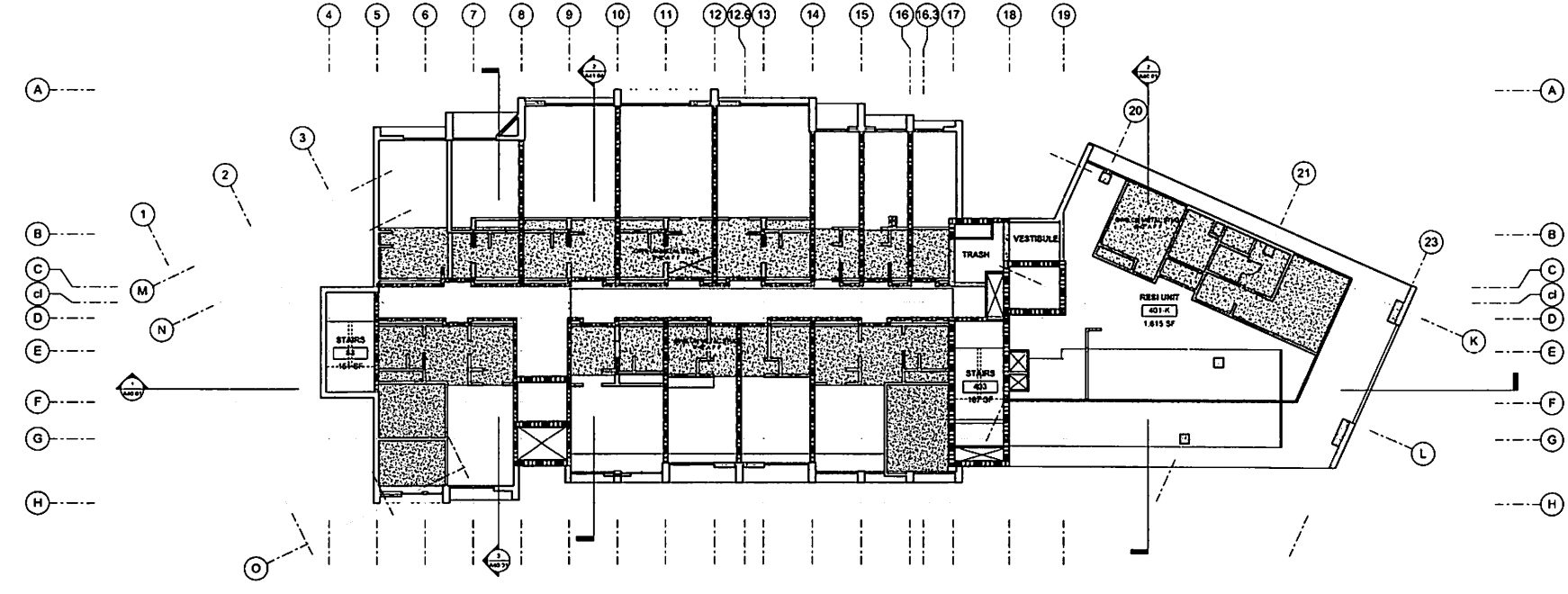


RCP LEVEL 3.1 | 1/8" = 1'-0" | 1



RCP LEVEL 4 | 1/8" = 1'-0" | 2

R&A

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
RCP 3 & 4 LEVEL

No.	Description	Date
1	ISSUED FOR PLANNING REVIEW	2017/06/27

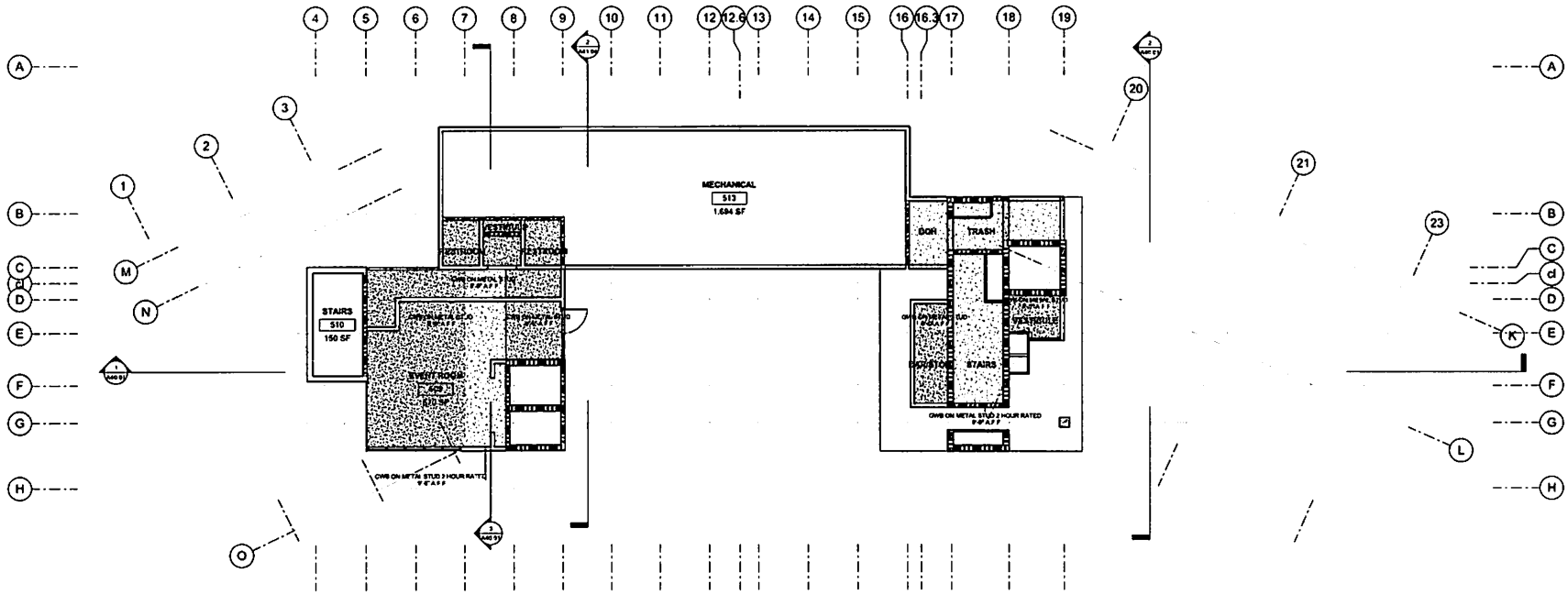
JOB NO
236

DATE
06/27/17

SCALE
1/8" = 1'-0"

SHEET NO
A80.02

6/29/2017 11:24:11 AM



RCP ROOF LEVEL 1/8" = 1'-0" 1

R&A

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CHRISTIAN ROBERT

STATE OF UTAH

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
RCP ROOF LEVEL

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-0[illegible]-27

JOB NO. 236

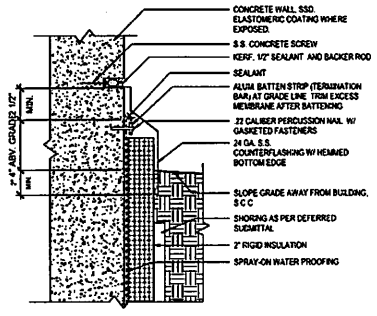
DATE 06/27/17

SCALE 1/8" = 1'-0"

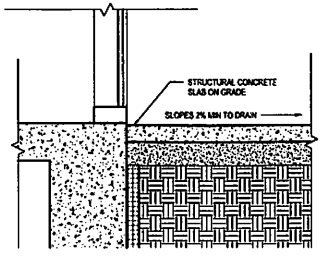
SHEET NO.
A80.03

6/29/2017 11:24:15 AM

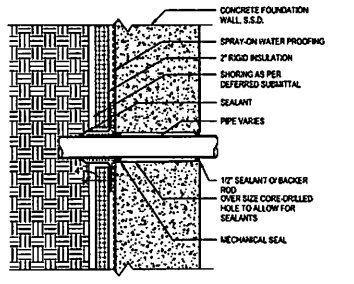
R&A IF THIS SHEET IS NOT 30" x 42" IT IS A REDUCED PRINT



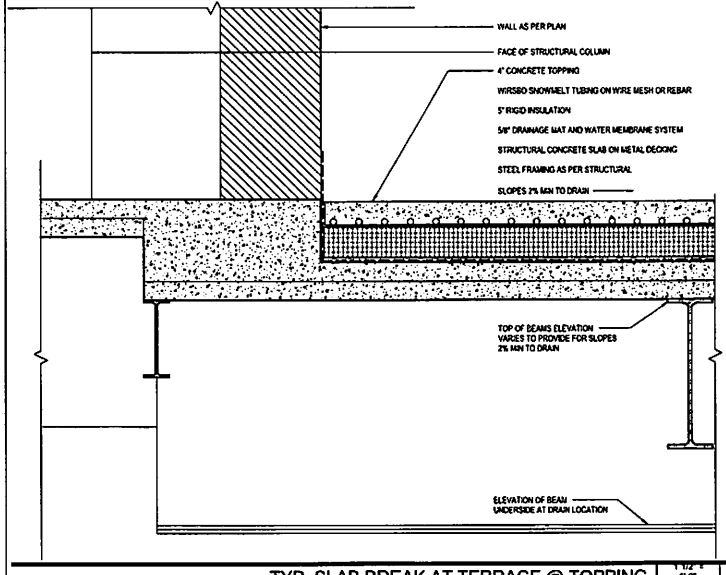
WP TERMINATION AT GRADE | 3" = 1'-0" | 9



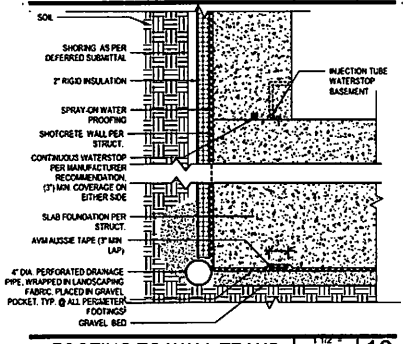
SLAB BREAK @ PLAZA | 1 1/2" = 1'-0" | 5



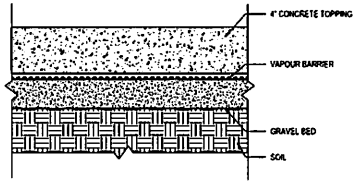
POST APPLIED PIPE PENTR. | 1 1/2" = 1'-0" | 1



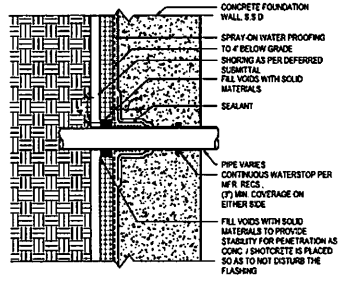
TYP. SLAB BREAK AT TERRACE @ TOPPING | 1 1/2" = 1'-0" | 15



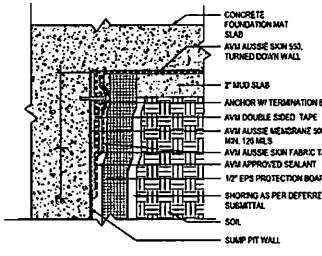
FOOTING TO WALL TRANS. | 1 1/2" = 1'-0" | 10



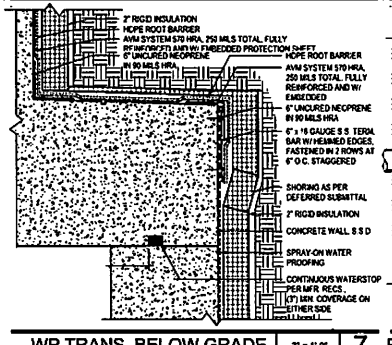
TYP. SLAB ASSEMBLY | 3" = 1'-0" | 6



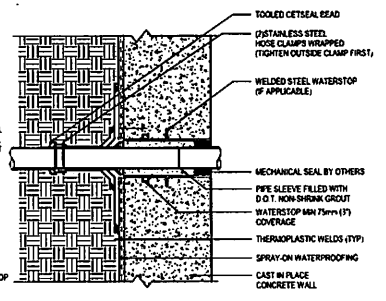
PIPE PENETRATION (TYP.) | 1 1/2" = 1'-0" | 2



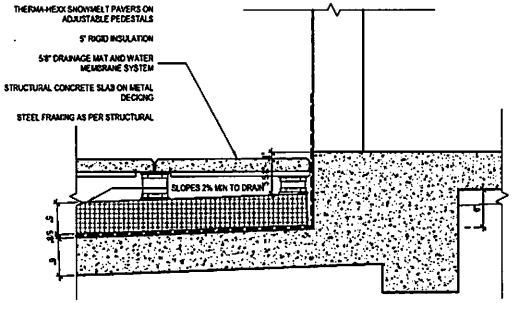
POST APPLIED WP @ SUMP PIT | 3" = 1'-0" | 11



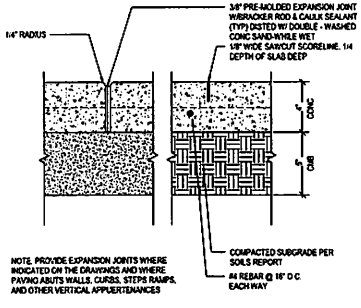
WP TRANS. BELOW GRADE | 3" = 1'-0" | 7



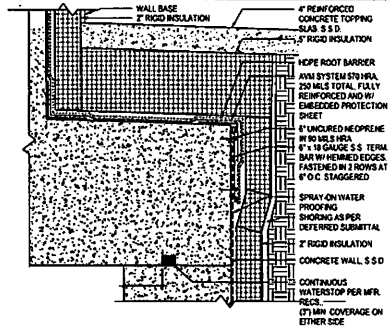
PIPE PENETRATION-SLEEVED | 1 1/2" = 1'-0" | 3



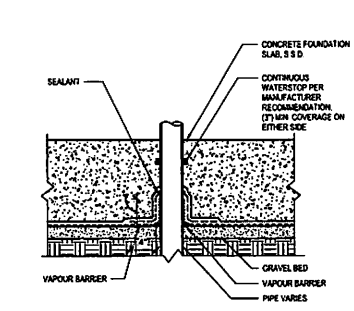
TYP. SLAB BREAK AT POOL DECK @ PAVERS | 1 1/2" = 1'-0" | 16



CONC JOINTS | 12" = 1'-0" | 12



WP TRANS. BELOW GRADE | 3" = 1'-0" | 8



PIPE PENETR. ON GRADE | 1 1/2" = 1'-0" | 4

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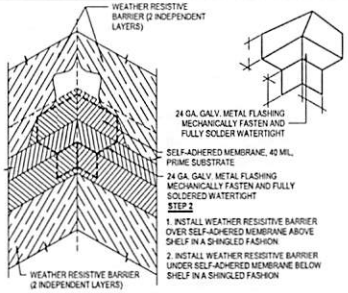
POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

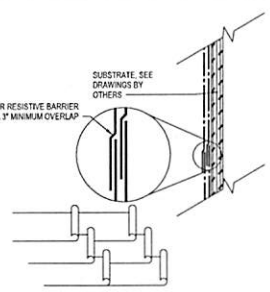
SHEET TITLE
FOUNDATION DETAILS

No.	Description	Date
1	REISSUED FOR FOUNDATION PERMIT	2017/6/27

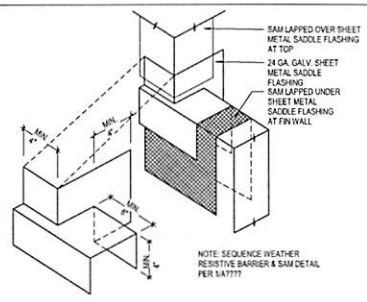
JOB NO 236
DATE 06/27/17
SCALE As indicated
SHEET NO A91.01



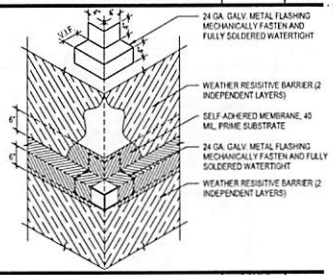
TYP. FLG - INSIDE CORNER | 1 1/2" = 1'-0" | 17



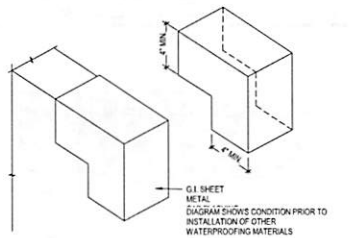
WEATHER RESIST. BARRIER | 1 1/2" = 1'-0" | 13



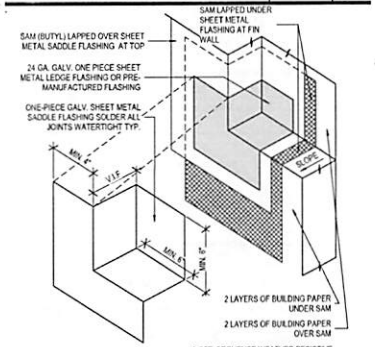
SHEET METAL SADDLE FLG | N.T.S. | 9



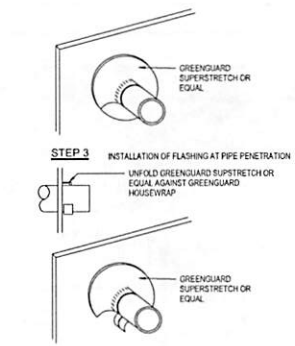
TYP. FLG - OUTSIDE CORNER | 1 1/2" = 1'-0" | 14



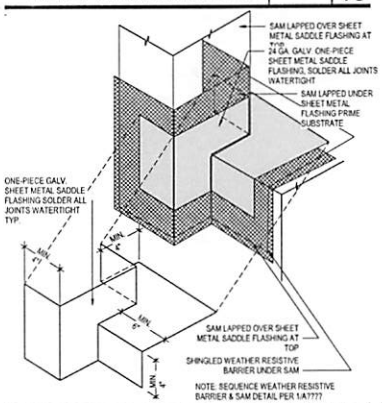
SHEET METAL SADDLE FLG | N.T.S. | 10



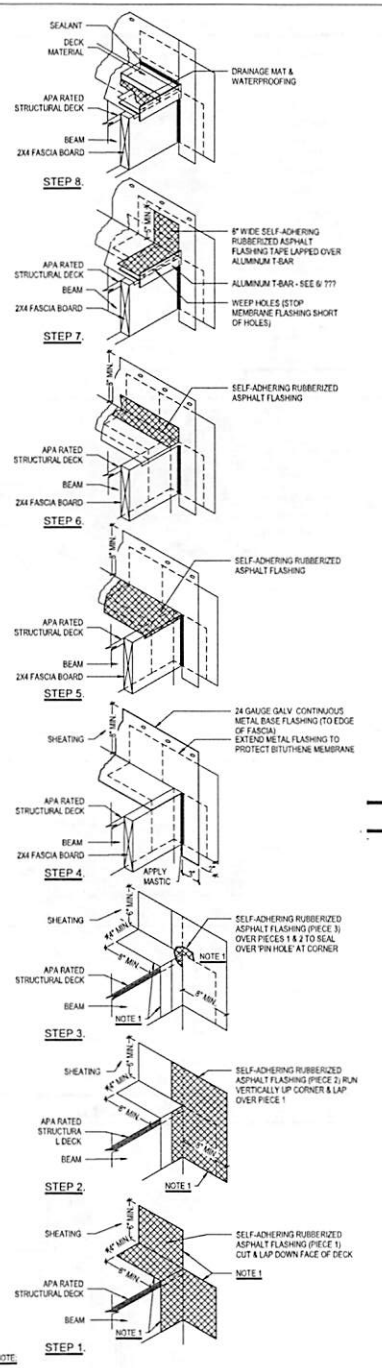
SHEET METAL LEDGE FLG | 1 1/2" = 1'-0" | 15



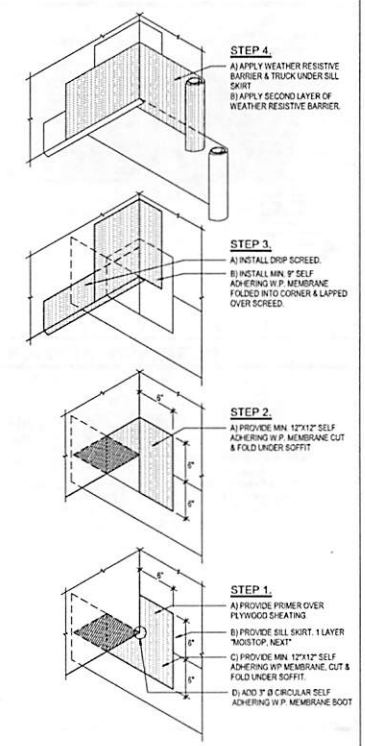
FLG AT PIPE PENETRATION | 1 1/2" = 1'-0" | 12



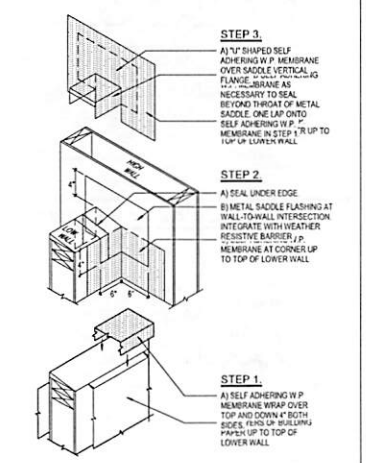
SHEET METAL SADDLE FLG | 1 1/2" = 1'-0" | 16



DECK EDGE TO WALL | 1 1/2" = 1'-0" | 8



SOFFIT EDGE TO WALL | 1 1/2" = 1'-0" | 2



PARAPET TO WALL FLASHING | 1 1/2" = 1'-0" | 4

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
EXTERIOR DETAILS

No.	Description	Date

JOB NO. 236

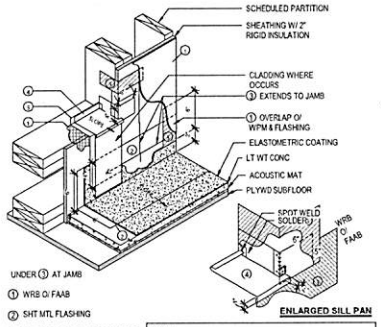
DATE 06/27/17

SCALE 1 1/2" = 1'-0"

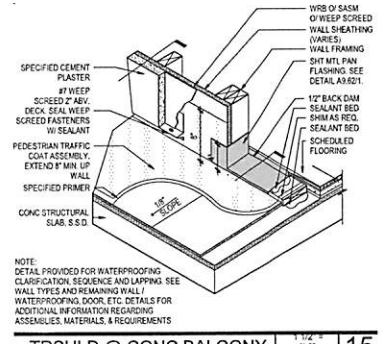
SHEET NO. A92.01

6/28/2017 11:24:35 AM

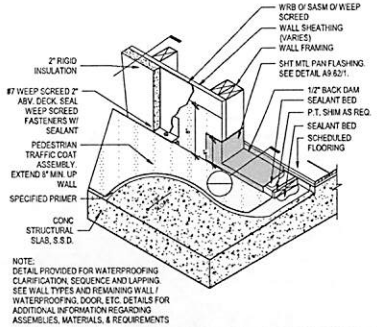
R&A - IF THIS SHEET IS NOT 30"x 42" IT IS A REDUCED PRINT



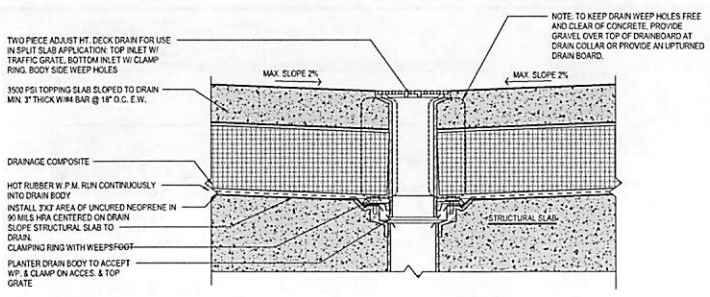
TYP WINDOW SILL FLASHING | 1 1/2" = 1'-0" | 14



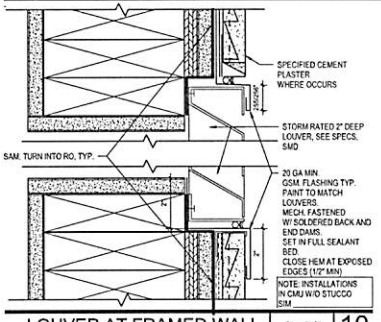
TRSHLD @ CONC BALCONY | 1 1/2" = 1'-0" | 15



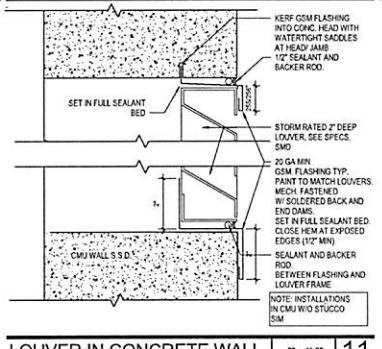
TRSHLD @ CONC BALCONY | 1 1/2" = 1'-0" | 16



DECK SLAB @ DRAIN | 3" = 1'-0" | 5

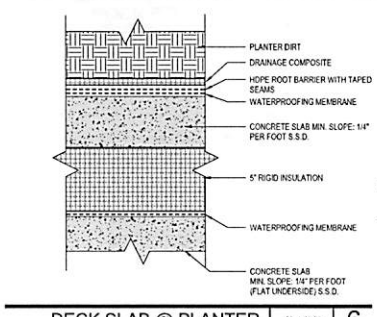


LOUVER AT FRAMED WALL | 6" = 1'-0" | 10

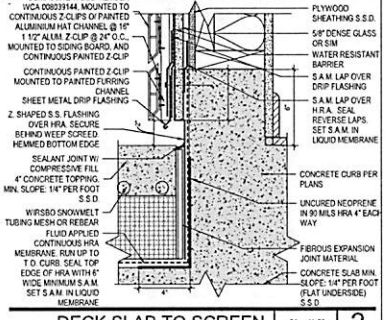


LOUVER IN CONCRETE WALL | 6" = 1'-0" | 11

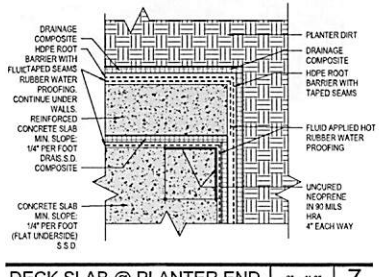
DECK SLAB TO DOOR | 3" = 1'-0" | 1



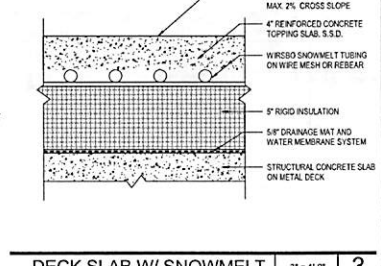
DECK SLAB @ PLANTER | 3" = 1'-0" | 6



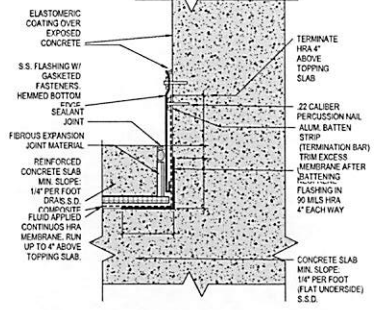
DECK SLAB TO SCREEN | 3" = 1'-0" | 2



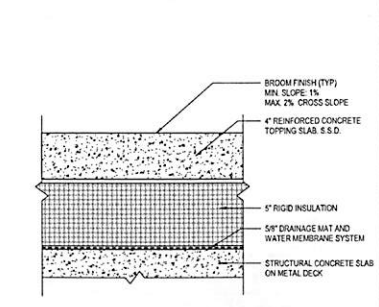
DECK SLAB @ PLANTER END | 3" = 1'-0" | 7



DECK SLAB W/ SNOWMELT | 3" = 1'-0" | 3



DECK SLAB TO CONCRETE | 3" = 1'-0" | 8



DECK SLAB W/O SNOWMELT | 3" = 1'-0" | 4

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CHRISTIAN ROBERT
REGISTERED ARCHITECT

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
EXTERIOR DETAILS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-6-27

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JOB NO. 236

DATE 06/27/17

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SHEET NO. A92.02

6/28/2017 11:24:37 AM

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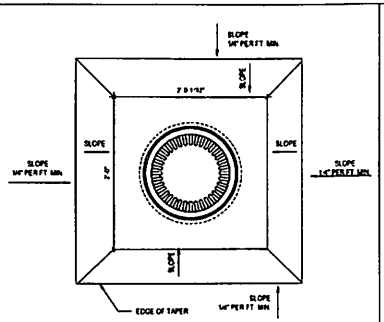
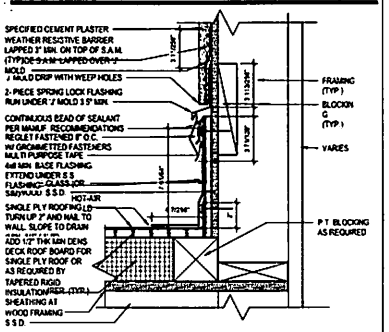
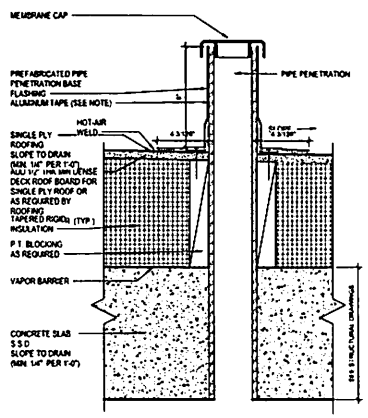


ROOF DRAIN-PLAN | 1-1/2" = 1'-0" | 1



ROOF TO WD. FRAMED WALL | 3" = 1'-0" | 2



SEE ACOUSTICAL DETAILS FOR PIPE TO ROOF STRUCTURE ATTACHMENT

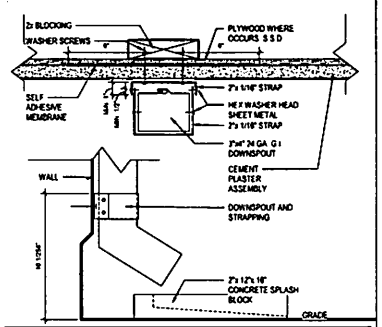
NOTES:
1. ALUMINUM TAPE IS REQUIRED IF EXISTING PENETRATION IS CONTAMINATED
2. VAPOR BARRIER SHALL BE SEALED AT EDGES

NOTE
Roof penetration details for plumbing, mechanical, electrical and equipment support, must include the following:
1) Require that there be a minimum of 10 inches of separation to edge and penetrations from cant strip scuppers, valley parapets & walls.
2) The use of pitch pockets is not allowed due to the high historic rate of failure.
Recommend separating penetrations and using standard round roof flashings as an alternative.
3) The use of "L" or square iron attached to roof framing and sealed in a pitch pocket is not recommended. Recommend using a round pipe attached to framing and sealed with standard roof flashing.

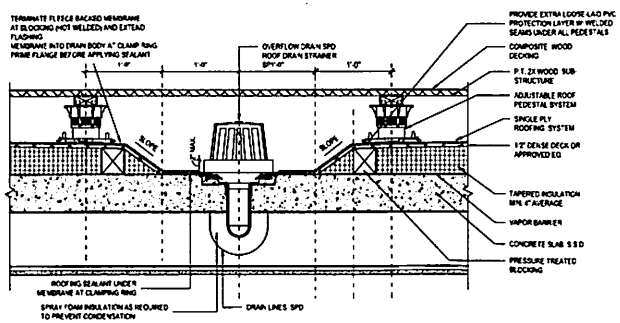
NOTE: ALL FLASHING AND ROOF COMPONENTS TO BE APPROVED BY PVC ROOFING MANUFACTURER FOR USE.

ROOFING MFR. SHALL DETERMINE EXACT ROOF DETAILS, WHICH SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL IN THE FORM OF SHOP DRAWINGS.

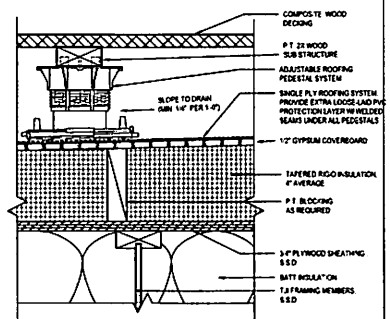
ROOF SLAB @ VENT | 3" = 1'-0" | 7



DOWNSPOUT @ SPLASH BLOCK | 3" = 1'-0" | 3



ROOF DRAIN @ CONCRETE | 1-1/2" = 1'-0" | 8



EXT WD ROOF W/ DECK | 3" = 1'-0" | 4

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ROOF DETAILS

No	Description	Date
	ISSUED FOR: PLANNING	2017-06-27

JOB NO 236

DATE 06/27/17

SCALE As indicated

SHEET NO A93.01

6/29/2017 11:24:46 AM

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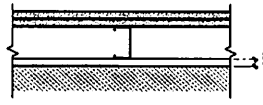
PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES
J							2			

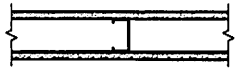
J TYPE



PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES
EX										
E01										

PROVIDE WOOD FRAMING IN LOCATIONS AS PER STRUCTURAL

E TYPE



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A							1			

PROVIDE WOOD FRAMING IN LOCATIONS AS PER STRUCTURAL

A TYPE

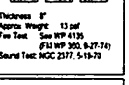
WALLS AND INTERIOR PARTITIONS, WOOD-FRAMED

GA FILE NO WP 3916 | GENERIC | 2 HOUR FIRE | 55 to 54 STC RATING

GYPSUM WALLBOARD WOOD STUDS

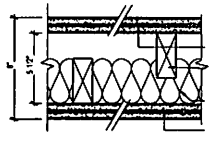
Base layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to each side of 2 x 4 wood studs 16" o.c. staggered 8" o.c. on 2 x 6 wood plates, with 6d coated nails, 1 7/8" long, 0.092" shank, 1/4" heads. 24" o.c. Face layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to each side with 6d coated nails, 2 3/8" long, 0.113" shank, 9/32" heads, 8" o.c.

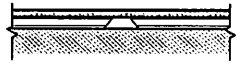
Joints staggered 16" each layer and side. Sound backed with nails for base layer spaced 8" o.c. Horizontal bracing required at mid-height (LOAD-BEARING)



Thickness 8"
Approx. Weight 13 psf
Fire Test See WP 4135 (FM WP 350, 9-27-74)
Sound Test NGC 2377, 5-19-73

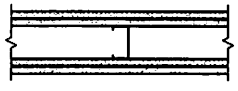
K TYPE





PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES

F TYPE



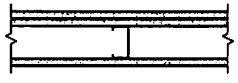
PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES
B							2			

PROVIDE WOOD FRAMING IN LOCATIONS AS PER STRUCTURAL

B TYPE

PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES

G TYPE



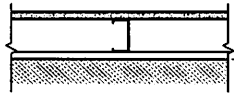
PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES

PROVIDE WOOD FRAMING IN LOCATIONS AS PER STRUCTURAL

C TYPE

PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES

H TYPE



PARTITION TYPE MARK	FRAMING THK (IN)	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	ATTEN THK	FIRE RTG	TESTED ASSEMBLY	STC RTG	SHEET NOTES

PROVIDE WOOD FRAMING IN LOCATIONS AS PER STRUCTURAL

D TYPE

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
WALL TYPES

No.	Description	Date
	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO 236

DATE 06/27/17

SCALE 3" = 1'-0"

SHEET NO A94.01

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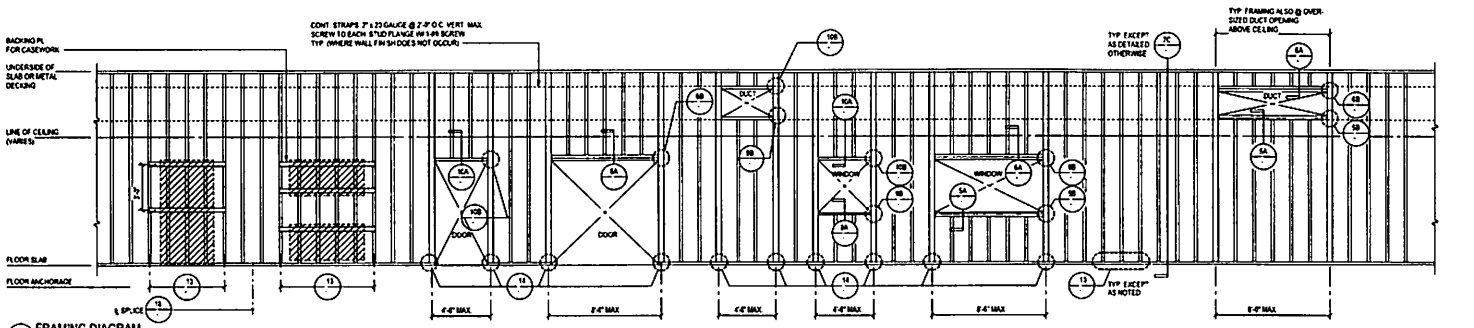
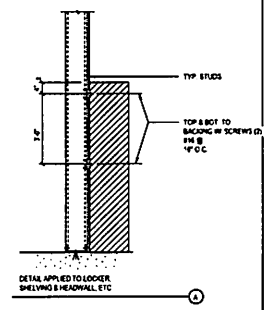


8 FRAMING DIAGRAM

GENERAL NOTES

A. ALL STUD FRAMING SHALL BE 20 GA. @ 16" O.C. TYP. OR 18 GA AT MEDIUM OR HEAVY DUTY BACKING PLATE CONDITIONS U.N.O.
B. ALL STUDS SHALL BE "C" STUDS W/ 8"x1"END FLANGES EXCEPT FOR FRAMING AT SHAFT WALLS WHICH SHALL BE "DW" STUDS
C. TOP AND BOTTOM TRACKS SHALL BE SAME GAUGE AS STUDS, EXCEPT AT SUSPENDED PARTITIONS (REFER TO DETAILS)
D. ALL STUD FRAMING SHALL BE FULL HEIGHT, FROM STRUCTURAL SLAB TO THE UNDERSIDE OF THE ROOF OR FLOOR DECK ABOVE, UNLESS NOTED OTHERWISE
E. WHERE CONDITIONS IN THE FIELD OCCUR WHICH MAKE IT DIFFICULT TO FRAME A PARTITION FULL HEIGHT, THE ARCHITECT MAY, AT HIS DISCRETION, ALLOW THE CONTRACTOR TO FRAME THE PARTITION AT A LOWER HEIGHT PROVIDED THAT IT'S BRACED IN ACCORDANCE WITH THE DETAILS PROVIDED HEREIN, OR AS DIRECTED BY THE ARCHITECT
F. DOUBLE OR LARGE FLANGE STUDS AT THE SIDES OF OPENINGS SHALL NOT BE CUT FOR ANY REASON
G. WHERE WELDING OF THE BACKING PLATES TO THE STUDS BURNS THROUGH EITHER THE STUD, PLATE OR BOTH, THE DAMAGED MATERIAL SHALL BE REPLACED WITH NEW MATERIAL
H. SEE SHEET(S) A951 FOR ACOUSTICAL REQUIREMENTS
I. PROVIDE MEDIUM TO HEAVY DUTY BACKING PLATES SPANNING A MINIMUM OF (2) STUDS AT THE FOLLOWING: HANDRAILS, WALL AND BASE CABINETS, COUNTERS, FIRE EXTINGUISHER CABINETS, SHOWER SEATS, URINAL PARTITIONS, CLOSET RODS
J. PROVIDE MEDIUM TO LIGHT DUTY BACKING PLATES AT THE FOLLOWING: PAPER TOWEL DISPENSERS, SOAP DISHES, SOAP DISPENSERS, AND SIMILAR WALL ATTACHED SCHEDULED ACCESSORIES



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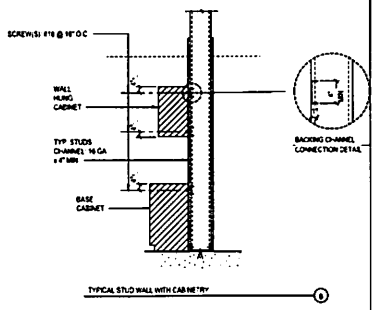

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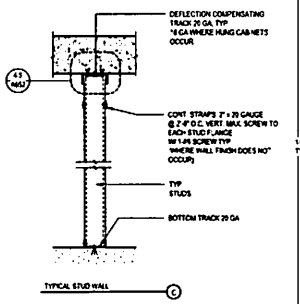

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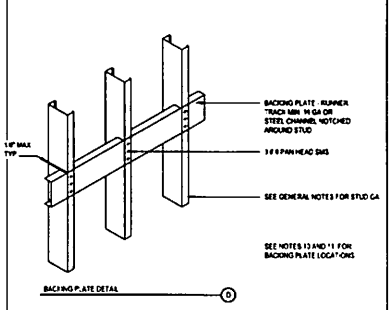

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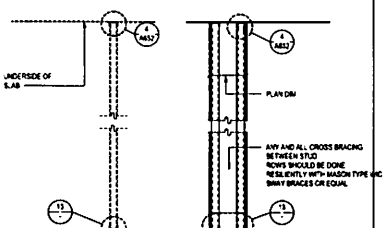
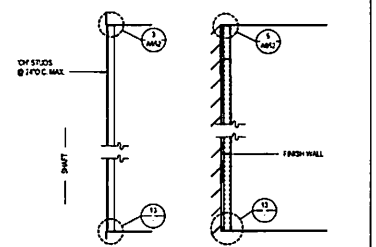
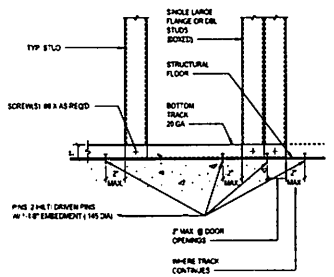
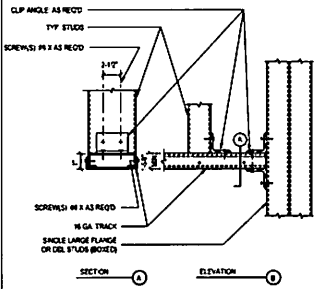




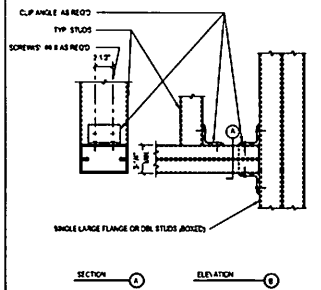
2 FRAMING DIAGRAMS



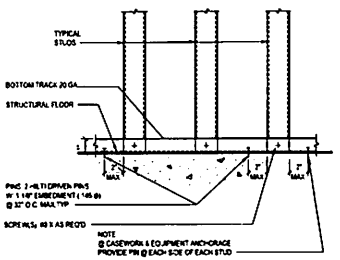
14 FRAMING AT DOOR



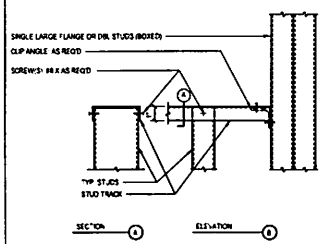
10 FRAMING AT SMALL OPENING



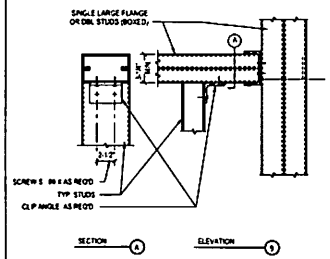
6 FRAMING AT LARGE OPENING



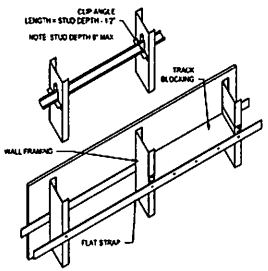
13 TYPICAL FRAMING



9 FRAMING AT SMALL OPENING



5 FRAMING AT LARGE OPENING



1 FRAMING DETAILS

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
FRAMED WALLS DETAILS

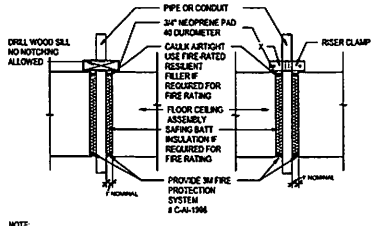
No.	Description	Date
1	ISSUED FOR PLAN NOTATION	27HT-6/27

JOB NO 236

DATE 06/27/17

SCALE 1" = 1'-0"

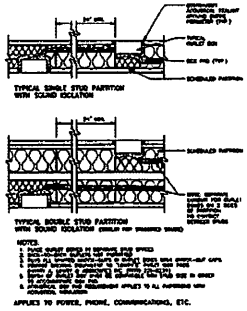
SHEET NO A94.02



NOTE:
1) SEE SHEET A7.00 FOR ADDITIONAL REQUIREMENTS
2) PIPE ISOLATION FOR WASTE AND SUPPLY WATER PIPES GREATER THAN 1" DIAMETER
3) IF PIPE IS SUSPENDED FROM, OR DIRECTLY ATTACHED TO STRUCTURE OR OTHER BUILDING ELEMENTS, USE 1/2" THICK, 40 DUROMETER NEOPRENE SLEEVE BETWEEN PIPE AND CLAMP

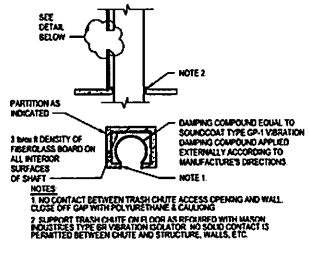
0-PIPE ISOLATION | 1 1/2" = 1'-0" | 17

NOTE:
1. STEEL ELECTRICAL BOXES SHALL NOT EXCEED 16 SQUARE INCHES, AND SHALL NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET, AND SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES WHEN ON OPPOSITE SIDES OF THE WALL.
2. WHEN OUTLETS ARE LOCATED ON THE SAME SIDE OF THE WALL A MAXIMUM SPACING OF 12'-0".
3. AN OULET SHALL BE PROVIDED ON WALLS LONGER THAN 2'-0".



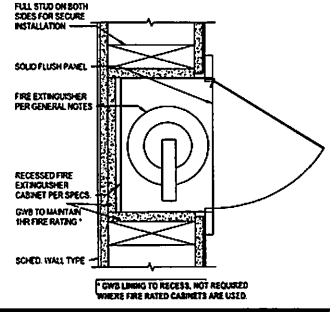
APPLIES TO POWER, PHONE, COMMUNICATIONS, ETC.

ACOUSTIC - OUTLET BOXES | 1/8" = 1'-0" | 13



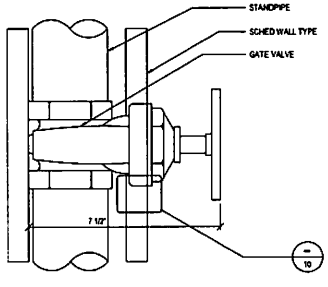
NOTES
1. NO CONTACT BETWEEN TRASH CHUTE ACCESS OPENING AND WALL. CLOSE OFF GAP WITH POLYURETHANE & CAULKING
2. SUPPORT TRASH CHUTE ON FLOOR AS REQUIRED WITH MASON INDUSTRIES TYPE BR VIBRATION ISOLATOR. NO SOLID CONTACT IS PERMITTED BETWEEN CHUTE AND STRUCTURE, WALLS, ETC.

ACOUSTIC - TRASH CHUTE | 1/8" = 1'-0" | 9

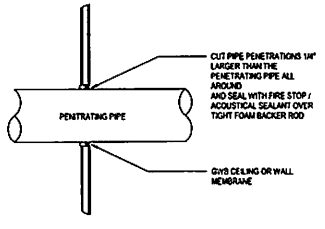


* GWB LINING TO RECESS, NOT REQUIRED WHERE FIRE RATED CABINETS ARE USED.

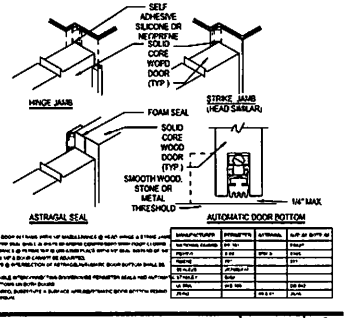
RECESSED F.E. CABINET | 3/32" = 1'-0" | 5



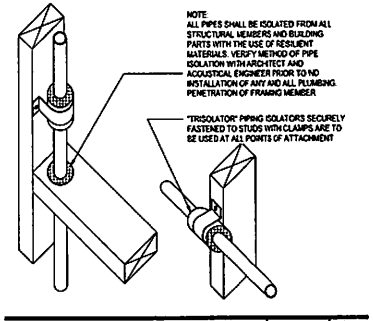
GATE VALVE FRAMED WALL | 1/8" = 1'-0" | 14



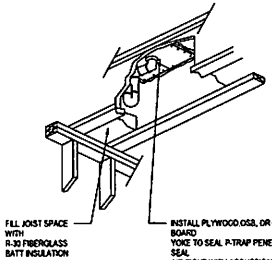
SEALANT PIPE PENETRATION | 1/8" = 1'-0" | 10



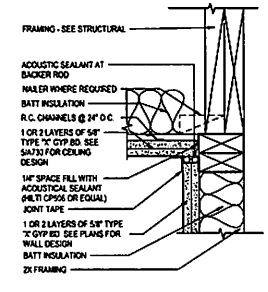
ACOUSTIC - DOOR SEALS | 1/8" = 1'-0" | 6



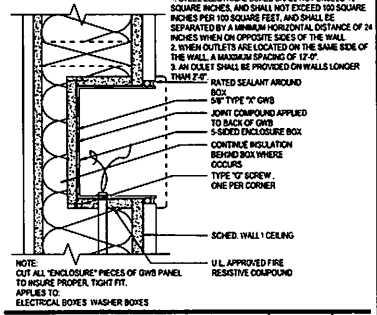
ACOUSTIC PIPE ISOLATION | 3" = 1'-0" | 15



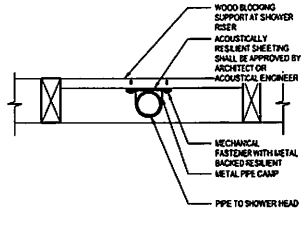
ISOLATION @ P-TRAPS | 3" = 1'-0" | 11



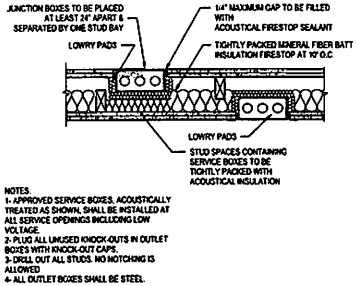
ACOUSTIC DET. @ CEILING | 3" = 1'-0" | 7



5-SIDED ENCLOSURE BOX | 1/8" = 1'-0" | 3

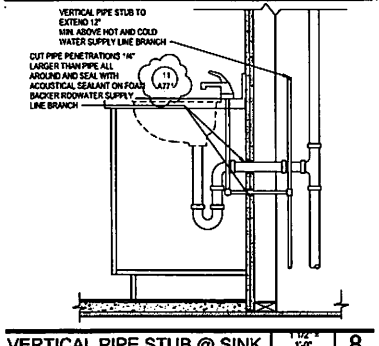


SHOWER RISER | 3" = 1'-0" | 16

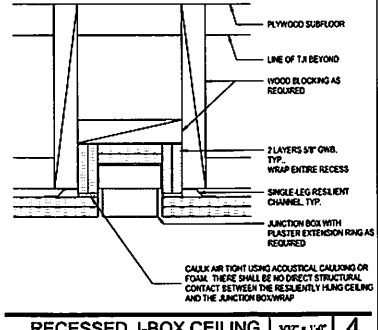


NOTES:
1- APPROVED SERVICE BOXES, ACOUSTICALLY TREATED AS SHOWN, SHALL BE INSTALLED AT ALL SERVICE OPENINGS INCLUDING LOW VOLTAGE.
2- PLUG ALL UNUSED KNOCK-OUTS IN OUTLET BOXES WITH KNOCK-OUT CAPS.
3- DRILL OUT ALL STUDS. NO HOTCHING IS ALLOWED
4- ALL OUTLET BOXES SHALL BE STEEL.

J-BOX @ DBL. STUD WALL | 1 1/2" = 1'-0" | 12



VERTICAL PIPE STUB @ SINK | 1 1/2" = 1'-0" | 8



RECESSED J-BOX CEILING | 3/32" = 1'-0" | 4

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POWDER MOUNTAIN - PARCEL 2C

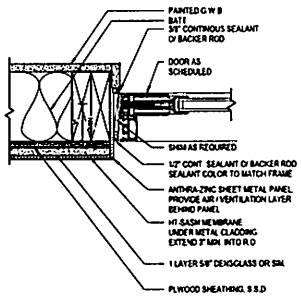
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ACOUSTIC / FIRE RATING DETAILS

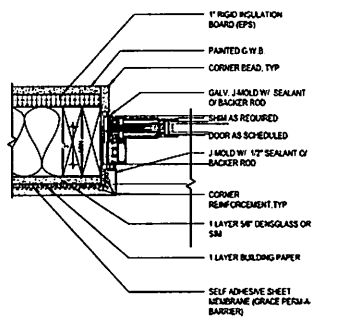
No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

PROJECT NO. 236
DATE 06/27/17
SCALE As indicated
SHEET NO. A94.03

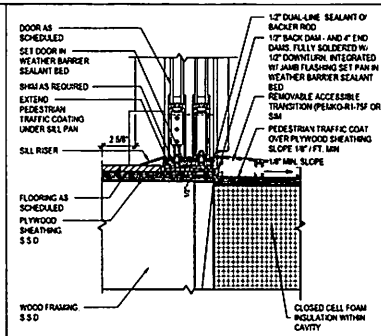
6/29/2017 11:25:14 AM



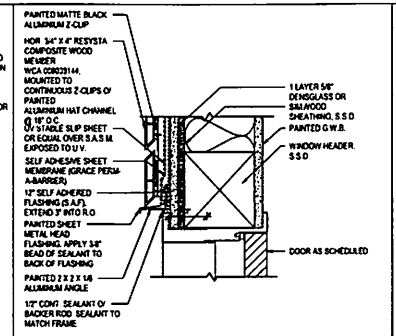
JAMB @ MTL PANEL | 3" = 1'-0" | 13



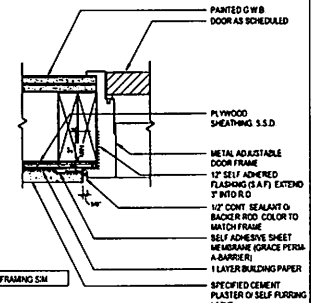
JAMB AT LOCK SIDE | 3" = 1'-0" | 9



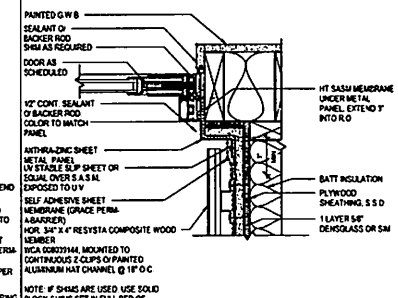
THRESHOLD @ BALCONY B | 3" = 1'-0" | 5



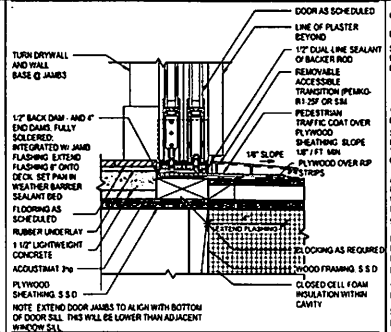
ENTRY DR HEAD @ RAINSCRN | 3" = 1'-0" | 1



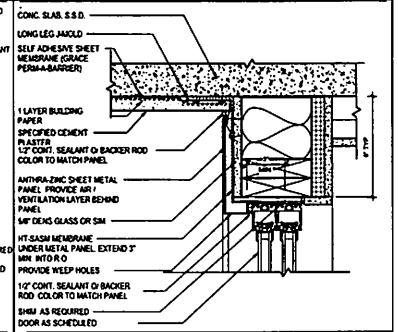
ENTRY DR JAMB @ PLASTER | 3" = 1'-0" | 14



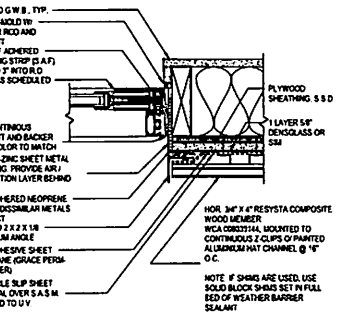
JAMB @ RAINSCRN SIDEWALL | 3" = 1'-0" | 10



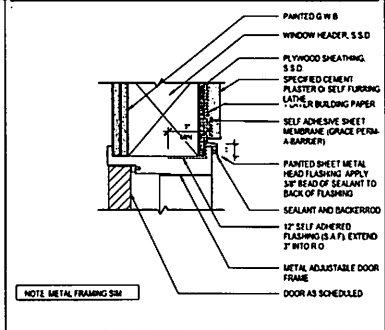
THRESHOLD @ BALCONY A | 3" = 1'-0" | 6



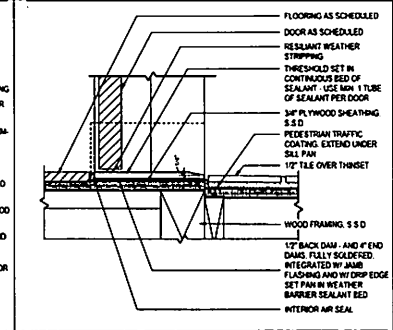
SLIDING DOOR HEAD | 3" = 1'-0" | 2



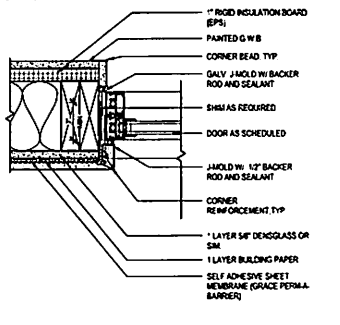
JAMB @ RAINSCRN | 3" = 1'-0" | 11



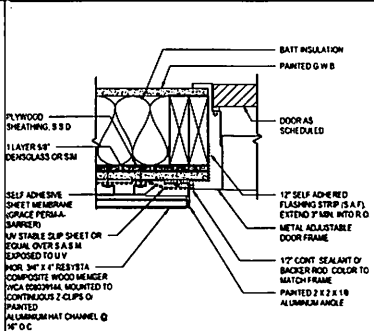
ENTRY DR HEAD @ PLASTER | 3" = 1'-0" | 7



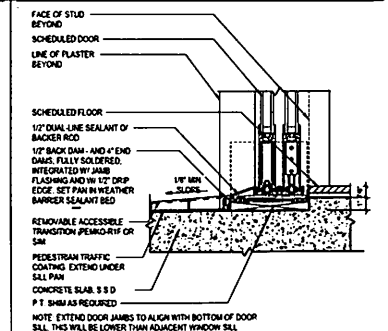
ENTRY DOOR THRESHOLD | 3" = 1'-0" | 3



JAMB AT FIXED SIDE | 3" = 1'-0" | 12



ENTRY DR JAMB @ RAINSCRN | 3" = 1'-0" | 8



SLIDING DOOR THRESHOLD | 3" = 1'-0" | 4

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
DOOR DETAILS

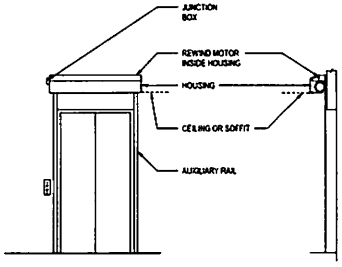
No.	Description	Date

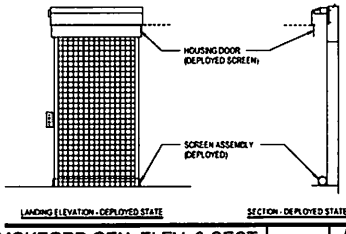
JOB NO
236

DATE
06/27/17

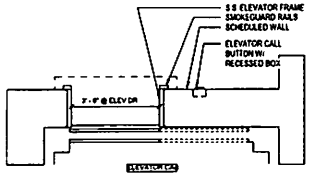
SCALE
3" = 1'-0"

SHEET NO
A95.01

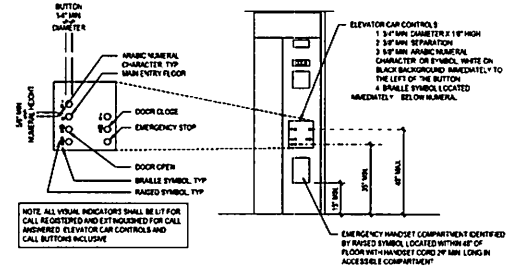


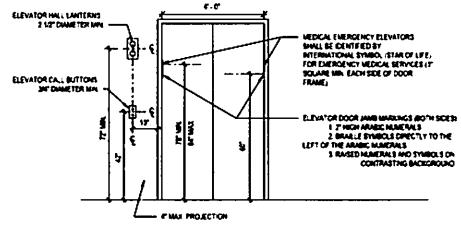


SMOKEGRD GEN. ELEV. & SECT | 3" = 1'-0" | 5

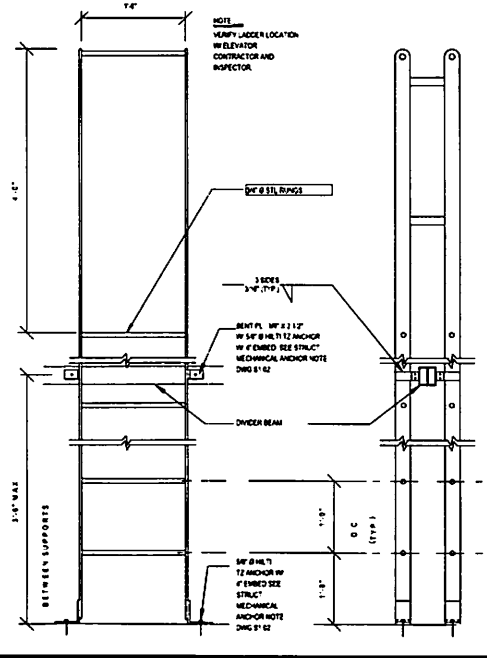


ELEV. JAMB @ PARKING LEVEL | 1/2" = 1'-0" | 4

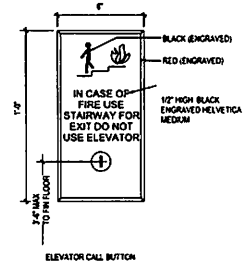




ELEVATOR CONTROLS | 1/4" = 1'-0" | 3



PIT LADDER | 1/4" = 1'-0" | 2



ELEVATOR CALL BUTTONS | 1/8" = 1'-0" | 1

R&A

STAMP

NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ELEVATOR DETAILS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO 236

DATE 06/27/17

SCALE As indicated

SHEET NO A97.50

6/29/2017 11:25:16 AM

R&A IF THIS SHEET IS NOT 30" x 42" IT IS A REDUCED PRINT

The following items must be performed or provided at no cost to Otis Elevator Company ("Otis") by the Owner or General Contractor or their agents in accordance with governing codes. The price and installation schedule of Otis is based on these job-site conditions existing at the beginning and during the installation of the elevator equipment. Failure to provide the items specified in this list will result in additional work performed by Otis Elevator beyond the scope of our contract causing installation delays. A change order will be submitted by Otis for materials and/or labor expended.

All work must be performed per the applicable national and or local codes

General Prep/Work

1 Provide on-site storage area for elevator equipment as follows: dry and enclosed, provides roll-able access to the elevator hoistway at the ground level, located within 100 feet (30480mm) of the hoistway and is larger than 25 x 20 feet (7622mm x 6096mm) per elevator. Any warranties provided by Otis for elevator equipment are null and void if equipment is stored in a manner other than a dry enclosed building structure.

2 Provide sufficient on-site refuse containers for the proper disposal of elevator packaging material. Should sufficient refuse containers not be provided, disposal of packaging material shall become the responsibility of the owner.

3 Provide any cutouts to accommodate elevator equipment (troughing, venting, and hall fixtures), along with the patching/painting of walls, floors, or partitions together with finish painting of entrance doors and frames, if required.

Hoistway & Pit Prep/Work

4 Provide and install a steel, I-beam shaped safety beam with a maximum flange width of 8 11/16" (220mm), from side wall to side wall at the top of the hoistway, capable of withstanding a minimum net live load of 7500 lb (3402 kg) per elevator. Reference Otis Layout for location. A 4" minimum clearance is required from top of beam to top of hoistway.

If your jobsite voltage = 600VAC three phase or 240VAC single phase, and your controller is to be located in the hoistway entrance, one of the two option below must be done.

Option 1: An additional steel I-beam needs to be provided and installed. It is to be located per the Otis layout & sized the same as the safety beam for the purpose of mounting the transformer provide by Otis (See overhead requirements).

Option 2: No second beam needed. Place a transformer in an electrical room. The transformer must be mounted and wired as per the National Electrical Code (ANSI/NFPA 70). See Otis layout and fact sheets for details.

5 Provide a clear plumb hoistway with variations from the size shown on the Otis layout not to exceed -0"/+ 1" (25mm) and not less than the clear dimensions shown on the Otis layout.

6 Provide adequate rail bracket supports, bracket spacing as required by governing code, from pit floor to top of hoistway comply with the rail reaction forces detailed on the Otis Contract Layout. Provide adequate support for the top rail brackets at locations on the top landing as specified on the Otis Layout. Provide separated beams where required. Unless approved by Otis, rail-bracket attachment supports must be exposed and flush with the clear hoistway line.

If the floor-to-floor height exceeds the maximum bracket spacing allowed by the elevator code, Otis requires some form of steel support to properly attach our guide rail brackets. The maximum allowed bracket spacing is indicated in the rail forces and bracket detail table on the Otis layout. Any rail bracket mounting surfaces that are not in line with the finished hoistway dimension (i.e. the clear hoistway line) may need to be extended to meet the required distance. Otis agrees to provide guidance on this matter at the appropriate time.

If rail bracket embedded plates or inserts are provided by Otis they shall be installed by others in accordance with Otis documentation and instructions.

If vertical tube steel is utilized as rail support on car rail side, opposite cwt., (2) vertical tubes spaced at 20.4" (518mm) on center are required for car rail brackets with "A" dimension >= 5.76" (146mm).

7. Provide adequate support at all fastening points of each entrance. Provide plumb vertical surfaces for entrances and sill supports, one above the other, and square with the hoistway. Finish floor and grout, if required, between entrances and building sill line. For MRL installations, a horizontal support member is to be provided 20" (508mm) above the clear opening at the controller landing to support the entrance and controller components. If any other floor height exceeds 12'-0" (3657mm), a horizontal support member is to be provided 12" (305mm) above the clear opening.

8 Prior to the start of installation, provide a dry, properly framed, enclosed and vented hoistway in accordance with all applicable codes.

9 A) Protection from Falls:
As required by the Occupational Safety and Health Administration (OSHA) 1926.502 (b) (1-3) a freestanding removable barricade at each hoistway opening at each floor. Barricades shall be 42" (1067mm) high, with mid-rail and kick board, and withstand 200 lbs. (90.7kg) of vertical and horizontal pressure.

B) Protection from Falling Objects
As required by the Occupational Safety and Health Administration (OSHA) 1926.502(j) hoistway protection from falling debris and other trades materials by either

1)Full entrance screening/mesh in front of all elevator entrances

2)Secured/controlled access to all elevator lobbies (lock and key) with posted Notice "only elevator personnel beyond this protection."

Notes:

Items A.) and B.) can be integrated systems

Hoistway barricades and screening shall be constructed, maintained and removed by others.

10 Provide a pit floor designed to sustain vertical forces (based on safety impact) on car and counterweight rails and impact loads on car and counterweight buffers as shown on the Otis layout. The pit must be dry and clean. The elevator pit must have a floor drain or sump pump for the accumulation of water. Location to be coordinated with Otis to avoid all elevator components and access areas. In areas requiring fire fighters emergency operation (FEO) a sump pump/drain shall be provided that shall have the capacity to remove a minimum of 11.4 m3/h (3,000 gal/h) per elevator (2.2.2.5, ASME A17.1-2007/CSA B44-07). Otis recommends that the owner verify the drain or sump pump system is in compliance with all applicable codes and laws.

11 The front entrance wall at the main landing and top landing, is not to be constructed until after all elevator equipment is installed in the hoistway (the entire front wall - CLEAR HOISTWAY WIDTH - must be open for installation). Remaining front entrance walls are not to be constructed until after door frames and sills are in place.

The rough openings, per sizes shown on the Otis layout, are required. Prior to the completion and turnover of the elevator(s), all entrance walls must be installed and rough openings filled in complete to maintain fire rated hoistway requirements.

12 Provide and install a fixed vertical iron ladder in each pit as required by governing code and located per Otis layout or as coordinated with Otis personnel. Ladder width and pit well pocket requirements are shown in the pit plan view on the Otis layout.

13 Install permanent light fixture in each elevator pit with illumination of not less than 100 lx (10 fc) as measured at the pit floor. The light bulb(s) shall be externally guarded to prevent contact and accidental breakage. The light switch shall be so located as to be accessible from the pit ladder.

14 Glass used in hoistway construction must block 98% or more of incident full-spectrum ultraviolet radiation for the full height of the hoistway.

15 Provide and install guarding of counterweight in a multiple-elevator hoistway as required, when a counterweight is located between elevators, the counterweight runway shall be guarded on the side next to the adjacent elevator. The guarding must meet or exceed the requirements of ASME A17.1-2007, section 2.3.2.3.

If an emergency door in a blind hoistway is required, provide an outward swinging single section type door with door closer and a self closing barrier per ASME A17.1-2007, section 2.11.1.2. Contact your local Otis personnel for a detailed drawing (AAA269000_FM) showing Otis specific requirements.

MRL Machine Space Prep/Work

16 Maintain the temperature at the top of the hoistway (machine space) between 32° F (0° C) and 104° F (40° C). This space also includes the car controller which is mounted at the top landing. Relative humidity shall not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown in Otis Confirmation of Power Supply form. Local codes may require tighter temperature ranges and higher ventilation levels. Please check with your local code authority for the exact requirements in your area. If your machinery space temperature exceeds this requirement, contact your local Otis sales representative for assistance.

17 Install a permanent light fixture at the top of the hoistway (machine space) of not less than 200-lux (19 fc) as measured at the level of the standing surface on the car when the elevator is at the top landing. Light switch is to be located in the hoistway per the Otis layout.

18. Install a permanent light fixture at the top landing entrance (control space), in the hall, of not less than 200-lux (19 fc) as measured at the floor level. Light switch is to be located close to the elevator entrance.

Control Room/Space and Machine Space Prep/Work

19. Provide a suitable control room/space(s) with access and ventilation in accordance with all applicable codes and regulations. The control room/space(s) shall be maintained at a temperature between 32F (0C) and 104F (40C) to be measured 6 feet (1830 mm) above the floor and 1 foot (305 mm) out from the front center of the car controller(s). Relative humidity is not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown on the Otis Confirmation of Power Supply form. Local codes may require tighter temperature ranges and higher ventilation levels, please check with your local code authority for the exact requirements in your area. If your control room/space(s) temperatures exceed these requirements, contact your local Otis sales representative for assistance.

20 Provide illumination of control room/space(s) of not less than 200 LUX (19 FC) as measured at floor level. Light switch is to be located within 18" (157 mm) to the lock-jamb side of the access door to the control room/space(s).

21. Provide control room/space(s) with self-closing and self-locking doors with a group 2 locking device. In addition ensure that all air gaps around the doors are sealed (i.e. threshold, weather stripping, etc.).

22. Maintain the temperature at the top of the hoistway (machine space) between 32° F (0° C) and 104° F (45° C). Relative humidity shall not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown in Otis Confirmation of Power Supply form. If your machinery space temperature exceeds the requirement, contact your local Otis sales representative for assistance.

23. Install a permanent light fixture at the top of the hoistway (machine space) of not less than 200-lux (19 fc) as measured at the level of the standing surface on the car when the elevator is at the top landing. Light switch is to be located in the hoistway per the Otis layout.

Fire Prevention Prep/Work

24. Provide hoistway walls designed and constructed in accordance with the required fire rating (including those places where elevator fixture boxes, rail bracket fastenings, and any other penetration into the hoistway walls).

25. In the United States provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated by Otis.

A For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing.

B For each group of elevators, provide a normally closed contact representing all smoke detectors located in lobbies, hoistways, or control rooms/spaces but not the smoke detector at the designated return landing (see above) or the smoke detectors as described below:

1)If a smoke detector is located in the hoistway at or below the lower of the two recall landings, it shall be wired to activate the same normally closed contact as the smoke detector located in the lobby at the lower of the two recall landings.

2)If the control room/space(s) are located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing.

C Requirements for intermittently illuminating the fire hat visual signal in the car operating panel, either 1) or 2) must be selected.

1)For a single unit, or group of elevators having control room/space(s) and one common hoistway, provide one additional normally closed contact representing the control room/space(s) and hoistway smoke detectors.

2)If the group contains more than one hoistway, and hoistway smoke detectors are installed, provide one normally closed contact for each elevator. The contact is to represent the smoke detectors in the control room/space(s) or hoistway containing that particular elevator.

26. In Canada provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated by Otis.

A For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing and if provided, from the sensing device in the pit.

B For each group of elevators, provide a normally closed contact representing all smoke detectors located in elevator lobbies, but not the smoke detector at the designated return landing (see above), and if provided, from the sensing device in the top of the hoistway.

C For each group of elevators, provide a normally closed contact representing the smoke detector in the elevator machine space.

D If the control space is located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing. For each group of elevators, provide in addition to the above, a normally closed contact representing the sensing devices in the pit or at the top of the hoistway (For the Fire Hat in the Elevator).

27. In the United States, if sprinklers are installed in the hoistway(s), or machine space(s), a means to automatically disconnect the main line power supply of the affected elevator and any other power supply used to move the elevator upon or prior to the application of water is required (unless prohibited by local code). Smoke detectors shall not be used to activate sprinklers in hoistway(s), or machinery spaces or to disconnect the mainline power supply.

In addition, when the Automatic Recovery Operation (ARO) is specified, the means provided to automatically disconnect power to the elevator shall be equipped with an additional auxiliary contact that is positively opened when power is removed from the elevator system. This automatically controlled mainline disconnect must be provided with all associated wiring and conduit to the controller.

28. Provide an "ABC" fire extinguisher, minimum 10 lbs for machine space, and located convenient to the top landing elevator entrance.

29. Provide control room/space(s) and door to code compliant fire-resistive construction.

Electrical Requirements

30. 3 Phase Power MRL - Provide a permenent three (3) phase electrical-feeder system with a separate equipment-grounding conductor terminating in the elevator contractor located at the top landing or transformer located at the top of the hoistway. Permanent three (3) phase electrical-feeder to be terminated at the elevator controller or transformer at the start of installation of the top landing elevator entrance and the timing of connection to Otis controller shall be coordinated with the elevator installer.
shall be coordinated with the elevator installer. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. Provide a fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to elevator controller (NEC building. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the elevator controller. Size of main contacts to suit elevator power characteristics. Fuses, if provided, are to be current limiting class J or equivalent. Circuit breakers, if provided, are to have current limiting characteristics equivalent to class J fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

Single Phase Power MRL - Provide a permenent single phase electrical-feeder system with a separate equipment-grounding conductor terminating in the elevator contractor located at the top landing or transformer located at the top of the hoistway. Permanent single phase electrical-feeder to be terminated at the transformer at the start of installation of the top landing elevator entrance and the timing of connection to Otis controller shall be coordinated with the elevator installer. Feeder conductors and grounding conductor sized according to elevator current characteristics shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. Provide a fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to elevator controller (NEC building. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the elevator controller. Size of main contacts to suit elevator power characteristics. Fuses, if provided, are to be current limiting class J or equivalent. Circuit breakers, if provided, are to have current limiting characteristics equivalent to class J fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

NOTE: DO NOT SCALE THIS DRAWING — REFER TO DWG'S NO. G2S 3500-PW, G2S 3500-EL

31. 3 Phase Power Control Room/Space - Provide a permenent three (3) phase electrical-feeder system with a separate equipment-grounding conductor terminating in the control room/space(s), located per Otis layout. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to controller [NEC 620-51, 620-51(D), and 620-52] or [CEC Rule 38-013(2)(a)]. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the controller. Size of main contacts to suit elevator power characteristics. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

Single Phase Power Control Room/Space - Provide a permenent single phase electrical-feeder system with a separate equipment-grounding conductor terminating in the control room/space(s), located per Otis layout. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to controller [NEC 620-51, 620-51(D), and 620-52] or [CEC Rule 38-013(2)(a)]. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the controller. Size of main contacts to suit elevator power characteristics. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

32. Provide a dedicated 125 volt, 15 ampere single-phase branch circuit with a fused disconnect switch or circuit breaker located at the point of power distribution in the building. The fused disconnect or circuit breaker shall be capable of being locked in the open position. The branch circuit supplies the car lights, car top receptacle, auxiliary lighting power source and ventilation on each car in compliance with the National Electrical Code [NEC820-53] or Canadian Electrical Code [CEC Rule 38-053]. Termination of this branch circuit shall be in the elevator controller located at the top landing and shall be connected at the same time as the permanent three (3) phase power referenced in the previous paragraph.

33. All 125 volt, 15 or 20 ampere single-phase receptacles installed in pits, machine spaces, control room/space(s) shall be of the ground-fault circuit-interrupter type (GFCI). A dedicated single-phase receptacle supplying a permanently installed pit sump pump shall not require GFCI protection.

34. Provide electric power for lights, tools, welding, hoisting, etc. during installation with sufficient power for starting, testing and adjusting the elevator. Provide a 220 volt, 30 ampere single-phase 4 wire electrical supply for platform operation during construction, available at the start of elevator installation.

35. Provide one (1) dedicated outside telephone line per elevator, and terminated at the controller designated by the Otis construction superintendent. Reference the A17.1 code and the Otis power of confirmation letter for specific requirements.

36. In areas under the jurisdiction of AMSE A17.1-2004/CSA B44 or later where the elevator travel is greater than or equal to 60 feet /18 meters, provide two-way voice communications means that shall enable emergency personnel within the building to establish communications to each car individually without intervention by a person within the car. The communication means shall override communications to the outside of the building, and once established shall only be terminated by emergency personnel outside the car. Refer to ASME A17.1-2004 CSA B44 or later, section 2.27.1.1.4 for exact requirements.

37. [Optional] For elevators having an intra building intercom, provide a separate 120 volt, 15 ampere, single phase power supply with fused SPST disconnect switch or circuit breaker, located as required for inter-communicating system power supply. Circuit to be arranged for feeding from the building emergency lighting supply if provided. Conduit and wiring for remotely located inter-communicating stations.

38. [Optional] For installations having emergency (standby) power, provide the standby power unit and means for starting it. The emergency (standby) power unit shall deliver to the elevator via disconnect switches in the building power distribution location or disconnect switches in the control room/space(s), sufficient power to operate one or more elevators at a time at full rated speed, and rated load.

An automatic power transfer switch for each power feeder to monitor both normal and emergency (standby) power conditions and to perform the transfer from one to the other. Switch to have two sets of normally closed dry contacts, one to be open when the switch is in the emergency (standby) power position, the other to open upon initiation of power failure. Each set of contacts is to have an inhibit function which will delay transfer to normal and/or emergency (standby) power by an adjustable period of 0 - 300 seconds. Switch shall have a phase monitor feature, which prohibits the transfer of power between "live" sources unless the sources are in phase with each other. If a shunt trip device is provided, an additional normally closed contact, with all associated wiring and conduit to the controller, is required from the emergency (standby) power source. The emergency (standby) power system provided shall comply with ANSI/NFPA 70 requirements 620.91. The table in section "ELEVATOR REGENERATIVE POWER REQUIREMENTS", on the Otis Confirmation of Power Supply form, contains the elevator system power regenerated under an overhauling load. The information contained in the form is to be used to determine regenerative power absorption capability for the emergency (standby) power distribution system.

Note: The building Emergency (Standby Power) Generator system used to operate the elevator(s) shall be capable of supplying non-linear loads.

You agree to indemnify and save Otis harmless against any and all liability and costs arising out of your failure to carry out any of the foregoing requirements.

Gen2®

3500# @ 200 F.P.M.
SEISMIC 3+

Otis
A United Technologies Company

DWG. NO.: G2S 3500-PWBO

BUILDING: POWDER MOUNTAIN NORTH ELEVATOR
LOCATION:
CONT. WITH:
OWNER:
ARCHT.:
CONTRACT NO.:

EXPRESS DRAW WEB 19

R&A

STAMP

NOT FOR CONSTRUCTION UNTIL SIGNED BY THIS ARCHITECT

POWDER MOUNTAIN - PARCEL 2C
5752 N. Copper Crest
Eden, UT 84310

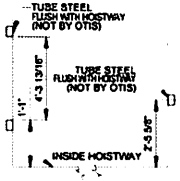
SHEET TITLE
ELEVATOR CUTSHEET - NORTH

No.	Description	Date
1	ISSUED FOR FOUNDATION PACKET	2017-06-27

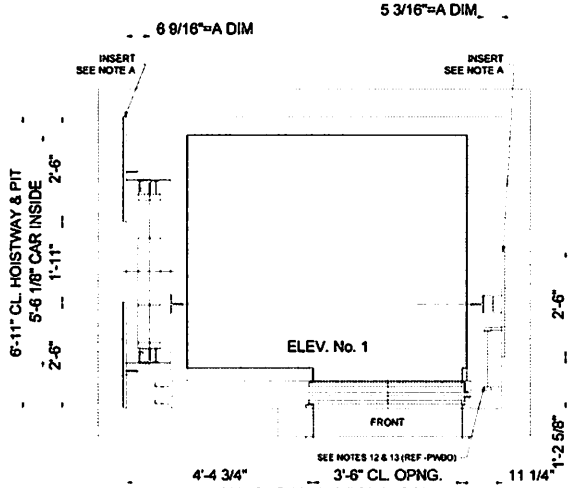
JOB NO. 236
DATE 06/27/17
SCALE
SHEET NO. A97.51

9/29/2017 11:25:21 AM

NSA: IF THIS SHEET IS NOT 30"x 42" IT IS A REDUCED PRINT

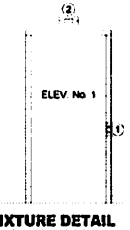


TUBE STEEL RAIL BRACKET SUPPORT
ELEV. No. 1



PLAN VIEW
SEE NOTE 6, PWBO SHEET

LADDER DETAIL
ELEV. No. 1



HALL FIXTURE DETAIL
FINISHED FLOOR
① HALL BUTTONS @ ALL FLOORS
② HALL POSITION INDICATOR @ FLOOR(S) 1

PIT PLAN VIEW
FORCE SHOWN INCLUDES DOUBLING FOR IMPACT

DIRECTIONAL ARROW INDICATES NORTH

NOTE A
THESE DIMENSIONS ARE BASED ON HOISTWAY SIZES SHOWN & 30" INSERTS IF EITHER OF THESE VARY, CONSULT THE SALES REPRESENTATIVE.

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED _____ DATE _____

Gen2®
3500# @ 200 F.P.M.
SEISMIC 3+

Otis
A United Technologies Company

DWG. NO.: G2S 3500-PN
BUILDING: POWDER MOUNTAIN NORTH ELEVATOR
LOCATION:
CONT. WITH:
OWNER:
ARCHT.:
CONTRACT NO.:

NOTE: DO NOT SCALE THIS DRAWING | REFER TO DWG'S. NO. G2S 3500-PWBO, G2S 3500-EL

EXPRESS DRAW WEB 19

8/28/2017 11:25:31 AM

R&A

STAMP

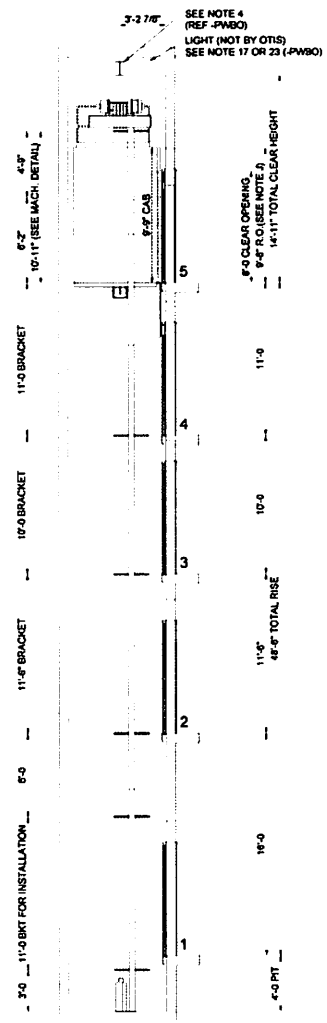
NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN - PARCEL 2C
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ELEVATOR CUTSHEET - NORTH

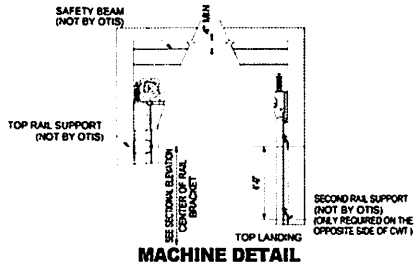
No.	Description	Date
1	ISSUED FOR PLANNING APPROVAL PP#681	2017/8/31

JOB NO. 236
DATE 06/27/17
SCALE
SHEET NO. A97.52



SECTIONAL ELEVATION

FOR MAX. SPACING BETWEEN INSERTS SEE RAIL FORCE DETAIL



MACHINE DETAIL

RAIL FORCE & BRACKET SPACING DETAIL

SEE NOTES 6 & 7

CAR		R1	434 lbs
		R2	75 lbs
		VX	1891 lbs
		VY	946 lbs
	MAXIMUM BRACKET SPACING		12' 0"
	RAIL SIZE		1-1/2
CWT		R1	266 lbs
		R2	19 lbs
		VX	1904 lbs
		VY	997 lbs
	MAXIMUM BRACKET SPACING		12' 0"
	RAIL SIZE		1-1/2
DEH (DEAD END HITCH)		R1	660 lbs
		R2	1500 lbs

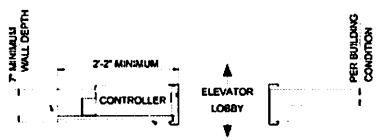
IN MULTICAR GROUPS THE VALUES ABOVE ARE THE LARGEST VALUES FOR THE ENTIRE GROUP

FIRST INTERMEDIATE RAIL SUPPORT LOCATION TO BE LOCATED 14'-0" FROM PIT FLOOR. ALL OTHER INTERMEDIATE SUPPORTS CANNOT EXCEED THE MAXIMUM BRACKET SPACING IN THE RAIL FORCE & BRACKET SPACING DETAIL

CAR R1 = SAFETY APPLICATION
CWT R1 = LOADING OR RUNNING
R2 = LOADING OR RUNNING

REQUIREMENTS FOR RAIL BRACKET SUPPORT (NOT BY OTIS) DEFLECTION NOT TO EXCEED 1/8" BASED ON HORIZONTAL RAIL FORCES

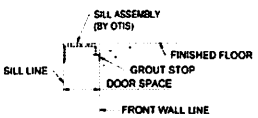
NOTE J
ROUGH OPENING AT ALL FLOORS, EXCEPT TOP LANDING, EQUALS 8'-10"
TOP LANDING EQUALS 9'-6"



TOP LANDING ENTRANCE REQUIREMENTS

(MUST BE LOCATED AT THE FRONT TOP ENTRANCE)

ELEV No 1



DETAIL "A"
SILL SUPPORT

ADEQUATE SUPPORT AT ALL FASTENING POINTS OF ENTRANCE ASSEMBLY REQUIRED MUST WITHSTAND A HORIZONTAL PULL-OUT FORCE OF 140 LBS @ EA. FASTENING POINT (8 @ EA. ENTRANCE) INCLUDING SUPPORT FOR CENTER SILL SUPPORT BRACKET (NOT BY OTIS)

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED: DATE:

Gen2®

3500# @ 200 F.P.M.
SEISMIC 3+

Otis
A United Technologies Company

DWG. NO.: G2S 3500-EL

BUILDING POWDER MOUNTAIN NORTH ELEVATOR
LOCATION
CONT. WITH
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EXPRESS DRAW WEB 19

NOTE - DO NOT SCALE THIS DRAWING REFER TO DWGS NO. G2S 3500-PWBO, G2S 3500-PN

R&A

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NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN - PARCEL 2C
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ELEVATOR CUTSHEET - NORTH

No.	Descriptions	Date
*	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO 236

DATE 06/27/17

SCALE

SHEET NO A97.53

6/29/2017 11:25:35 AM

R&A - IF THIS SHEET IS NOT 30" x 42" IT IS A REDUCED PRINT

The following items must be performed or provided at no cost to Otis Elevator Company ("Otis") by the Owner or General Contractor or their agents in accordance with governing codes. The price and installation schedule of Otis is based on these job-site conditions existing at the beginning and during the installation of the elevator equipment. Failure to provide the items specified in this list will result in additional work performed by Otis Elevator beyond the scope of our contract causing installation delays. A change order will be submitted by Otis for materials and/or labor expended.

All work must be performed per the applicable national and or local codes.

General Prep/Work

1. Provide on-site storage area for elevator equipment as follows: dry and enclosed, provides roll-able access to the elevator hoistway at the ground level, located within 100 feet (30480mm) of the hoistway and is larger than 25 x 20 feet (7620mm x 6096mm) per elevator. Any warranties provided by Otis for elevator equipment are null and void if equipment is stored in a manner other than a dry enclosed building structure.
2. Provide sufficient on-site refuse containers for the proper disposal of elevator packaging material. Should sufficient refuse containers not be provided, disposal of packaging material shall become the responsibility of the owner.
3. Provide any cutouts to accommodate elevator equipment (roughing, venting, and hall fixtures), along with the patching/painting of walls, floors, or partitions together with finish painting of entrance doors and frames, if required.

Hoistway & Pit Prep/Work

4. Provide and install a steel, T-beam shaped safety beam with a maximum flange width of 8 11/16" (220mm), from side wall to side wall at the top of the hoistway, capable of withstanding a minimum net live load of 7500 lb (3402 kg) per elevator. Reference Otis Layout for location. A 4" minimum clearance is required from top of beam to top of hoistway.

   If your jobsite voltage = 600VAC three phase or 240VAC single phase, and your controller is to be located in the hoistway entrance, one of the two option below must be done.

   Option 1: An additional steel I-beam needs to be provided and installed. It is to be located per the Otis layout & sized the same as the safety beam for the purpose of mounting the transformer provide by Otis (See overhead requirements).

   Option 2: No second beam needed. Place a transformer in an electrical room. The transformer must be mounted and wired as per the National Electrical Code (ANSI/NFPA 70). See Otis layout and fact sheets for details.
5. Provide a clear plumb hoistway with variations from the size shown on the Otis layout not to exceed -0"/+ 1" (25mm) and not less than the clear dimensions shown on the Otis layout.
6. Provide adequate rail bracket supports, bracket spacing as required by governing code, from pit floor to top of hoistway comply with the rail reaction forces detailed on the Otis Contract Layout. Provide adequate support for the top rail brackets at locations above the top landing as specified on the Otis Layout. Provide separator beams where required. Unless approved by Otis, rail-bracket attachment supports must be exposed and flush with the clear hoistway line.

   If the floor-to-floor height exceeds the maximum bracket spacing allowed by the elevator code, Otis requires some form of steel support to properly attach our guide rail brackets. The maximum allowed bracket spacing is indicated in the rail force and bracket detail table on the Otis layout. Any rail bracket mounting surfaces that are not in line with the finished hoistway dimension (i.e. the clear hoistway line) may need to be extended to meet the required distance. Otis agrees to provide guidance on this matter at the appropriate time.

   If rail bracket embedded plates or inserts are provided by Otis they shall be installed by others in accordance with Otis documentation and instructions.

   If vertical tube steel is utilized as rail support on car rail side, opposite ent., (2) vertical tubes spaced at 20.4" (518mm) on center are required for car rail brackets with "A" dimension >= 5.76" (146mm).
7. Provide adequate support at all fastening points of each entrance. Provide plumb vertical surfaces for entrances and sill supports, one above the other, and square with the hoistway. Finish floor and grout, if required, between entrances and building sill line. For MRL installations, a horizontal support member is to be provided 20" (508mm) above the clear opening at the controller landing to support the entrance and controller components. If any other floor height exceeds 12'-0" (3657mm), a horizontal support member is to be provided 12" (305mm) above the clear opening.
8. Prior to the start of installation, provide a dry, properly framed, enclosed and vented hoistway in accordance with all applicable codes.
9. A.) Protection from Falls:

   As required by the Occupational Safety and Health Administration (OSHA) 1926.502.B) (1-3) a freestanding removable barricade at each hoistway opening at each floor. Barricades shall be 42" (1067mm) high, with mid-rail and kick board, and withstand 200 lbs. (90.7kg) of vertical and horizontal pressure.

   B.) Protection from Falling Objects:

   As required by the Occupational Safety and Health Administration (OSHA) 1926.502(j) hoistway protection from falling debris and other trades materials by either:

   1.) Full entrance screening/mesh in front of all elevator entrances

   2.) Secured/controlled access to all elevator lobbies (lock and key) with posted Notice "only elevator personnel beyond this protection."

   Notes:

   Items A.) and B.) can be integrated systems.

   Hoistway barricades and screening shall be constructed, maintained and removed by others.
10. Provide a pit floor designed to sustain vertical forces (based on safety impact) on car and counterweight rails and impact loads on car and counterweight buffers as shown on the Otis layout. The pit must be dry and clean. The elevator pit must have a floor drain or sump pump to prevent the accumulation of water. Location to be coordinated with Otis to avoid all elevator components and access areas. In areas requiring fire fighters emergency operation (FEO) a sump pump/drain shall be provided that shall have the capacity to remove a minimum of 11.4 m3/h (3,000 gal/h) per elevator (2.2.2.5. ASME A17.1-2007/CSA B44-07). Otis recommends that the owner verify the drain or sump pump system is in compliance with all applicable codes and laws.
11. The front entrance wall at the main landing and top landing, is not to be constructed until after all elevator equipment is installed in the hoistway (the entire front wall - CLEAR HOISTWAY WIDTH - must be open for installation). Remaining front entrance walls are not to be constructed until after door frames and sills are in place.

    The rough openings, per sizes shown on the Otis layout, are required. Prior to the completion and turnover of the elevator(s), all entrance walls must be installed and rough openings filled in complete to maintain fire rated hoistway requirements.
12. Provide and install a fixed vertical iron ladder in each pit as required by governing code and located per Otis layout or as coordinated with Otis personnel. Ladder width and pit wall pocket requirements are shown in the pit plan view on the Otis layout.
13. Install permanent light fixture in each elevator pit with illumination of not less than 100 lx (10 fc) as measured at the pit floor. The light bulb(s) shall be externally guarded to prevent contact and accidental breakage. The light switch shall be so located as to be accessible from the pit ladder.
14. Glass used in hoistway construction must block 98% or more of incident full-spectrum ultraviolet radiation for the full height of the hoistway.
15. Provide and install guarding of counterweight in a multiple-elevator hoistway as required, when a counterweight is located between elevators, the counterweight runway shall be guarded on the side next to the adjacent elevator. The guarding must meet or exceed the requirements of ASME A17.1-2007, section 2.3.2.3.

    If an emergency door in a blind hoistway is required, provide an outward swinging single section type door with door closer and a self closing barrier per ASME A17.1-2007, section 2.11.1.2. Contact your local Otis personnel for a detailed drawing (AAA20900D_FMI) showing Otis specific requirements.

MRL Machine Space Prep/Work

16. Maintain the temperature at the top of the hoistway (machine space) between 32° F (0° C) and 104° F (40° C). This space also includes the car controller which is mounted at the top landing. Relative humidity shall not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown in Otis Confirmation of Power Supply form. Local codes may require tighter temperature ranges and higher ventilation levels. Please check with your local code authority for the exact requirements in your area. If your machinery space temperature exceeds this requirement, contact your local Otis sales representative for assistance.
17. Install a permanent light fixture at the top of the hoistway, (machine space) of not less than 200-lux (19 fc) as measured at the level of the standing surface on the car when the elevator is at the top landing. Light switch is to be located in the hoistway per the Otis layout.
18. Install a permanent light fixture at the top landing entrance (control space), in the hall, of not less than 200-lux (19 fc) as measured at the floor level. Light switch is to be located close to the elevator entrance.

Control Room/Space and Machine Space Prep/Work

19. Provide a suitable control room/space(s) with access and ventilation in accordance with all applicable codes and regulations. The control room/space(s) shall be maintained at a temperature between 32F (0C) and 104F (40C) to be measured 6 feet (1830 mm) above the floor and 1 foot (305 mm) out from the front center of the car controller(s). Relative humidity is not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown on the Otis Confirmation of Power Supply form. Local codes may require tighter temperature ranges and higher ventilation levels, please check with your local code authority for the exact requirements in your area. If your control room/space(s) temperatures exceed these requirements, contact your local Otis sales representative for assistance.
20. Provide illumination of control room/space(s) of not less than 200 LUX (19 FC) as measured at floor level. Light switch is to be located within 18" (157 mm) to the lock-jamb side of the access door to the control room/space(s).
21. Provide control room/space(s) with self-closing and self-locking doors with a group 2 locking device. In addition, ensure that all air gaps around the doors are sealed (i.e. threshold, weather stripping, etc.).
22. Maintain the temperature at the top of the hoistway (machine space) between 32° F (0° C) and 104° F (45° C). Relative humidity shall not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown in Otis Confirmation of Power Supply form. If your machinery space temperature exceeds the requirement, contact your local Otis sales representative for assistance.
23. Install a permanent light fixture at the top of the hoistway (machine space) of not less than 200-lux (19 fc) as measured at the level of the standing surface on the car when the elevator is at the top landing. Light switch is to be located in the hoistway per the Otis layout.

Fire Prevention Prep/Work

24. Provide hoistway walls designed and constructed in accordance with the required fire rating (including those places where elevator fixture boxes, rail bracket fastenings, and any other penetration into the hoistway walls).
25. In the United States provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated by Otis.

    A. For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing.

    B. For each group of elevators, provide a normally closed contact representing all smoke detectors located in lobbies, hoistways, or control rooms/spaces but not the smoke detector at the designated return landing (see above) or the smoke detectors as described below:

    1) If a smoke detector is located in the hoistway at or below the lower of the two recall landings, it shall be wired to activate the same normally closed contact as the smoke detector located in the lobby at the lower of the two recall landings.

    2) If the control room/space(s) are located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing.

    C. Requirements for intermittently illuminating the fire hat visual signal in the car operating panel, either 1) or 2) must be selected.

    1) For a single unit, or group of elevators having control room/space(s) and one common hoistway, provide one additional normally closed contact representing the control room/space(s) and hoistway smoke detectors.

    2) If the group contains more than one hoistway, and hoistway smoke detectors are installed, provide one normally closed contact for each elevator. The contact is to represent the smoke detectors in the control room/space(s) or hoistway containing that particular elevator.
26. In Canada provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated by Otis.

    A. For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing and if provided, from the sensing device in the pit.

    B. For each group of elevators, provide a normally closed contact representing all smoke detectors located in elevator lobbies, but not the smoke detector at the designated return landing (see above), and if provided, from the sensing device in the top of the hoistway.

    C. For each group of elevators, provide a normally closed contact representing the smoke detector in the elevator machine space.

    D. If the control space is located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing. For each group of elevators, provide in addition to the above, a normally closed contact representing the sensing devices in the pit or at the top of the hoistway. (For the Fire Hat in the Elevator.)
27. In the United States, if sprinklers are installed in the hoistway(s), or machine space(s), a means to automatically disconnect the main line power supply of the affected elevator and any other power supply used to move the elevator upon or prior to the application of water is required (unless prohibited by local code). Smoke detectors shall not be used to activate sprinklers in hoistway(s), or machinery spaces or to disconnect the mainline power supply.

    In addition, when the Automatic Recovery Operation (ARO) is specified, the means provided to automatically disconnect power to the elevator shall be equipped with an additional auxiliary contact that is positively operated when power is removed from the elevator system. This automatically controlled mainline disconnect must be provided with all associated wiring and conduit to the controller.
28. Provide an "ABC" fire extinguisher, minimum 10 lbs for machine space, and located convenient to the top landing elevator entrance.
29. Provide control room/space(s) and door to code compliant fire-resistive construction.

Electrical Requirements

30. 3 Phase Power MRL - Provide a permanent three (3) phase electrical-feeder system with a separate equipment-grounding conductor terminating in the elevator controller located at the top landing or transformer located at the top of the hoistway. Permanent three (3) phase electrical-feeder to be terminated at the elevator controller or transformer at the start of installation of the top landing elevator entrance and the timing of connection to Otis controller shall be coordinated with the elevator installer. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. Provide a fused disconnect switch or circuit breaker capable of being locked in the open position for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to elevator controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013(2) (a)] located at the point of power distribution in the building. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the elevator controller. Size of main contacts to suit elevator power characteristics. Fuses, if provided, are to be current limiting class J or equivalent. Circuit breakers, if provided, are to have current limiting characteristics equivalent to class J fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

    Single Phase Power MRL - Provide a permanent single phase electrical-feeder system with a separate equipment-grounding conductor terminating in the transformer located at the top of the hoistway. Permanent single phase electrical-feeder to be terminated at the transformer at the start of installation of the top landing elevator entrance and the timing of connection to Otis controller shall be coordinated with the elevator installer. Feeder conductors and grounding conductor sized according to elevator current characteristics shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. Provide a fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to elevator controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013 (2) (a)] located at the point of power distribution in the building. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the elevator controller. Size of main contacts to suit elevator power characteristics. Fuses, if provided, are to be current limiting class J or equivalent. Circuit breakers, if provided, are to have current limiting characteristics equivalent to class J fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.
31. 3 Phase Power Control Room/Space - Provide a permanent three (3) phase electrical-feeder system with a separate equipment-grounding conductor terminating in the control room/space(s), located per Otis layout. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013(2)(a)]. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the controller. Size of main contacts to suit elevator power characteristics. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

    Single Phase Power Control Room/Space - Provide a permanent single phase electrical-feeder system with a separate equipment-grounding conductor terminating in the control room/space(s), located per Otis layout. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013(2)(a)]. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the controller. Size of main contacts to suit elevator power characteristics. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.
32. Provide a dedicated 125 volt, 15 ampere single-phase branch circuit with a fused disconnect switch or circuit breaker located at the point of power distribution in the building. The fused disconnect or circuit breaker shall be capable of being locked in the open position. The branch circuit supplies the car lights, car top receptacle, auxiliary lighting power source and ventilation on each car in compliance with the National Electrical Code [NEC620-51] or Canadian Electrical Code [CEC Rule 38-033]. Termination of this branch circuit shall be in the elevator controller located at the top landing and shall be connected at the same time as the permanent three (3) phase power specified in the previous paragraph.
33. All 125 volt, 15 or 20 ampere single-phase receptacles installed in pits, machine spaces, control rooms/space(s) shall be of the ground-fault circuit-interrupter type (GFCI). A dedicated single-phase receptacle supplying a permanently installed pit sump pump shall not require GFCI protection.
34. Provide electric power for lights, tools, welding, hoisting, etc. during installation with sufficient power for starting, testing and adjusting the elevator. Provide a 208 volt, 30 ampere single-phase 4 wire electrical supply for platform operation during construction, available at the start of elevator installation.
35. Provide one (1) dedicated outside telephone line, per elevator, and terminated at the controller designated by the Otis construction superintendent. Reference the A17.1 code and the Otis power of confirmation letter for specific requirements.
36. In areas under the jurisdiction of ANSE A17.1-2004/CSA B44 or later where the elevator travel is greater than or equal to 60 feet /18 meters, provide two-way voice communications means that shall enable emergency personnel within the first building to establish communications to each car individually without intervention by a person within the car. The communication means shall override communications to the outside of the building and once established shall only be terminated by emergency personnel outside the car. Refer to ASME A17.1-2004 CSA B44 or later, section 2.27.1.1.4 for exact requirements.
37. [Optional] For elevators having an intra building intercom, provide a separate 120 volt, 15 ampere, single phase power supply with fused SPST disconnect switch or circuit breaker, located as required for inter-communicating system power supply. Circuit to be arranged for feeding from the building emergency lighting supply if provided. Conduit and wiring for remotely located inter-communicating stations.
38. [Optional] For installations having emergency (standby) power, provide the standby power unit and means for starting it. The emergency (standby) power unit shall deliver to the elevator via disconnect switches in the building power distribution location or disconnect switches in the control room/space(s), sufficient power to operate one or more elevators at a time at full rated speed, and rated load.

    An automatic power transfer switch for each power feeder to monitor both normal and emergency (standby) power conditions and to perform the transfer from one to the other. Switch to have two sets of normally closed dry contacts, one to be open when the switch is in the emergency (standby) power position; the other to open upon initiation of power transfer and to close when transfer is complete. Switch to have an inhibit function which will delay transfer to normal and/or emergency (standby) power by an adjustable period of 0 - 300 seconds. Switch shall have a phase reversal feature, which prohibits the transfer of power between "live" sources unless the sources are in phase with each other. If a shunt trip device is provided, an additional normally closed contact, with all associated wiring and conduit to the controller, is required from the emergency (standby) power source. The emergency (standby) power system provided shall comply with ANSI/NFPA 70 requirements 620.91. The table in section "ELEVATOR REGENERATIVE POWER REQUIREMENTS", on the Otis Confirmation of Power Supply form, contains the elevator system power regenerated under an overhauling load. The information contained in the form is to be used to determine regenerative power absorption capability for the emergency (standby) power distribution system.

    Note: The building Emergency (Standby Power) Generator system used to operate the elevator(s) shall be capable of supplying non-linear loads.

You agree to indemnify and save Otis harmless against any and all liability and costs arising out of your failure to carry out any of the foregoing requirements.

Gen2®

3500# @ 200 F.P.M.
SEISMIC 3+

Otis
A United Technologies Company

DWG NO.: G2S 3500R-PWBO

BUILDING: POWDER MOUNTAIN SOUTH ELEVATOR
LOCATION:
CONT. WITH:
OWNER:
ARCHT.:
CONTRACT NO.:

EXPRESS DRAW WEB 19

NOTE - DO NOT SCALE THIS DRAWING

REFER TO DWG'S NO. G2S 3500R PN, G2S 3500R-EL

R&A

4199 Sorensen Avenue, Suite 100
Kenosha, CA 92618
tel 949.728.8900
www.rna-a.com

STAMP

STATE OF UTAH
CRAIG DAVID ROBERT
5466826-4301
REGISTERED ARCHITECT

NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ELEVATOR CUTSHEET - SOUTH

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO. 236

DATE 06/27/17

SCALE

SHEET NO. A97.54

6/29/2017 11:25:40 AM

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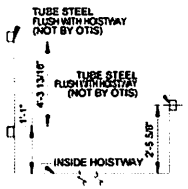
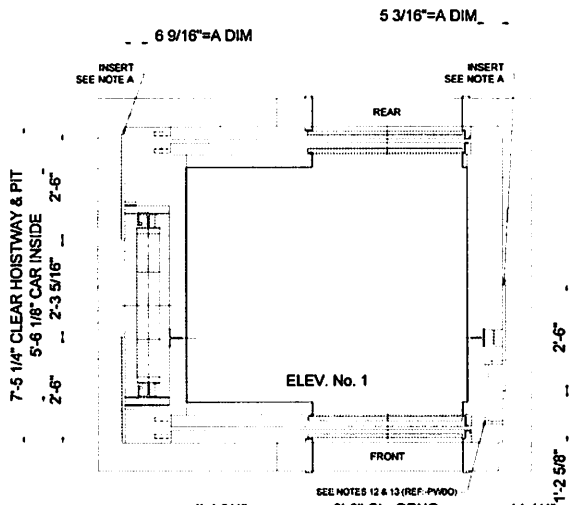
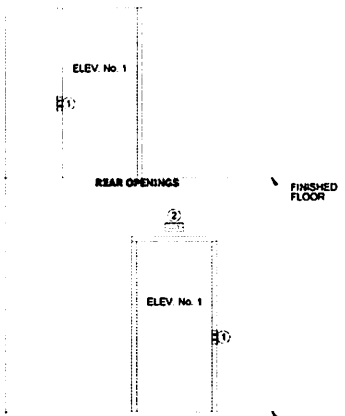


TUBE STEEL RAIL BRACKET SUPPORT
ELEV. No. 1

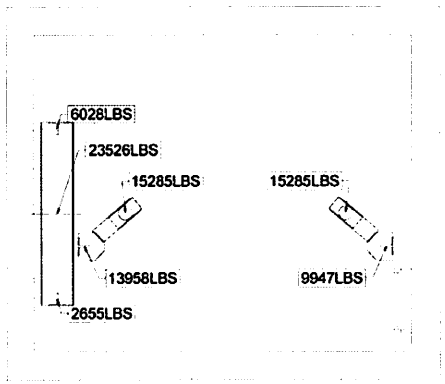


PLAN VIEW
SEE NOTE 5, PVBO SHEET

LADDER DETAIL
ELEV No 1



HALL FIXTURE DETAIL
(1) HALL BUTTONS @ ALL FLOORS
(2) HALL POSITION INDICATOR @ FLOOR(S) 1



PIT PLAN VIEW
FORCE SHOWN INCLUDES DOUBLING FOR IMPACT

NOTE A
THESE DIMENSIONS ARE BASED ON HOISTWAY SIZES SHOWN & 30" INSERTS IF EITHER OF THESE VARY, CONSULT THE SALES REPRESENTATIVE.

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED. DATE:

Gen2®
3500# @ 200 F.P.M.
SEISMIC 3+

Otis
A United Technologies Company

DWG. NO. G2S 3500R-PN
BUILDING POWDER MOUNTAIN SOUTH ELEVATOR
LOCATION
CONT. WITH
OWNER
ARCHT
CONTRACT NO

EXPRESS DRAW WEB 19

DIRECTIONAL ARROW INDICATES NORTH

NOTE : DO NOT SCALE THIS DRAWING REFER TO DWG'S NO. G2S 3500R PVBO, G2S 3H0R EL

6/28/2017 11:25:44 AM

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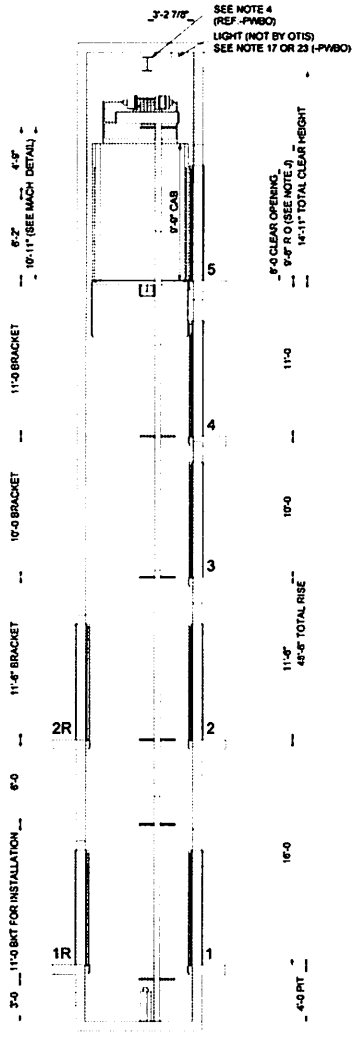
POWDER MOUNTAIN - PARCEL 2C
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ELEVATOR CUTSHEET - SOUTH

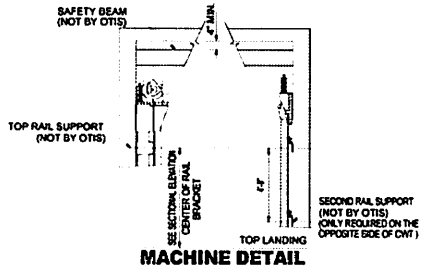
No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO 236
DATE 06/27/17
SCALE
SHEET NO A97.55



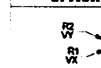
SECTIONAL ELEVATION

FOR MAX. SPACING BETWEEN INSERTS SEE RAIL FORCE DETAIL



MACHINE DETAIL

RAIL FORCE & BRACKET SPACING DETAIL



SEE NOTES 6 & 7

CAR		R1	434 lbs
		R2	75 lbs
		VX	1891 lbs
		VY	946 lbs
	MAXIMUM BRACKET SPACING		12' 0"
	RAIL SIZE		1-1/2
CWT		R1	200 lbs
		R2	19 lbs
		VX	1994 lbs
		VY	997 lbs
	MAXIMUM BRACKET SPACING		12' 0"
	RAIL SIZE		1-1/2
DEH (DEAD END HITCH)		R1	650 lbs
		R2	1500 lbs

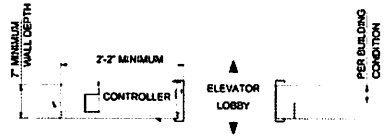
IN MULTICAR GROUPS THE VALUES ABOVE ARE THE LARGEST VALUES FOR THE ENTIRE GROUP

FIRST INTERMEDIATE RAIL SUPPORT LOCATION TO BE LOCATED 14' 0" FROM PIT FLOOR. ALL OTHER INTERMEDIATE SUPPORTS CANNOT EXCEED THE MAXIMUM BRACKET SPACING IN THE RAIL FORCE & BRACKET SPACING DETAIL.

CAR R1 = SAFETY APPLICATION
CWT R1 = LOADING OR RUNNING
R2 = LOADING OR RUNNING

REQUIREMENTS FOR RAIL BRACKET SUPPORT (NOT BY OTIS):
DEFLECTION NOT TO EXCEED 1/8"
BASED ON HORIZONTAL RAIL FORCES

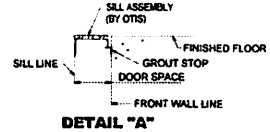
NOTE J
ROUGH OPENING AT ALL FLOORS, EXCEPT TOP LANDING, EQUALS 8'-10"
TOP LANDING EQUALS 9'-6"



TOP LANDING ENTRANCE REQUIREMENTS

(MUST BE LOCATED AT THE FRONT TOP ENTRANCE)

ELEV. No. 1



DETAIL "A"
SILL SUPPORT

ADEQUATE SUPPORT AT ALL FASTENING POINTS OF ENTRANCE ASSEMBLY REQUIRED. MUST WITHSTAND A HORIZONTAL PULL-OUT FORCE OF 140 LBS @ EA. FASTENING POINT (8 @ EA. ENTRANCE) INCLUDING SUPPORT FOR CENTER SILL SUPPORT BRACKET (NOT BY OTIS)

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED: DATE:

Gen2[R]

3500# @ 200 F.P.M.
SEISMIC 3+

Otis
A United Technologies Company

DWG. NO.: G2S 3500R-EL

BUILDING LOCATION: POWDER MOUNTAIN SOUTH ELEVATOR

CONT. WITH

OWNER

ARCHT

CONTRACT NO

EXPRESS DRAW WEB 19

NOTE : DO NOT SCALE THIS DRAWING

REFER TO DWG'S NO. G2S 3000R PWBO, G2S 3000R PH

R&A

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POWDER MOUNTAIN - PARCEL 2C
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
ELEVATOR CUTSHEET - SOUTH

No.	Description	Date
1	ISSUED FOR FOUNDATION PACKAGE	7/17/17

JOB NO. 236

DATE 06/27/17

SCALE

SHEET NO. A97.56

6/28/2017 11:25:49 AM

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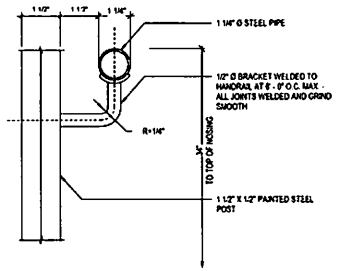
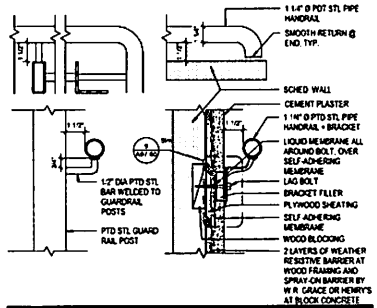
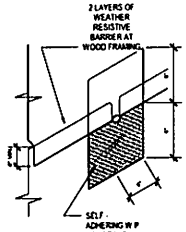


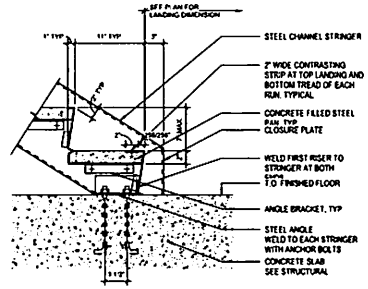
WALL HANDRAIL BRACKET | 6" = 1'-0" | 17



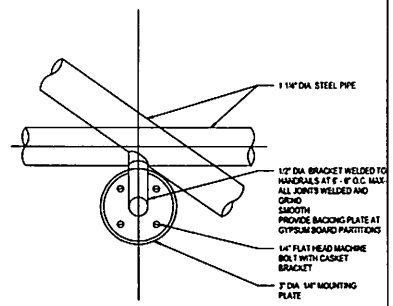
TYP HANDRAIL AT EXT WALL | 3" = 1'-0" | 13



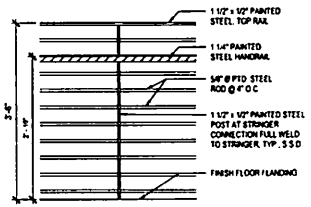
HANDRAIL WATERPROOFING | 1" = 1'-0" | 9



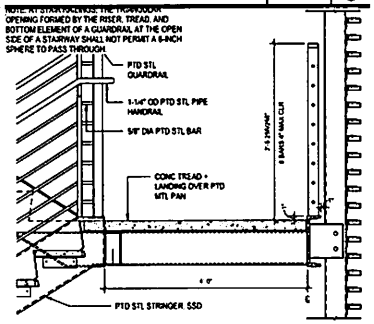
STRINGER AT SLAB | 1 1/2" = 1'-0" | 5



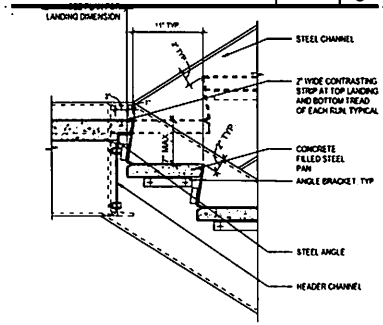
WALL MTD HANDRAIL ELEV. | 6" = 1'-0" | 1



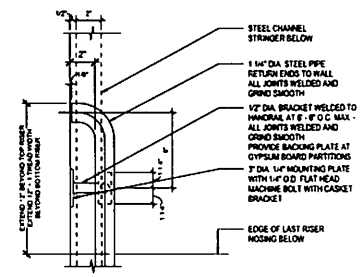
TYP GUARDRAIL ELEVATION | 1" = 1'-0" | 14



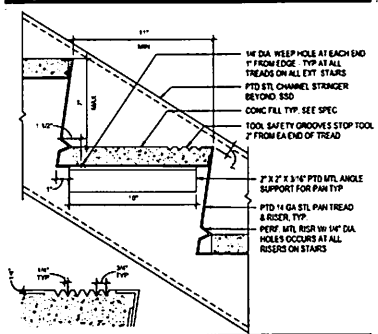
STAIR - SECT AT INT LANDING | 1" = 1'-0" | 10



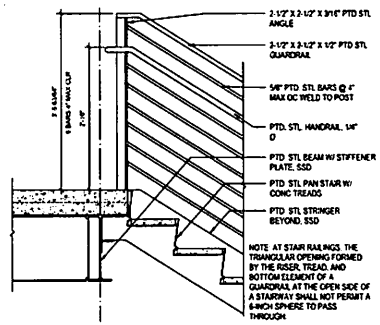
INTERMEDIATE LANDING | 1 1/2" = 1'-0" | 6



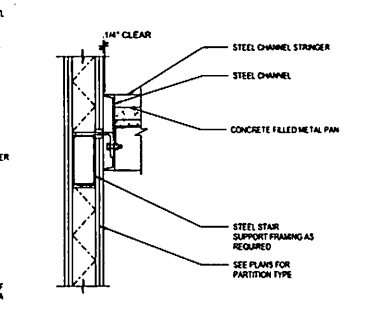
WALL MTD HANDRAIL PLAN | 3" = 1'-0" | 2



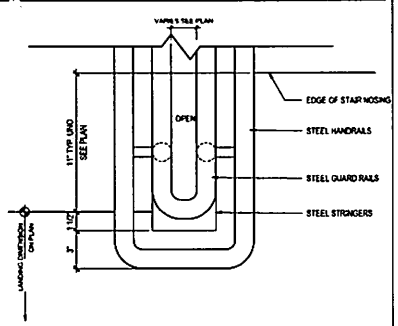
TYP STAIR TREAD AND RISER | 3" = 1'-0" | 15



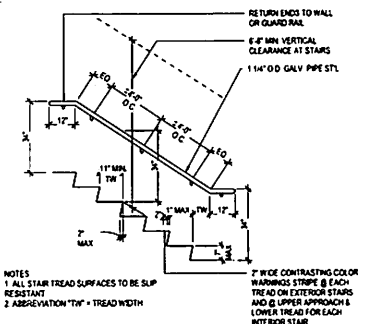
STR - SECT AT FLOOR LEVEL | 1" = 1'-0" | 11



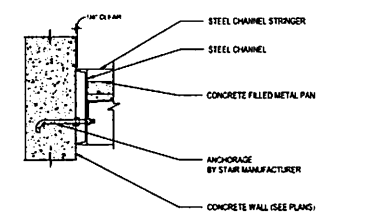
LANDING CONNECTION | 1 1/2" = 1'-0" | 7



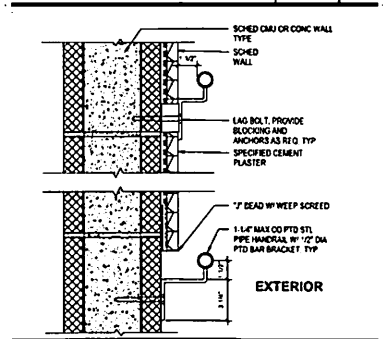
INSIDE RAILING PLAN VIEW | 3" = 1'-0" | 3



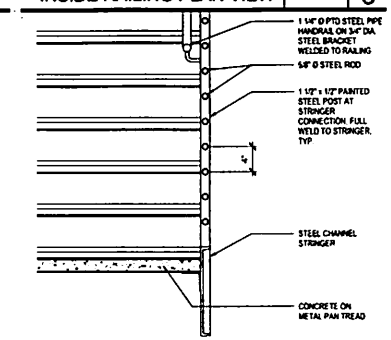
TYP. HANDRAIL ELEV. | 1/2" = 1'-0" | 16



STRINGER AT CONC. WALL | 1 1/2" = 1'-0" | 12



HANDRAIL ATTACHMENT | 3" = 1'-0" | 8



TYP. RAILING SECTION | 1 1/2" = 1'-0" | 4

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE

STAIR, GUARDRAIL DETAILS

No.	Description	Date
	REVISED FOR FOUNDATION PERMIT	2017-07-27

JOB NO. 236

DATE 06/27/17

SCALE As indicated

SHEET NO. A97.60

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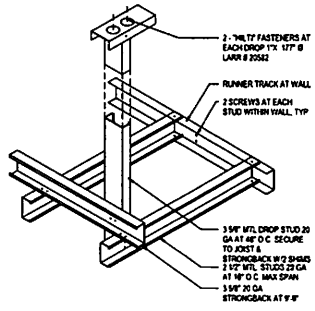
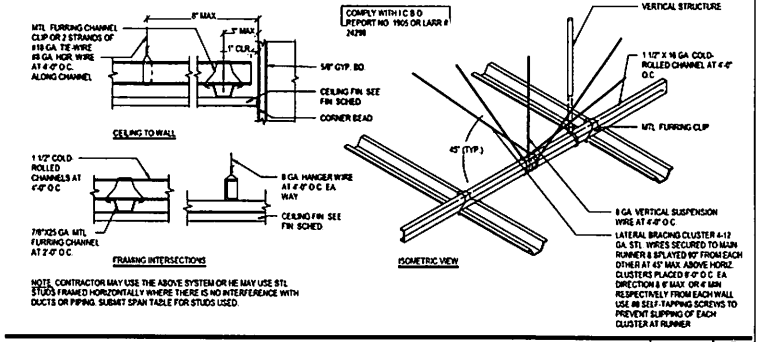


TYP MTL STUD CEILING | N.T.S. | 1



NOTE: CONTRACTOR MAY USE THE ABOVE SYSTEM OR HE MAY USE STL STUDS FRAMED HORIZONTALLY WHERE THERE IS NO INTERFERENCE WITH DUCTS OR PIPING. SUBMIT SPAN TABLE FOR STUDS USED.

SUSPENDED CEILING | N.T.S | 2

R&A

4788 Southside Boulevard, Suite 100
Coeur D'A, CA 83815
ph: 208.765.5840
www.r&a.com

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POWDER MOUNTAIN - PARCEL 2C

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CEILING DETAILS

No	Description	Date
1	ISSUED FOR PLANNING COMMISSION REVIEW	2017-06-21

JOB NO
236

DATE
06/27/17

SCALE
1 1/2" = 1'-0"

SHEET NO.
A98.04

6/29/2017 11:25:59 AM

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1. Design Criteria

1.1 Governing Building Code: 2013 International Building Code (IBC)
A Risk Category II

1.2 Floor Live Loading
A Retail Areas and Exterior Plazas ..... 100 psf Live Load
B Residential Rooms and Balconies ..... 40 psf Live Load
C Stair Partitions & Corridors ..... 100 psf Live Load
D Mechanical Rooms ..... 75 psf Live Load or actual weights, if larger

1.3 Roof Live Loading
A Roof Live Load ..... 20 psf
B Roof Snow Load ..... 184 psf or 302 psf + Drift per IBC
1 Ground Snow Load, P_g ..... 263 psf
2 Snow Exposure Factor, C_e 1.0
3 Importance Factor, I_s 1.0
a Thermal Factor
b Exterior Ventilated Roof C_t 1.1
c All Other Roofs 1.0

1.4 Earthquake
A Seismic Design Category ..... D
B Spectral Response Accelerations:
S_s = 0.256 g S_{DS} = 0.341 g
S_1 = 0.089 g S_{D1} = 0.274 g
C Soil Site Class C
F_a = 1.676 F_v = 1.531
D Basic Seismic-Force-Resisting System: ..... Special Reinforced Concrete or Wood Shear Walls
R = 5 C_d = 5 Ω_0 = 2.5
E Importance Factor, I_e 1.0
F Redundancy Factor, ρ 1.3
G Design Base Shear ..... 999 kips
H Design Story Drift, Δ ..... 0.020*hsx of floor
I Analysis Procedure ..... Equivalent Lateral Force (Static)

1.5 Wind
A Ultimate Design Wind Speed V_{ult} ..... 115 mph
B Exposure C
C Internal Pressure Coefficient, GC_{pi} ..... ± 0.18
D Topographic Factor, K_{zt} 1.0
E Components and Cladding Design Pressures:

Design Wind Pressure (psf)

	Location	Effective Area (sf)			
		≤ 10	50	100	≥ 200
Walls	Typical 7.0 sf buildings corner	63.5	59.7	58.0	52.5
	All other areas	47.6	41.3	39.0	31.9
Roof	Typical 7.0 sf buildings corner	176.9	169.5	73.5	75.5
	Typical 7.0 sf buildings zone 2	119.2	91.9	73.5	75.5
	All other areas	69.7	69.5	69.5	69.5

1.6 Foundation
A Subsurface Conditions
Soils report and log of borings was obtained by the Owner for the Engineer's use in the design of the foundations, and is not a part of the Contract Documents. This report and log of borings is available for the Contractor's information, but is not a warranty of the subsurface conditions. The Contractor may use the report at his own risk.
B Soils Report by XDEX, dated January 18th, 2017
C Bed Bearing Pressures
1 Lower level, 8 bed below lowest grade ..... 4000 psf
2 Shallow Foundations over finished grade ..... 2000 psf
D Lateral Soil Pressure (Not Equivalent Density
1 Active ..... 35 pcf (retaining walls)
2 At Rest ..... 55 pcf (rigid foundation walls)
3 Passive ..... 320 pcf
4 Increase for Seismic 6.16
E Coefficient of Friction 0.40

1.7 Classification for Fire Rated Construction
A For the purpose of determining fire-resistive assemblies, open-web steel framing members shall be considered unprotected. All other steel floor and roof framing members shall be considered restrained

2. Earthwork

2.1 Clearing: The entire building area shall be scraped to remove all topsoil, vegetation, and debris

2.2 Fixed milling
A The natural undisturbed soil below slabs on grade shall be proof rolled prior to placing concrete. Remove all soft spots and replace with compacted structural fill. Areas requiring compacted structural fill shall be scarified to a depth of 8 inches and shall be compacted to be at or above 95 percent of maximum laboratory density per ASTM D1557. Scarification and proof rolling is not required where bedrock is exposed
B The natural undisturbed soil and fill footings shall be properly prepared for proof rolling prior to placing concrete. Removal of soft spots

2.3 Footings shall bear on one of the following, but not combined
A Properly prepared native soils as described above, with soft spots removed and footing excavations bottomed to bear on stable soils only
B A minimum of two feet of compacted structural fill over properly prepared native soils, with soft spots removed and replaced with compacted structural fill
Footing inspections must be obtained by the Geotechnical Engineer prior to placing compacted structural fill or any formwork, concrete, or reinforcing steel for footings

2.4 Concrete slabs on grade shall be underlain by at least 4" of either:
A A well-graded granular base course with not more than 5 percent passing a No. 200 sieve compacted to 95 percent of the maximum laboratory density as determined by ASTM D1557
B A poorly-graded non-draining granular material with a maximum size of not more than ¾ inch and no more than 5 percent passing a No. 200 sieve

2.5 Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 4 inches, with less than 33 percent fines, and 10 to 60 percent sand. Native soils meeting the criteria may be used but should be approved by the geotechnical engineer prior to placement. Compacted structural fill shall be compacted to 95 percent of the maximum laboratory density as determined by ASTM D1557 at or slightly above the optimum moisture content. All fill shall be tested (See Specifications and the Quality Assurance section of the GEN).

3. Concrete

3.1 Materials shall comply with the Standards specified in American Concrete Institute (ACI) 318-14 "Building Code Requirements for Structural Concrete"
A Concrete shall proportioned and tested as follows:

Location	28 day strength psi	Max Water/ Cement Ratio	Air Content (%)	Max Aggregate Size	Exposure Class		
					F	S	C
Footings	3000	0.55	-	¾"	F0	S0	C0
Interior Slabs on Grade	3000	0.55	-	¾"	F0	S0	C0
Exterior Walls, Concrete Beams, and Elevated Slabs	4000	0.45	5	¾"	F1	S0	C1
Swimming Pools	5000	0.40	-	¾"	F2	S0	C1
Interior Walls and Columns	3000	0.55	-	¾"	F0	S0	C0
Roof Topping and Suspended Slabs	4000	0.45	-	¾"	F1	S0	C1
Stair, Ramps and Suspended Slabs	4000	0.45	-	¾"	F1	S0	C1
Concrete over Steel Deck	3000	0.55	-	¾"	F0	S0	C0
Slab on Grade	3000	0.55	-	¾"	F0	S0	C0

* Concrete shall comply with ACI 318, Section 19.3.1, where F, S and C are exposure categories for freezing and thawing, sulfate, and corrosion protection of reinforcement, respectively

B Concrete Materials
1 Portland Cements (ASTM C150)
a Type I or II for exposure class S0
b Type II or V for exposure class S1
c Type V for exposure class S2 and S3
2 Fly Ash (ASTM C618, Class C or F), maximum by ash content as a percentage of total weight of cementitious materials shall be 25 percent
C Steel Reinforcement
1 ASTM A615 Grade 60, f_y = 60,000 psi min. unless noted otherwise
2 Reinforcement at concrete exposed beams, concrete shear walls, and all components of shear walls, including coupling beams and wall piers shall comply with ASTM A706, Grade 60. ASTM A615 Grade 60 reinforcement shall be permitted if
a The actual yield strength based on yield does not exceed 78,000 psi, and
b The ratio of actual tensile strength to the actual yield strength is not less than 1.25
c Mill tests shall be submitted to the Engineer
D Wire Reinforcement
1 Welded wire fabric (WWF): ASTM A1064.
E Fiber Reinforcement
1 Synthetic Micro-Fiber: Barchard polypropylene micro-fibers engineered and designed for use in concrete, complying with ASTM C 1116, 1/2 to 1-1/2 inches long. Add to concrete at a dosage rate of 1 to 3 lbs per cubic yard of concrete.
2 Macro-synthetic Fibers: monofilament, non-fibrillating fibers of polypolypropylene/polyethylene blend. Macro fibers shall comply with ASTM C 1116, Type III, and meet the criteria of ASTM D 7508
a Where noted in the Bond Deck Schedule, macro-synthetic fibers shall be added to concrete over steel deck at a dosage rate determined by the fiber manufacturer but not less than 6 lbs/cy
b Do not fiber mix exposed floors
F Admixtures
1 Air-entraining admixtures, comply with ASTM C 260 unless noted
a Tolerance on air entrained as delivered shall be +/- 1.5%
b Where air entrained of a linear finished floor shall exceed 3%, there is an increased risk for delamination and blistering to occur. Where this situation is present, the contractor shall pay special attention to the finishing procedures to help minimize such risks. Refer to ACI 302.1R-96 "Guide for Concrete Floor and Slab Construction" for proper finishing guidelines
2 Concrete Hardening Admixture
a Corrosion inhibiting additive containing a minimum of 30 percent calcium nitrite dosed at 3 gallons per cubic yard shall be added to all reinforced concrete with exposure class C2
3 The use of liquid plasticizers and water reducers shall not be permitted
4 Calcium chloride or admixtures containing calcium chloride shall not be added to the concrete mix
G Chloride Ion: Maximum water soluble chloride ion concentrations in hardened concrete at age between 28 and 42 days, contributed from the ingredients including water, aggregates, cementitious materials, and admixtures shall not exceed a maximum, by weight of cement, of 1.00% for reinforced with exposure class C2 and 0.06% for all prestressed concrete
H Slump Limit: 4 inches, maximum for all concrete prior to the addition of plasticizers and water reducing admixtures. The concrete supplier shall adjust the batch slump of each concrete mix at the submitted mix design
I Shrinkage Limit: Shrinkage tests on grade shall have a drying shrinkage limit of 0.048 percent tested in accordance with ASTM C157. Drying shrinkage test results shall be submitted with mix designs.
J Slump: Use same grade as type of concrete shall be poured on the site at any given time
K Plants: bottled in rotors and chutes shall be used to support reinforcing bars, tie bars and fasteners in parking structures and elevated slabs. Wood blocking will not be permitted for this purpose

3.2 Formwork shall comply with ACI Standards Publication 347 and the general specifications. The contractor shall be responsible for the design, detailing, bars placement and removal of the formwork and shores.
A Re-Condition forms and screeds with a camber of 1/4" per every 10'-0" of span to compensate for dead load deflection, unless noted otherwise. Post tensioned concrete slabs and beams do not require fabricated to be pre-cambered

3.3 Concrete cover requirements for bottom bar reinforcing steel shall comply with ACI 318, "Building Code Requirements for Structural Concrete"

A Cast-in-Place Concrete	Specified Cover
1 Cast against and permanently exposed to earth	3"
2 Formed concrete exposed to earth or weather	
#6 bars thru larger	2"
#5 and smaller bars	1 1/2"
3 Concrete not exposed to weather or in contact with ground	
Slabs, Walls, Joists #11 bars and smaller	3/4"
Beams, Columns, primary reinforcement ties, stirrups, spirals	1 1/2"

3.4 Construction Joints and Control Joints
A Provide a surface roughness amplitude of ¼" amplitude in all cold bearings. A continuous keyway shall not be used for construction joints shear wall to footing connections, unless specifically indicated. Refer to project plans, schedules and details for the shear wall to footing connection requirements
B All horizontal and vertical construction joints shall have a surface intentionally roughened to ¼" amplitude. A continuous 2 X 4 keyway may be used on elements other than shear walls.
C Provide reinforcement dowels to match the member reinforcement across the joint, unless noted otherwise. For dowels across construction joints and not to footing connections of concrete shear walls, refer to specific project plans, schedules, and details.
D Construction joints in suspended concrete pours shall be made at the center of spans.
E Slabs on grade shall have construction or control joints spaced not to exceed 20 times the slab thickness in any direction
F Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed within 12 hours of concrete placement. See typical details for joint configuration
G Control joints in vertically cast concrete walls, unless noted otherwise. Locate shall line up with masonry and architectural joints, see drawings.
1 Vertical spacing shall be 10'-0" on center
2 Reinforcing shall be continuous through control and construction joints, unless noted otherwise
3 Control joints in concrete foundation walls shall line up with masonry control joints
H Control joints shall be installed in concrete slabs over steel deck by saw-cutting along grid lines and centers of deepened grid forms. Save typical details for joint size and reinforcement. Reinforcement required shall be in addition to any slab reinforcement.

3.5 Detailing: All reinforcing, including welded wire fabric, shall be detailed, fabricated & supported to comply with ACI 315, "Details and Detailing of Concrete Reinforcement" and ACI 318, "Building Code Requirements for Structural Concrete". All reinforcing bars shall not be welded unless specifically shown on drawings
A Lap splice lengths shall be detailed to comply with the CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE SCHEDULE.
B All reinforcement shall have sufficient embedment to develop at least 1.25fy of the bar in tension or compression. Type 2 couplers have the capacity to develop the full tension capacity of the bar. Type 1 couplers shall not be used in seismic frames and shear walls and joint elements. Mechanical splices shall have a current ICC Code Evaluation Report issued "Lenton-Lock" (ESR-3097) or "Bar-Grip" (ESR-3467) or "BAR Bowmanite" (ESR-1483) tapered threaded mixer splices, "Ten-Lock" (ESR-3498) bolt coupling sleeves or approved coupling devices. Mechanical splices shall be staggered so adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars
C All embedded channels and dowels shall be securely tied in formwork or to adjacent reinforcing prior to the placement of concrete
D Use chairs or other support devices recommended by CRSI to support and tie reinforcement bars and welded wire fabric prior to placing concrete. Welded wire fabric shall be continuously supported at 4'-0 c. maximum
E See typical details for reinforcing at wall extensions and ends, reinforcing around wall openings and corresponding with openings, vertical wall dowels, concrete sizes and splices at exterior column reinforcing
F See typical details for columns cross-ties. The 90-degree hooks of two successive crossties shall have the same longitudinal bars shall be alternated and tie and
G Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, anchors and other plate embedded items and all reinforcing
H All reinforcement shall be bent cold, and shall be bent only once at the same location. All reinforcement shall be shop bent, unless otherwise permitted by the engineer

3.6 Minimum Reinforcing: Wall reinforcing shall be as follows, unless noted otherwise

Wall Thickness	Horizontal Reinforcing	Vertical Reinforcing
8"	#5 @ 18" c.c.	#5 @ 18" c.c.
8"	#5 @ 18" c.c.	#5 @ 18" c.c.
12"	#5 @ 18" c.c.	#5 @ 18" c.c.
12"	#5 @ 12" c.c. Each Face	#5 @ 12" c.c. Each Face
Other	0.0015 of Gross Area	0.0015 of Gross Area

Spacing shall exceed nearest three times the wall thickness or 18". In addition to the above reinforcing, 2 - #5 x continuous horizontal bars shall be placed at the bottom of the wall over the footing and at each floor level, at the roof level and at the top of wall.

3.7 No exposed concrete or precast reinforcing aluminum or any other material requires to concrete shall be embedded in concrete

3.8 Unless otherwise noted, all slabs on grade shall be 4" thick

3.9 Post-Tensioned Concrete
A All post-tensioned concrete reinforcing shall be designed, detailed and constructed in accordance with ACI 318. Anchorages for post-tensioning tendons shall also comply with the requirements of ACI 318 and shall have ICC code approvals. A copy of the ICC Code Evaluation Report shall accompany the shop drawings for review
B Post tensioning tendons shall be 0.6" or 0.5" diameter - 7 wire strands, unbonded (shielded), Grade 270, Low Relaxation, per ASTM A 416. Mill certificates for each mill heat shall be sent to the fabricator upon delivery of the tendons to the site. Permissible stresses for tendons shall not exceed those specified by ACI 318, Section 18.5
C Tendons shall be protected from corrosion at all times by an approved coating. The coating shall remain effective and free from cracks and shall not become brittle or fluid over the entire operating or anticipated range of temperatures, but shall be chemically stable, non-corrosive, non-emissive, and shall not react with the concrete or steel tendons or plastic sheathing to prevent reduction in the concrete. Repair all damage to sheathing with plastic tape prior to concrete placement. Tendons shall be grouted in accordance with the requirements of section 18.18 of ACI 318.
D Anchorages for post-tensioning tendons shall be designed in accordance with ACI 318 and shall have ICC code approvals. The anchorages for tendons shall be able to withstand the forces from packing the concrete. These are as follows:
Forces from jacking to overcome friction forces 0.94*fpy
Forces immediately after stressing anchorage 0.70*fpy
E Prior to tendon installation, the contractor shall submit calculations for the forms listed below. Calculations shall be prepared by a professional engineer licensed in the State of Utah and shall be submitted with the shop drawings for review.
1 The contractor shall submit calculations showing the anticipated prestress forces and the forces at each anchorage shown or forces for tendons shall be saved to determine the quantity of tendons to be used.
2 Calculations shall determine the anticipated elongation for the tendons. Elongation calculations shall be submitted for
a Each "pull" length that varies more than 30 feet from the typical lengths.
b Each "pull" length that is over 125 feet.
3 If actual tendon units have a difference greater than two percent (2%) at the greatest of the numbers of tendons used to stress any slab or beam, revised elongation calculations shall be revised to indicate proper tendon quantity and tendon elongations. Shop drawings shall reflect specific computed values for elongations when the tendons are delivered with the 5/8 centroid.
4 Calculations shall include computations for the shortening of the slab due to tendon stressing. Creep, shrinkage, and elastic shortening of the concrete shall be included to adjust the forces so that the tendons will be "plotted" after the slab has been shortened. The slab shall conform to the dimensions shown on the plans after all shortening has occurred. The post-tensioned concrete decks can be expected to shorten approximately 3/4 inches per 100 feet of length due to elastic, creep and shrinkage of concrete.
F Shop drawings shall be submitted prior to installation. The shop drawings shall show tendon locations, tendon spacing, inserts, and mild steel locations. They shall show all details of end anchorages, transitions at changes in slab thickness, and all other details of the post-tensioning system prior to construction. The shop drawings will also show tendon forces, and anticipated tendon elongations for each individual tendons. Specific tendons shall be identified on the shop drawings, and products are correctly identified and placed. If a tendon mismatch or they relate to anticipated elongations and forces)
G The shop drawings shall indicate the effective post-tensioning forces for distributed tendons are noted on the plans by the symbol "400 lb/ft". The forces for banded tendon groups are noted on the plans by the symbol "1400 lb/ft". The post-tension forces for beams are indicated in the post-tension beam schedule. The forces indicated by these tendons are minimum forces. The quantity of tendons required by the final anchorage force shall not be less than the values noted on the contract drawings
H Unless otherwise noted, all concrete shall have a minimum of mild steel reinforcing equivalent to #4 bars centered at 36" o.c. each way in bottom one third of slab. The support bars for the tendons may be included as part of this reinforcing. All bars shall be lap spliced a minimum of 48".
I All anchorages shall be held securely in place prior to casting into concrete. Wooden concrete cover to anchor shall be as follows
Slab Edges ..... 1 1/2"
Beam End ..... 3"
J All products and anchorages shall be waterproof so as to eliminate water leakage through the products. Tendon anchorages, wedges and all inserts shall be sealed after stressing products shall be sealed with epoxy based paint before the recess pockets are grouted. The concrete surfaces of the pockets shall be sealed with a bonding agent approved by the architect. All products shall be grouted flush with the concrete edge
K All pockets and anchorages shall be waterproof, so as to eliminate water leakage through the products. Tendons and tendon anchorages shall be protected with an encapsulation system equivalent to the Varibrick plastic coated and galvanized systems or the CP+ encapsulation system as manufactured by VSL, Inc., and as approved by the structural engineer in writing. All encapsulation tubes shall have a positive connection to the post-tensioned anchors and shall have a tight seal to the tendon and the smoothing of the tendon. Split encapsulation tubes are not allowed. All anchorages shall be epoxy or plastic sealed. The concrete surfaces of the pockets shall be sealed with a bonding agent approved by the architect. All pockets shall be grouted flush with the concrete edge.
L All pockets required for anchorage shall be adequately reinforced, so as not to decrease the strength of the structure. A minimum of two #4 bars shall be placed behind all anchorages, in both directions, unless otherwise noted on the drawings. Reinforcing steel adequate to control primary and secondary stresses under other bearing plates shall be provided to suit the system employed
M Tendon placement and detailing:
1 Slab tendons shall not be spaced more than 6 times the slab thickness. In no case shall the tendon spacing exceed 48". Twisting or undressing of individual strands within a bundle or a beam shall not be permitted.
2 Slight deviations in spacing of tendons from those required by design and as shown on the drawings will be permitted. Deviations of centerline of tendons shall not be more than 3/4 inch. Tendons shall clear all openings or sleeves by a minimum of 3 inches. No sleeves shall be located within one diameter of the space over the supports or through shear heads. All sleeves shall be coordinated with the structural engineer prior to placement.
3 Draped tendons to a predictable profile as shown on drawings between supports and anchors to control precise shapes as the profiles. Dimensions locate the center of gravity of the tendon in group of tendons. Support bars and straps shall be fastened to adequately hold tendons in position during concrete placement. Bars shall be fastened to stirrups at adequate intervals to prevent displacement.
4 The minimum vertical radius of curvature of tendons shall not be less than ten times the depth of the concrete section. Check for tendons are to be accurate at column face, high points and at the end of the slab. Provide a minimum of 2 inches of concrete cover to any tendon duct. Tendons shall be located at all slab edges. The banded strips for tendon placement shall not be wider than 6 times the slab thickness. Banded strips are noted on the drawings.
5 Unless otherwise noted, banded strips (tendons) shall be centered on columns. Banded tendon placement location shall take precedence over distributed tendon placement location where a conflict occurs
6 Inlet conditions of tendons on bottom of finished slabs with 6" long quarter round wood trim strips shall be installed at each end of slab and at 60 lb. o.c. in between, as directed by Architect
N The stressing operations shall be carried out under the control of a qualified engineer employed in post-tension concrete construction. He shall exercise close control of the quality procedures methods and sequence of stressing operations. His work shall be performed to the satisfaction of the Engineer, the owner's representative and observe the placement of tendons prior to the placement of concrete.
O Jacking forces and elongations records shall be made by the contractor during the stressing operations. Calibrated gauges, jacking and tendon elongations shall be carefully recorded and submitted during the stressing operations. Calibrated gauges of the recorded gauge readings and elongations shall be promptly submitted to the Architect.
1 The tendons shall be stressed according to the calibrated gauge readings. The measured tendon elongations shall be compared with the computed elongations during stressing and shall not vary by more than 7%. If the variation between the measured and computed values is over 7% but not more than 10%, the reason for the difference shall be determined by the contractor and corrected to the engineer's satisfaction prior to proceeding with additional stressing.
2 No additional concrete shall be incorporated until records of the concrete tests and the elongation tests have been reviewed and approved by the engineer.
3 Post-tension tendons shall be stressed within 16 hours after concrete placement. For stressing of post-tension tendons, the contractor shall not be performed until the concrete has attained a minimum compressive strength of 3,000 psi. If concrete has not attained indicated strength within 96 hours after placement, each tendon shall be stressed to 50% of the average tendon force. The post-tensioning operations shall not be performed until the concrete has attained the minimum strength. Mechanical tendon anchorages shall be protected from corrosion after they have been stressed. Stressing shall not begin until evidence of adequate anchorage of the tendons in the concrete has been submitted to the engineer.
P Stressing sequence shall be determined by the post-tensioning supplier, unless noted otherwise. The post-tensioning supplier shall submit the stressing sequence, methods and procedures for stressing the tendons to their required forces with the shop drawings
Q The contractor shall submit jack calibrations with each jack. Jacks shall be clearly marked for the purpose of the calibrated gauge pressure. Jacks shall be recalibrated for each 50,000 square feet of slab area that is tensioned.
R Grouts containing shall not be used in the vicinity of the tendons, reinforcing steel or embedded steel.
S Provide adequate shoring and bracing during casting of concrete members. Restore to their original positions.
T The contractor shall employ construction methods that allow for slab monitoring where work, equipment or other plate embedded items would not obstruct slab monitoring. Structural integrity of all elements shall be maintained. Particular care shall be taken to prevent cracking at all times
U Grounding of casting equipment to tendons or reinforcing steel is not permitted

4. Structural Steel

4.1 Material
A W-Shapes: ASTM A992 (F_y = 50 ksi), except as noted otherwise
B All Other Shapes and Plates: ASTM A36 (F_y = 36 ksi), except as noted otherwise
C Reinforcement and Structural Hollow Structural Sections (HSS): ASTM A500 Grade C (F_y = 50 ksi)
D Pipe: ASTM A53, Grade B (F_y = 35 ksi)
E Steel Pipe: ASTM A53, Grade B (F_y = 35 ksi)
F Bolts:
1 Galvanized Steel Bolt: ASTM A563 or A1053, Grade 9S with D90 galvanized coating
2 Unfinished Steel Bolt: ASTM A325 or A1049 Grade 9S
G Domed Bar Anchors (DBA): ASTM A108
H Headed Steel Anchors (HSA): ASTM A108 with dimensions complying with AISC specifications
I Anchor Rods: ASTM F1554, Grade 36, excess noted otherwise, with ASTM A563 heavy hex nuts and ASTM F436 hardened washers

4.2 Fabrication and construction shall comply with the following Codes and Standards
A American Institute of Steel Construction (AISC) 360-10 "Specification for Structural Steel Buildings"
B AISC 303-10, "Code of Standard Practice for Steel Buildings and Bridges" covering the following Section 3.5 Steel tolerances of the Contract Documents (4-000). Section 4.2.1 Section 4.1.1, Section 4.1.2, Section 4.5, and Section 7.13.3
1 The project specifications are the prime contract drawings. Consultants' drawings by other disciplines are supplementary to the architectural drawings. The structural drawings shall be used in conjunction with the architectural drawings. Detailing and shop drawing production for architectural items and inserts indicated on architectural drawings (including dimensioning) is architectural, structural, and/or other consultants' drawings. Refer to the Special Instructions and details for additional items.
C AISC/ASCE 2009, "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
D AWS D1.1/D1.1M:2015 (formerly D1.1 2010) "Structural Welding Code – Steel" supports items do not apply unless they conflict with the AISC requirements
E American Welding Society (AWS) D1.2 2008, "Structural Welding Code – Aluminum Supplement" supports items do not apply unless they conflict with the AISC requirements
F American Iron and Steel Institute (AISI) 2007, "North American Specification for the Design of Cold-Formed Steel Structural Members"

4.3 Structural shapes and plates shall be fabricated from newly rolled ordinary carbon sections utilized before, unless otherwise noted. Fabrication and erection procedures for structural steel shall comply with the structural drawings, unless written approval is given by the structural engineer

4.4 Welding
A. It is recommended the steel erection contractor and steel fabricator contract the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures should be established and followed by both parties. Welding is limited to the use of low-hydrogen electrodes
B Certification of Welders: All shop and field welding shall be performed by AWS certified welders who have been previously qualified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding for which he is qualified for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS D1.1/D1.1M. Certification and appropriate records must be provided to the architect prior to beginning work.
C Electrodes: E-70 XX or as noted otherwise. E80 XX may be used for welding steel three and more inches thick
D Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a filet weld all around unless noted otherwise. Filet weld sizes shall be as follows: Plate 1/4" thick or less than the thickness of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates and bars shall be returned around corners for a distance of twice the nominated size.
E Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases use only AWS requirements. Do not weld reinforcing bars for deformed bar anchors (DBAs), headed studs, or headed steel anchors (HSAs).
F Bolts: Do not apply any welds, including "tack" welds to bolts (including washers, except as specifically detailed in the drawings.
G Headed Steel Anchor (HSA) welding and Ordinance Bar Anchor (DBA) welding shall conform to the requirements of AWS D1.1 specifications. Welding shall comply with AWS D1.1 Section 7.6 through 7.8 and Annex B
H Special Provisions for Welds in the SPRS (Seismic Force Resisting System): Welds used in members and connections in the SPRS shall comply with the requirements of AWS D1.8 specifications, including materials, procedures and quality control shall comply with AISC 341 Chapter J, AWS D1.1, AWS D1.8 and Annex S
1 Demand Critical Welds: The following CJP groove welds are demand critical and shall comply with the special requirements for Demand Critical Welds
a Column splices designed as tension-free at base
2 Welding shall be performed in accordance with AISC 341 Chapter J and a welding procedure specification (WPS) as required in AWS D1.1. WPS variables shall be within the parameters established by the filler metal manufacturer. WPS for demand critical welds shall also comply with AWS D1.8 Section 6.1.
3 Consumables for Welding
a Weld metal in mechanical connections of the SPRS shall be made with filler metals meeting the requirements specified in section 6.3 of AWS D1.8

b Filler metal properties shall be as follows:

Property	70 ksi Classification	80 ksi Classification
Yield Strength, min	58 ksi	68 ksi
Tensile Strength, min	70 ksi	80 ksi
Elongation (%)	22 min	19 min
CVN Toughness, 5 at	20 min @ 0 degrees F	20 min @ 32 degrees F

c Filler metals in Demand Critical Welds shall receive Heat Input Testing that achieves the properties listed above with CVN toughness of 40 ft-lbf min @ 70 degrees F and shall comply with AWS D1.8 section 6.3 b or 6.3 c
d Diffusible Hydrogen: Welding consumables and electrodes that are exposed must meet the requirements of AWS D1.8 Table 6.3. The manufacturer's Certificate of Conformance shall be considered adequate proof of this requirement.
4 Backing: Backing shall meet the requirements of AWS D1.8 section 6.3.4
5 Backing bars shall be removed from the beam bottom flange to columns. The rest of the weld backing bars may be left in place. Bars shall be removed per AWS D1.8 Section 6.12.1.2. Backing bars shall be removed to sound weld metal and cracks. Weld tabs per AWS D1.8 section 6.17 and 6.18. This requirement also applies to all non-tubular backing used at beam to column CJP welds. Tubular backing per AWS D1.8 section 6.17.2
6 Weld backing bars need not be removed from the beam top flange connections to columns or at continuity plate connections to columns provided that the backing bars are welded to the column flange with a continuous 5/16 inch filet weld on the edge below the CJP groove weld for the entire length of the backing bar.
6. Backing at beam flange to column flange joints shall not be welded to the underside of the beam flange, nor back welded at this joint. 3/8 filet welds at root welds are placed between the backing bar and beam flange in some cases. Bars shall be removed per AWS D1.8 Section 6.12.
7 Details and removal of weld tabs shall be per AWS D1.8 Section 6.11. Use weld tabs as specified in AWS D1.1 Section 3.31 except at the end of CJP welds adjacent to the column continuity plates at continuity plates. Remove weld tabs to within 1/4 inch of the base metal and finish with a smooth transition. Weld tabs shall be removed and ground flush within 1/4 inch of the base metal surface after welding. Polish the edge where weld tabs are removed to a surface roughness of 500 micro-inches.
8. Contractor may leave weld tabs for all demand critical welds shall comply with AWS D1.8 Section 6.10. Weld access hole shape shall be per AWS D1.8 Figure 6.2.
9 Beam bottom flange welding sequence shall comply with AWS D1.8 Section 6.14.
10 Preheat and interpass temperatures shall comply with AWS D1.1 Section 3.5 and AWS D1.8 Section 6.5
11 All welding welding procedures applicable to demand critical welds only are as follows
a Welding processes shall comply with AWS D1.8 Section 6.2
b Welding consumables shall comply with AWS D1.8 Section 6.4.
12 Tack welds shall comply with AWS D1.1 Section 5.18 and AWS D1.8 Section 6.9 and 6.10. Tack welds not meeting these requirements and weld tabs at demand critical welds shall be placed where they are incorporated into a final weld.

STRUCTURAL DRAWING LIST	
SHT NO	SHT NAME
S00 01	GENERAL STRUCTURAL NOTES
S00 02	GENERAL STRUCTURAL NOTES
S00 03	GENERAL STRUCTURAL NOTES
S00 04	LEGENDS AND ABBREVIATIONS
S20 01	FOOTING & FOUNDATION PLAN
S22 01	LEVEL 2 FRAMING PLAN
S22 02	LEVEL 3 FRAMING PLAN
S22 03	LEVEL 4 FRAMING PLAN
S22 04	ROOF LEVEL FRAMING PLAN
S22 05	ROOF FRAMING PLAN
S30 01	CONCRETE SHEAR WALL ELEVATIONS
S30 02	CONCRETE SHEAR WALL ELEVATIONS
S30 11	CONCRETE SHEARWALL SCHEDULE AND DETAILS
S30 12	CONCRETE COUPLING BEAM SCHEDULE & DETAILS
S30 13	CONCRETE JAMB COLUMN SCHEDULE AND DETAILS
S30 14	CONRETE SHEARWALL DETAILS
S50 01	TYP FOOTING & FOUNDATION DETAILS
S50 02	FOOTING & FOUNDATION DETAILS
S50 03	FOOTING & FOUNDATION DETAILS
S51 01	TYP CONCRETE OVER STEEL DECK DETAILS
S51 02	TYPICAL FLOOR FRAMING DETAILS
S60 01	CONCRETE SCHEDULES
S60 02	CONCRETE SCHEDULES
S60 03	CONCRETE ANCHOR SCHEDULES
S61 01	TYPICAL STEEL FRAMING SCHEDULES
S61 02	STEEL COLUMN SCHEDULE AND DETAILS
S61 03	STEEL DECK SCHEDULES
S62 01	WOOD SCHEDULES

4.5 Bolted Connections
A Provide snug tightened joints with ASTM A325N Type 1 bolts for steel to steel connections, as noted otherwise on the drawings. Snug tightened joints shall be used in connections for simple span framing and beam to girder framing plate connections. The snug tightened condition is usually attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. Bolts shall be tightened at the center of the bolt group first, then progressively outward. Joints with ASTM A325N Type 1 bolts for all shall to steel connections that are part of the Seismic Force Resisting System (SFRS). Faying surfaces shall meet the requirements of a slip-critical Class A surface except for faying surfaces of end plate connections. Tightens bolts by the turn of the nut, calibrated wrench, or direct tension indicator. Additional bolting changes as defined by AISC shall be submitted to the engineer for review and acceptability prior to installation.
B Provide pretensioned joints with ASTM A325N Type 1 bolts for all shall to steel connections that are part of the Seismic Force Resisting System (SFRS). Faying surfaces shall meet the requirements of a slip-critical Class A surface except for faying surfaces of end plate connections. Tightens bolts by the turn of the nut, calibrated wrench, or direct tension indicator. Additional bolting changes as defined by AISC shall be submitted to the engineer for review and acceptability prior to installation. Provide manufacturer's certificates of compliance for all bolts, nuts, washers, and direct tension indicators required to be installed in pretensioned joints. Provide manufacturer's certificates of compliance for all bolts, nuts, washers, and direct tension indicators required to be installed in AISC 341 seismic force resisting systems. Additional bolting changes as defined by AISC shall be submitted to the engineer for review and acceptability prior to installation.
C Provide slip-critical joints with ASTM A325 Type 1 bolts for steel to steel connections subject to fatigue with steel-to-steel joints that utilize oversized holes, and joints that utilize slotted holes that are loaded perpendicular to the slot. Faying surfaces shall meet the requirements of a slip-critical Class A surface. Tightens bolts by the turn of the nut, calibrated wrench, or direct tension indicator. Additional bolting changes as defined by AISC shall be submitted to the engineer for review and acceptability prior to installation.
E. Provide fastener-hardened washers conforming to ASTM F436 for all bolts. Provide hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. Hardened washers or plates installed over oversized or slotted holes in an outer ply. Use beveled washers or plates installed over oversized or slotted holes in an outer ply. Use beveled washers or plates installed over oversized or slotted holes that have a size sufficient to completely cover the slot after installation.
F Where a shear to steel beam connection is not detailed in the drawings, provide a standard AISC framed connection with the capacity to support one half of the total uniform load capacity of the beam, but not less than 10 kips.
G. Bolts, nuts and washers shall not be reused.

4.6 Steel Lintels
A Provide steel angle lintels at all openings through the masonry veneer. Provide one lintel at each end of openings with a minimum bearing of six inches. See the Steel Angle Lintel Schedule for size

4.7 Beam Web Stiffener Plates
A. Provide full-height web stiffener plates to each side of all beams above all bearing points. Unless noted otherwise, stiffener plates shall be the thickness indicated in the typical stiffener plate detail

4.8 Composite Beams
A Composite beams are indicated on the framing plans with the suffix ( ). The number inside the parentheses indicates number of headed steel anchors for the beam. Shall have the studs equally spaced over the entire beam length.
B Composite beams have more than one number, with the symbol ( ), such as (#1, X, Y, Z), shall have "#1" number of studs spaced evenly over the first "section of beam", "X" number of studs spaced evenly over the second "section of beam", "

3. Aluminum: ASTM B221, alloy 6063-T6/6061-T6 (allowable fiber unit stress F = 12,000 psi)

C. Unless noted otherwise, provide 19-16-4 (1 1/2" x 3/16") steel grating in locations where metal bar grating is specified.

E. All metal bar grating shall be firmly and positively anchored to supporting members. Unless noted otherwise, weld grating to supporting members with 3/16" fillet welds, 3/4" long. Locate welds at each end of bearing bars approximately 6 in from each side of grating panel. At intermediate supports in panel, locate one weld at middle of panel.

6. Wood

6.1. Materials.

A. Framing Lumber: Number 2 Douglas Fir-Larch or better or as noted otherwise

B. Heavy Timber: Timbers larger than 5"x5" shall be Douglas-Fir Larch Number 1 or better or as noted otherwise, as graded by WWPA.

C. Glued Laminated Timber (Glulam): Visually graded DF/DF 24F-V4, Class 1 SE for beams with an architectural appearance, and DF Grade L2 or DF/DF 24F-V4, Class 1 SE for members with an architectural appearance, unless noted otherwise.

D. Laminated Veneer Lumber (LVL): All LVL members shall have the following minimum properties: Fb = 2990 psi, Fv = 285 psi, E = 1900 ksi, Fcomp = 750 psi.

E. Parallel Strand Lumber (PSL): All PSL members shall have the following minimum properties: Fb = 2990 psi, Fv = 290 psi, E = 2000 ksi, Fcomp = 750 psi.

F. Wood Structural Panel Sheathing: All panels shall be rated by the American Plywood Association (APA). Panels shall bear the stamp of an approved testing and grading agency. Panels shall be grade CCC PS 1 or PS 2 with exterior glue with the following panel span rating, unless noted otherwise.

24 oc or 48/24	Roof (23/32" min. thickness)
24 oc or 48/24	Floors (23/32" min. thickness)
24/16	Walls (7/16" min. thickness)

G. Nails for sheer walls and floor or roof diaphragms: Standard carbon or galvanized box with the following properties:

Nail Size	Shank Diameter (Common)	Shank Diameter (Galvanized Box)	Min. Penetration into Supporting Member
8d	0.113"	0.099"	1 1/4"
10d	0.131"	0.113"	1 1/2"
16d	0.148"	0.120"	1 1/2"
16d	0.162"	0.135"	1 3/4"

H. Bolts for connections: ASTM A307 with ASTM A563 heavy hex nuts and standard washers unless noted otherwise.

I. Lag screws for connections: SAE J429 Grade 1 or ASTM A307 Grade A with dimensions per ANSI/ASME B18.2.1.

6.2. Special Treatments

A. All wood to contact with concrete, masonry or soil: Preservative-treated wood shall meet the requirements in IBC Section 2303.1.8. Preservative-treated wood shall be treated to meet the requirements of AWPA Standard U1 and be according to species, use, and preservative combinations listed in AWPA U1, Section 4. Preservative-treated wood shall be identified by the mark of an accredited inspection agency.

6.3. Minimum Nailing & Stapling Requirements (See drawings for areas with greater requirements)

A. Roof. Provide 1/8" gap between panels.
1. Nail all sheathing panels with 10d common nails at 6" o.c. at all supported edges and at 12" o.c. at all intermediate supports.

B. Floor: Nail all sheathing panels with 10d common nails at 6" o.c. at all supported edges and 10d at 10" o.c. at all intermediate supports.

C. Walls: Solid block all panel edges.
1. Nail all sheathing panels with 8d common nails at 6" o.c. at all edges and at 12" o.c. at all intermediate supports (24" or 7/16" panels on studs spaced at 24" o.c. require 5" spacing at all intermediate supports).

D. General Framing and Carpentry: Connect all items as per the "Minimum Nailing Schedule" contained within the contract drawings and IBC Table 2304 10.1, "Fastening Schedules", unless noted otherwise.

E. Fasteners in contact with treated wood shall meet the following criteria as per IBC Section 2304 9.5:
1. Fasteners in contact with preservative-treated wood shall be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, wood screws, timber rivets, and lag screws may be mechanically-deposited zinc-coated steel with coatings meeting ASTM B 695, Class 55 minimum. Fasteners used in exterior locations shall be as per fastener manufacturer's recommendations.
2. Fasteners in contact with fire-retardant-treated wood shall be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, wood screws, timber rivets, and lag screws may be mechanically-deposited zinc-coated steel with coatings meeting ASTM B 695, Class 55 minimum.

6.4. Framing Connections

A. All framing connections not shown or otherwise indicated on the drawings shall be connected in a manner similar to the connections shown in the drawings or with approved Simpson Strong-Tie Connectors or equivalent with approval of engineer. (The following notations refer to Simpson Strong-Tie Connectors)
1. Solid Sawn Joists and Rafters:
a. "SA" top flange hanger as required.
b. "LUS" or "HUS" face mount hangers as required.
2. Engineered Wood I-Joists and Structural Composite Lumber
a. "ITS" or "SA" top flange hangers as required
b. "U", "LUS" or "HU" face mount hangers as required.
3. Glu-lam Beams: "EQ" Hangers and "GLB" Saddle Hangers
4. Hinge connections: "HCCTA."
5. Columns: "CC" Caps and "CB" Column Bases.
6. Hold Down Anchors: "HDU" or "HDQ"

6.5. Blocking, Bridging, and Bracing

A. Provide solid stopped blocking or bave 2 in (nominal) thick and full depth of joist at ends and at each support of joist. Blocking cut from I-joist material of the same depth as the I-joists used in structural construction may be used for flat floors or roofs.

B. Solid blocking between joists shall be nailed to the wood plate at the top of sheer walls with one Simpson "A35" framing anchor per each piece of blocking. Fill all holes in the framing anchors with 6-d short nails.

C. Provide approved bridging at 6'-0" o.c. maximum between post and supports for solid sawn floor or roof joists.

6.6. Laminated built-up beams of 2X member 12 in. or less in depth shall be spiked together with not less than 16d spikes at twelve-inch (12 in.) centers, staggered. Unless so spiked, or if the depth of beam is more than twelve inches (12 in.), the laminations shall be connected together with 1/2" bolts and 3" bolts at 24 in. o.c. staggered. Bolts shall be placed 1/4 the depth of the member from the top and bottom of the member.

6.7. All pre-fabricated wood joists shall be TJI as manufactured by I-Level or ProBuilt or BCI as manufactured by Boise Cascade Corp. I-joists that are equivalent to or better than the specified TJI or BCI products shall be submitted for approval, and shall maintain El values, moment capacities, and maximum vertical shear capacities. All approved brackets and hangers shall be provided by joist manufacturer and installed by contractor. All penetrations through the joists shall be done per manufacturers' recommendations and requirements.

6.8. Pre-Fabricated Steel Plate Wood Trusses:

A. Design Loading: The truss manufacturer is responsible for design and fabrication of the trusses. They shall be designed to support the concentrated and other distributed loads as shown on the framing plans in addition to the following uniform loads:

Dead Load (Top Chord) =	15 psf
Dead Load (Bottom Chord) =	10 psf
Live Load (Top Chord) =	Per Design Criteria and Loading Plans

Connector the design with all mechanical equipment, fire sprinkling systems and hanging wats supported by the trusses. Provide extra trusses where required.

B. Submittals: Complete calculations and shop drawings as per IBC Section 2303.4 indicating design loads, required bearing widths, each reaction force and direction, all member forces, sizes, species, number, and location of plies, lumber grades, dimensions, connections to other trusses, permanent restraint location & configuration, horizontal & vertical distinctions, steel truss parts sizes, thicknesses, and locations shall be submitted and reviewed for general conformance to the engineer before fabrication. Each connector shall be dimensioned on the shop drawings at its at exact location at the joint. Shop drawings and calculations shall bear the seal of a professional engineer licensed in the State of Utah. After truss installation, the fabricator shall certify in writing that the trusses have been installed assembly to his specifications.

C. Steel Connector Plates: Use only galvanized steel connector plates that comply with the Truss Plate Institute publications, TPI 1, latest edition. All steel connector plates must be approved by the ICC Evaluation Services. Submit a copy of the ICC Code Evaluation Report for the connector plate used. Values established by this connector must be indicated on the shop drawings.
1. The minimum size for any connector shall be 12 square inches.
2. All steel gusset plates shall be located on the post as the stresses require and shall provide a minimum bite of 2 3" length on all bracket members.
3. Trusses shall be kiln dried after fabrication to obtain full penetration without crushing the outer surfaces of wood.
4. Steel plates at compression web members shall be designed to resist 100% of the compression force without considering wood to wood bearing.
5. All steel plate dimensions shall be increased by 10% above that required by analysis. Stress increases for steel connector plate values for duration of load are not allowed.

D. Wood Members: All wood members of the truss shall be constructed of kiln dried lumber. The lumber shall be handled and stored in a manner to prevent moisture from being absorbed by the wood. Guide clamps shall be visible on framing members.

E. The trusses shall be designed by the truss supplier according to the following criteria:
1. Bending moments in the top and bottom chords shall be based on the following moment coefficients:
..... L/6 for one and two continuous span conditions.
..... L/10 for three or more continuous span conditions.
2. Web members shall be designed using an effective length factor
..... K = 1.0

F. Lateral Bracing/Restraint: Lateral bracing/restraint and bridging may be required by the design of the pre-fabricated wood roof truss to reduce the buckling length of individual truss members and provide stability during erection. This bracing or bridging may be in the form of 2 x 4 horizontal bracing or bridging with 2 x 4 cross-bracing spaced at 24"-0" o.c. maximum and at each end of the bracing or bridging. The 2 x 4 cross bridging shall be connected to the truss top chord and bottom chord bridging with Simpson A35 each end. Locations of the lateral bracing and truss bridging is to be supplied and installed at the location specified on the pre-fabricated wood roof truss design drawings by the General Contractor.
1. Space greater than 50 feet shall have temporary installation restraint/lateral bracing designed by a professional engineer.

G. Other requirements for truss stability and erection shall comply with the Truss Plate Institute publications, entitled "Commentary and Recommendations for Bracing Wood Trusses" and "Commentary and Recommendations for Handling and Erecting Wood Trusses." The contractor shall have copies of these publications on site and shall be familiar with their contents.

H. Prior to the fabrication of the pre-fabricated wood trusses, the contractor shall submit, in writing, proof of compliance of in-plant inspection by an ICC approved independent inspection agency. The in-plant inspections shall comply to the section 1704.2 of the International Building Code

I. The truss manufacturer's identification stamp shall be clearly visible.

J. Truss members and connections shall not be cut, notched, drilled, spliced or otherwise altered (including additional loads) in any way without prior written approval of the engineer.

6. Miscellaneous

6.1. Post-Installed Anchors in Concrete and Masonry

A. Anchorage to hardened concrete and grout-filled masonry shall include all mechanical and adhesive anchors and epoxy dowelled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings. Additional anchors shall not be used without approval from the Engineer prior to installation.

B. Special Inspection is required during the installation of all post-installed anchors. Refer to Specialist Inspection is required during the installation of all post-installed anchors. Refer to specialist inspection and testing requirements for additional requirements.

C. Anchorage to Concrete:
1. All post-installed anchors into hardened concrete shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report (ICC_ES)
Hilti (CA) HUS-EZ	ESR-3027
Powers Wedge-Bolt+	ESR-2526
Simpson Titen HD	ESR-2713

Steel Expansion/Wedge Anchor	Evaluation Report (ICC_ES)
Hilti (CA) Kwik Tz	ESR-1917
(CA) Red Head Trubolt+	ESR-3037
Powers Power-Stud+ SD2	ESR-2502
Simpson Strong-Bolt 2	ESR-3037

Adhesive Anchor System	Evaluation Report (ICC_ES)
Hilti (CA) HIT-HY 200	ESR-3187
Hilti (CA) HIT-RE 500-SD	ESR-2322
(CA) Red Head Epcon C6+	ESR-3217
(CA) Red Head Epcon S3	ESR-3012
Powers AC100+ Gold	ESR-3041
Powers Pure 110+	ESR-3298
Simpson SET-XP	ESR-2508

2. Adhesive anchors shall be installed into concrete having a minimum age of 21 days. For installations sooner than 21 days, consult the adhesive manufacturer.

D. Anchorage to Masonry:
1. All post-installed anchors into grout-filled masonry shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report (ICC_ES)
Hilti (CA) HUS-EZ	ESR-3056
Powers Wedge-Bolt+	ESR-1678
Simpson Titen HD	ESR-1906

Steel Expansion/Wedge Anchor	Evaluation Report (ICC_ES)
Hilti (CA) Kwik Tz	ESR-1253
Powers Power-Stud+ SD1	ESR-2502
Simpson Wedge-All	ESR-1396

Adhesive Anchor System	Evaluation Report (ICC_ES)
Hilti (CA) HIT-HY 70	ESR-3342
Hilti (CA) HIT-RE 500-SD	ESR-2322
Powers AC100+ Gold	ESR-2980

E. Alternate anchors or adhesives are permitted with approval of the engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor equivalent or exceeds the capacity of the specified anchor

F. Installations of adhesive anchors horizontally or upwardly inclined to support sustained tension loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall be submitted to the engineer for approval prior to commencement of installations.

G. Anchors shall be installed according to the manufacturer's published instructions and applicable code requirements including:
1. Hole diameter, depth, and cleaning procedure
2. Adhesive mixing, preparation, and placement
3. Installation torque

H. Locate all coring reinforcement and embedded items prior to drilling into concrete or masonry elements. Do not damage rebar or embeds while drilling or installing anchors.

I. Grout all protective or abandoned holes with non-shrink grout or an injectable epoxy adhesive matching the surrounding area's compressive strength. Consult the Architect for additional requirements at architecturally exposed concrete.

J. Drilled anchors are not allowed in post-tensioned concrete without approval of the architect and engineer.

K. Carbon steel anchors are limited to use in dry, interior locations.

7. Special Instructions

7.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical details.

7.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including discrepancies, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, before the most stringent requirement as directed by the Architect without additional cost to the owner. Any work done by the contractor after discovery of such discrepancies shall be done at the contractor's risk.

7.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, sleeves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment are not indicated within the structural drawings. Detailing and shop drawing preparation for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.

7.4. Shoring and Bracing Requirements.

A. Floor and Roof Structures – The General Contractor is responsible for the method and sequence of all structural erection. He shall provide temporary shoring and bracing as he method of erection requires to provide adequate vertical and lateral support. Shoring and bracing shall remain in place as the chosen method requires until all permanent members are in place and all field connections are completed, including all roof and floor attachments. The building shall not be considered stable until all connections are complete.

B. Foundation walls must be braced until the complete floor or roof systems is completed. Do not backfill until floor or roof systems are in place

C. Walls above grade shall be braced until the structural system is complete. Walls shall not be considered to be self-supporting.

7.5. All expansion joints (E.J.) shown in the structural drawings shall be considered seismic separation joints, unless noted otherwise

7.6. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. Those drawings shall bear the appropriate review stamps. The shop drawing review shall not relieve the contractor of the responsibility of completing the project according to the contract documents. The general contractor shall review and mark all shop drawings prior to submitting them to the Architect for his review. Shop Drawings made from reproductions of (those) contract drawings will be rejected.

7.7. Project Coordination. It shall be the responsibility of the general contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations through or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the general contractor and shall be coordinated with the Architect/Engineer. The use of construction is the responsibility of the general contractor. It is the contractor's obligations to provide all items necessary for his chosen procedure.

7.8. Contractor shall field verify all dimensions, and conditions. If the construct drawings do not represent actual conditions contractor shall notify architect/engineer prior to fabrication or construction within that area.

7.9. Notice of Copyright. The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers and Associates, Inc., All Rights reserved. Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers and Associates, Inc.'s reserved rights. The documents defining the structure are instruments of service prepared by Reaveley Engineers and Associates, Inc. for use on this specific project. These documents shall not be reproduced or copied, in whole or in part by the contractor or his subcontractors for preparation of shop drawings or other subsidiary.

8. Quality Assurance

8.1. Quality Assurance Agency Requirements

A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements.
1. The QAA shall be objective, competent and independent from the contractor responsible for the work being inspected. The agency shall also disclose possible conflicts of interest to confirm objectivity.
2. The QAA shall have adequate equipment to perform required tests.
3. The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and/or inspections. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities
4. Prior to the start of construction, the QAA shall submit to the building official, the owner architect and engineer copies of the following:
a. Current calibration records for all equipment to be used for the work being inspected and/or tested
b. Current certification and training records for each individual performing the inspections and/or testing
c. Sample inspection and testing reports and the distribution list for the records.
d. Proposed inspection procedures and frequency for each inspection required by the work.
e. Proposed testing methods and frequency of testing required by the work.
5. The QAA shall send copies of all inspection and testing reports to the building official, owner, architect, engineer and contractor. Reports shall indicate that the work inspected was or was not completed in conformance with approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official, architect and engineer.
6. The QAA shall submit a final report documenting required special inspections and correction of any discrepancies noted in the inspections. The final report shall be distributed to the building official, owner, architect and engineer in a timely manner prior to the completion of the project

8.2. Contractor Responsibilities

A. Each contractor responsible for the construction of a system or component requiring special inspections or testing shall submit a written statement of responsibility to the building official, owner, architect and engineer prior to the commencement of the work. The contractor's statement of responsibility shall contain the following:
1. Acknowledgement of awareness of the special requirements outlined in the statement of special inspections.
2. Acknowledgement that control will be exercised in order to obtain conformance to the approved construction documents.
3. Contractor's almost quality control procedures, methods and measures to be used in order to obtain conformance to the approved construction documents. Include copies of quality control reports, frequency of reporting and distribution of reports
4. Identification and qualifications of the person(s) responsible for quality control and their position(s) within the organization
B. Notification of Engineer: The contractor shall notify the engineer twenty-four hours prior to the items listed in the Structural Observations by the Engineer of Record section.
C. Notification of QAA: The contractor shall notify the QAA in a timely manner so that inspections and testing may be performed as outlined in the statement of special inspections

8.3. Structural Observations by the Engineer of Record

A. The Engineer of Record will perform structural observations at critical phases of the project as listed below. Observations will be made on a periodic basis throughout the construction of the structural system. During this time frame, site visits will be made at approximately monthly or bi-monthly intervals. Copies of the engineer's report will be distributed to the architect, contractor, owner, and building official
1. Placing concrete in any footing, mat footing, dowe foundation, grade beam, or pier
2. Closing any wall frame
3. Placing concrete in any column, beam or suspended slab
4. Completing the structural steel framing
5. Completing the welding of major sections of steel decking
6. Completing the nailing of any plywood wall or deck.

B. Observations made to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.

9. Statement of Special Inspections

9.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC)

9.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task.

Structural Steel per IBC Sections 1705.2.1, 1705.11.1 & 1705.12.2

Item	Frequency	Detailed Instructions
Prior to Welding (Table N5 4-1, AISC 360-10):		
Verify welding procedures (WPS) and consumable certificates	Continuous	
Material identification	Periodic	Verify type and grade of material.
Welder identification	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	Periodic	Verify joint preparation, dimensions, cleanliness, backing, and backing
Access holes	Periodic	Verify configuration and finish.
Fit-up of fillet welds	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
During Welding (Table N5 4-2, AISC 360-10):		
Use of qualified welders	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	Periodic	Verify packaging and exposure control
Cracked tack welds	Periodic	Verify that welding does not occur over cracked tack welds
Environmental conditions	Periodic	Verify rain speed is within limits as well as precipitation and temperature
WPS followed	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper positions.
Welding techniques	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass
After Welding (Table N5 4-3, AISC 360-10):		
Welds cleaned	Periodic	Verify that welds have been propyl cleaned
Size, length and locations of welds	Continuous	
Welds meet visual acceptance criteria	Continuous	
Arc strikes	Continuous	
k-area	Continuous	
Backing & weld tabs removed	Continuous	
Repair activities	Continuous	
Document acceptance or rejection of welded connections	Continuous	
Nondestructive Testing (Section N5.5, AISC 360-10)		
CJP welds (Risk Cat. II)	Periodic	Ultrasonic testing shall be performed on 10% of CJP groove welds in butt, T, and corner joints subjected to transversely applied tension loading in materials 5/16-inch thick or greater. Testing rate shall be increased if > 5% of welds tested have unacceptable defects
CJP welds (Risk Cat. III or IV)	Continuous	A reduction in the rate of ultrasonic testing is allowed per Section N5.5a
Access holes (flange > 2")	Continuous	
Welded joints subject to fatigue	Continuous	
Prior to Bolting (Table N5 6-1, AISC 360-10):		
Certifications of fasteners	Continuous	
Fasteners marked	Periodic	Verify that fasteners have been marked in accordance with ASTM requirements
Proper fasteners for joint	Periodic	Verify grade, type, and bolt length if threads are excluded from the shear plane
Proper bolting procedure	Periodic	Verify proper procedure is used for the joint detail
Connecting elements	Periodic	Verify appropriate faying surface condition and hole preparation, if specified, meet requirements.
Item	Frequency	Detailed Instructions
Pre-installation verification testing	Periodic	Observe and document verification testing by installation personnel for fastener assemblies and methods used
Proper storage	Periodic	Verify proper storage of bolts, nuts, washers, and other fastener components.
During Bolting (Table N5 6-2, AISC 360-10):		
Fastener assemblies	Periodic	Verify that fastener assemblies are of suitable condition, placed in all holes, and washers are positioned as required
Snug-tight prior to pretensioning	Periodic	Verify that joints are brought to snug-tight condition prior to pretensioning operations.
Fastener component	Periodic	Verify that fastener component is not turned by wrench prevented from rotating
Pretensioned fasteners	Periodic	Verify that fasteners are Pretensioned in accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges.
After Bolting (Table N5 6-3, AISC 360-10):		
Document acceptance or rejection of bolted connections	Continuous	
Other Steel Inspections (Sections N3.7, AISC 360-10 Table J6-1, J10-1, AISC 341-10):		
Structural steel details	Periodic	All fabricated steel or steel members shall be inspected to verify compliance with the details shown in the construction documents, such as beams, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel	Periodic	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded rod, and location of the rod and embedment prior to placement of concrete
Steel Elements of Composite Construction (Table N6 1, AISC 360-10, Tables J6-1 thru J6-3, AISC 341-11)		
Placement and installation of steel deck	Continuous	
Placement and installation of steel headed stud anchors	Continuous	
Document acceptance or rejection of steel elements	Continuous	
Reinforcing steel	Periodic	Verify appropriate reinforcement size, spacing, and embedment. Bud it has not been re-bend to field, it is correctly tied and supported, and that required steel clearances have been provided
Composite member size	Periodic	Verify that composite member is the required size

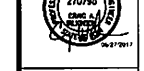
Steel Construction Other Than Structural Steel per IBC Sections 1705.2.3

Item	Frequency	Detailed Instructions
Steel Roof and Floor Deck (IBC Table 1705.2.2):		
Material verification of cold-formed steel deck	Periodic	Confirm that identification markings are provided to conform to ASTM standards specified on construction documents.
Floor and roof deck welds	Periodic	Visual inspection is required to confirm that weld meets acceptance criteria of AWS D1.3. Welder qualifications should also be verified

R&A
Architecture | Interiors
4180 Townsend Boulevard, Suite 100
Culver City, CA 90230
tel. 310.736.6610
www.r-a-a.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P. No. | Date
1 | 06-27-2017
2 | 07-26-2017
3 | 08-25-2017
4 | 09-26-2017

STAMP



NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
GENERAL STRUCTURAL NOTES

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO. 236

DATE 06-27-2017

SCALE

SHEET NO. S00.02

Concrete Construction per IBC Sections 1705.3 & 1705.12.1

Item	Frequency	Detailed Instructions
Prestressing steel, including post-tensioning tendons	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, splices and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report
Welding of reinforcing steel	Periodic	Verify weldability of reinforcing steel other than A706. Continuous inspection is required for welding of reinforcing steel used in intermediate or special concrete moment frames, boundary elements of special structural walls or shear reinforcement.
Cast-in bolts & embeds	Continuous	
Post-installed anchors as dowels		All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report.
Use of required mix design	Periodic	Verify that all mixes used comply with the approved construction documents. ACI 318: Ch. 4, 5.2-5.4; and IBC 1904.2, 1913.2, 1913.3
Concrete sampling for strength tests, slump, air content, and temperature	Continuous	Samples for strength tests shall be taken in accordance with ASTM C172, cured per ASTM C31 and tested in accordance with ASTM C39. Acceptance criteria for strength tests shall be per ACI 318 Section 5.6.3.3. For each mix placed, samples shall be taken not less than once a day, nor less than once for each 150 yd³ of concrete, nor less than once for each 5000 ft² of surface area for slabs or walls. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.
Concrete & shotcrete placement	Continuous	
Curing temperature and techniques	Periodic	Verify that the ambient temperature for concrete is kept at > 35°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 5.11.3). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Pre-stressed concrete	Continuous	Verify application of prestressing forces and grouting of bonded prestressing tendons.
In-situ strength verification	Periodic	Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons.
Formwork	Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.
Reinforcement in special structural walls and all components of special structural walls including coupling beams and wall piers	Periodic	Verify that ASTM A 615 reinforcing steel used in shear areas complies with ACI 318: 21.1.5.2 by excess of certified mill test reports. If the reinforcing steel is to be welded chemical tests shall be performed in accordance with ACI 318: 3.5.2

Wood Construction per IBC Sections 1705.5, 1705.10.1 & 1705.11.2

Item	Frequency	Detailed Instructions
High-load diaphragms	Periodic	Verify thickness and grade of sheathing, size of framing members at panel edges, nailing/staple diameters and length, and the number of fastener lines and fastener spacing per approved plans.
Item	Frequency	Detailed Instructions
Wood trusses spanning > 60-feet	Periodic	Verify that temporary and permanent truss bracing is installed in accordance with approved truss package
Structural wood	Periodic	If fastener spacing is less than 4"o.c. for either diaphragm or shear wall sheathing. Verify that proper nailing, bolting, anchoring and other fastening of sheathing, diaphragms, drag struts, braces, shear panels and bottoms has occurred

Soils per IBC Section 1705.6

Item	Frequency	Detailed Instructions
Verify subgrade is adequate to achieve design bearing capacity.	Periodic	Prior to placement of concrete
Verify excavations extend to proper depth and material	Periodic	Prior to placement of compacted fill or concrete
Verify that subgrade has been appropriately prepared prior to placing compacted fill	Periodic	Prior to placement of compacted fill.
Perform classification and testing of compacted fill materials	Periodic	All materials shall be checked at each lift for proper classifications and gradations not less than once for each 10,000ft² of surface area
Verify proper materials, densities, and fill thicknesses during placement and compaction.	Continuous	

R&A
6400 Tamarack Boulevard, Suite 120
Cedar City, UT 84720
tel. 310.730.6646
www.ra-pllc.com
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POWDER MOUNTAIN

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
GENERAL STRUCTURAL NOTES

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

PROJECT NO
236

DATE
06-27-2017

SCALE

SHEET NO
S00.03

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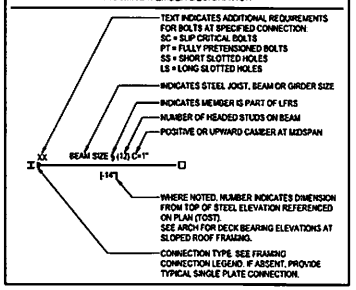
PLAN LEGEND

- FOOTING STEP
- FOOTING - CONTINUOUS
- FOOTING - THICKENED SLAB
- FOOTING - SQUARE FOOTING - RECTANGULAR FOOTING - MAT FOOTING
- CHANGE IN ELEVATION
- SLAB BLOCK OUT AT COLUMN
- SLAB CONTROL/CONSTRUCTION JOINT
- SPECIAL SLAB OR DECK AREA
- SPECIAL SLAB OR DECK AREA
- SPECIAL SLAB OR DECK AREA
- RECESSED/DEPRESSED SLAB
- OPENING
- CONCRETE HOUSEKEEPING PAD
- INDICATES ROOF DAVIT ARM BASE
- INDICATES WINDOW WASHING TIE-BACK
- CONCRETE BEAM
- CONCRETE JOIST - ONE WAY PANS
- CONCRETE JOIST - TWO WAY PANS
- CONCRETE SUSPENDED SLAB

- CONCRETE WALL
- CONCRETE WALL - RECESSED (FDTN CONCRETE LINTEL (FRAMING PLAN))
- CONCRETE WALL - RECESSED AT DOOR
- CONCRETE PIER IN CONCRETE WALL. TOP OF PIER RECESSED BELOW SLAB.
- CONCRETE COLUMN
- CONCRETE JAMB COLUMN POURED MONOLITHIC WITH CONCRETE WALL
- MASONRY WALL
- MASONRY WALL - RECESSED (FDTN PLAN) MASONRY LINTEL (FRAMING PLAN)
- MASONRY COLUMN IN MASONRY WALL
- STEEL STUD WALL - STRUCTURAL
- STEEL HEADER IN STEEL STUD WALL
- BRICK WALL
- BRICK WALL - RECESSED (FDTN PLAN) BRICK LINTEL (FRAMING PLAN)
- BRICK COLUMN IN BRICK WALL
- STEEL BRACED FRAME - ABOVE
- STEEL BRACED FRAME
- STEEL BEAM OR GIRDER
- STEEL JOIST OR PURLIN
- STEEL ANGLE BRACE / KICKER. SEE _/ FOR SLAB EDGE KICKER. SEE _/_ FOR FRAME BRACE
- CROSS BRIDGING
- HORIZONTAL BRIDGING
- STEEL COLUMN - TUBE (HSS)
- STEEL COLUMN - WIDE FLANGE
- STEEL COLUMN - PIPE (HSS)
- CONCRETE ON METAL DECK
- ROOF DECK
- STEEL GRATE

- EXISTING FOOTING - CONTINUOUS
- EXISTING FOOTING - THICKENED SLAB
- EXISTING FOOTING - SQUARE, RECTANGULAR, OR MAT
- EXISTING CONCRETE SHEAR WALL. FOUNDATION WALL OR RETAINING WALL
- EXISTING OPENING THROUGH CONCRETE WALL
- EXISTING CONCRETE PIER IN CONCRETE WALL. PIER RECESSED BELOW SLAB.
- EXISTING CONCRETE COLUMN
- NEW OPENING THROUGH EXISTING CONCRETE WALL
- EXISTING MASONRY WALL
- EXISTING OPENING THROUGH MASONRY WALL
- NEW OPENING THROUGH EXISTING MASONRY WALL
- EXISTING MASONRY COLUMN IN MASONRY WALL
- EXISTING STEEL COLUMN - TUBE
- EXISTING STEEL COLUMN - WIDE FLANGE
- EXISTING STEEL COLUMN - PIPE
- EXISTING STEEL BRACED FRAME
- EXISTING SLAB BLOCK-OUT AT COLUMN
- EXISTING SLAB CONTROL/CONSTRUCTION JOINT
- EXISTING STEEL BEAM OR GIRDER
- EXISTING STEEL JOIST OR PURLIN
- EXISTING CROSS BRIDGING
- EXISTING HORIZONTAL BRIDGING
- EXISTING TO BE REMOVED
- EXISTING OPENING

FRAMING MEMBER DESIGNATION



FRAMING CONNECTION LEGEND

- MOMENT FRAME CONNECTION (LFRS)
- GRAVITY BEAM MOMENT CONNECTION
- WELDED SINGLE PLATE COLLECTOR/CHORD CONNECTION
- STRAP PLATE COLLECTOR CHORD CONNECTION AT BEAMS PARALLEL TO MARK
- DOUBLE ANGLE CONNECTION
- DROP-IN BEAM CONNECTION

ABBREVIATIONS

@	AT
AB	ANCHOR BOLT (S)
ABV	ABOVE
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
CJ	CONSTRUCTION JOINT OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CTR	CENTER
D.B	DECK BEARING
db	DIAMETER OF REINFORCING BAR
DBA	DEFORMED BAR ANCHORS
DBL	DOUBLE
DET	DETAIL
DIA (OR Ø)	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DK	DECK
DN	DOWN
DWG	DRAWING
DWL	DOWEL
E.F.	EACH FACE
E.J.	EXPANSION JOINT (SEISMIC SEPARATION JOINT)
E.W	EACH WAY
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST (E)	EXISTING
EXP	EXPANSION / EXPOSED
EXT	EXTERIOR
F.D.	FLOOR DRAIN
F.F	FINISH FLOOR
F.V	FIELD VERIFY
FDTN	FOUNDATION
FIN	FINISH
FL	FLOOR
FT	FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLU-LAMINATED BEAM
GR	GRADE
GSN	GENERAL STRUCTURAL NOTES
HB	HORIZONTAL BRIDGING
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHORS
HSS	HOLLOW STRUCTURAL STEEL
HT	HEIGHT
I.F.	INSIDE FACE
IBC	INTERNATIONAL BUILDING CODE
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
ICC	INTERNATIONAL CODE COUNCIL
IN	INCH
INSUL	INSULATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIPS - 1,000 POUNDS
KLF	KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
Ld, Ld, Lab, Labt, Labc, Lac	SEE CONCRETE REINFORCING BAR DEVELOPMENT AND LAP LENGTH SCHEDULE
LF	LINEAL FOOT
LFRS	LATERAL FORCE RESISTING SYSTEM (SFRS & WFRS)
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
MAS	MASONRY
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MFGR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NORM	NORMAL
NTS	NOT TO SCALE
O.C.	ON CENTER
O.F.	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OWSJ	OPEN WEB STEEL JOIST
P.T	POST-TENSIONED
PCF	POUNDS/CUBIC FOOT
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS/LINEAL FOOT
PNL	PANEL
PSF	POUNDS/SQ FOOT
PSI	POUNDS/SQ INCH

ABBREVIATIONS

R.D.	ROOF DRAIN
REINF	REINFORCING
REQD	REQUIRED
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHT	SHEET
SI	SPECIAL INSPECTION (SP. INSP.)
SIM	SIMILAR
SOG	SLAB ON GRADE
SQ	SQUARE
STAG	STAGGERED
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
T & B	TOP AND BOTTOM
T.O	TOP OF
TEMP	TEMPERATURE
THDS	THREADS
TOC	TOP OF CONCRETE
TOCP	TOP OF CONCRETE PIER
TOF	TOP OF FOOTING
TOS	TOP OF SLAB
TOST	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W.P.	WORK POINT
W	WITH
WF	WIDE FLANGE
WFRS	WIND FORCE RESISTING SYSTEM
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

PLAN MARKS

BF-#	BRACED FRAME
CB-#	CONCRETE BEAM
CC-#	CONCRETE COLUMN
CCSS-#	CANTILEVERED CONCRETE SUSPENDED SLAB
CDP-#	CONCRETE DRILLED PIER
CFW-#	CONCRETE FOUNDATION WALL
CGB-#	CONCRETE GRADE BEAM
CJ-#	CONCRETE JOIST
CJC-#	CONCRETE JAMB COLUMN
CL-#	CONCRETE LINTEL
CP-#	CONCRETE PIER
CRW-#	CONCRETE RETAINING WALL
CSG-#	CONCRETE SLAB ON GRADE
CSH-#	CONCRETE SHEAR HEAD
CSS-#	CONCRETE SUSPENDED SLAB
CSW-#	CONCRETE SHEAR WALL
CW-#	CONCRETE WALL
FCF	CONTINUOUS FOOTING
FM#	MAT FOOTING
FR#	RECTANGULAR FOOTING
FS#	SQUARE FOOTING
FTS#	THICKENED SLAB FOOTING
HD-#	HOLD DOWN ANCHOR
MC-#	MASONRY COLUMN
MF-#	MOMENT FRAME
ML-#	MASONRY LINTEL
MP-#	MASONRY PIER
MW-#	MASONRY WALL
PTB-#	POST-TENSIONED CONCRETE BEAM
SBP-#	STEEL BASE PLATE
SC-#	STEEL COLUMN
SCP-#	STEEL CAP PLATE
SD-#	STEEL DECK
SDA-#	STEEL DECK ATTACHMENT
SG-#	STEEL GIRDER
SJ-#	STEEL JOIST
SND-#	SNOW DRIFT
WB-#	WOOD BEAM
WBW-#	WOOD BEARING WALL
WC-#	WOOD COLUMN
WD-#	WOOD DIAPHRAGM
WJ-#	WOOD JOIST
WSW-#	WOOD SHEAR WALL

R&A
4180 Townsgate Boulevard, Suite 100
Culver City, CA 90232
tel 310.736.6646
www.ra-pe.com
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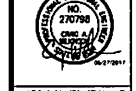

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POWDER MOUNTAIN

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
LEGENDS AND ABBREVIATIONS

No	Description	Date
1	ISSUE D FOR FOUNDATION PERMIT	2017-06-27

YSR NO. 236

DATE 06-27-2017

SCALE 1/8" = 1'-0"

SHEET NO S00.04

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1. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE RETAINING AND / OR SITE WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

2. SEE TYPICAL STEP DETAIL AT CONTINUOUS FOOTING AND TYPICAL STEP DETAIL AT MAT FOOTING FOR REINFORCING REQUIREMENTS C1/S50.01 , C2/S50.01 .

3. PROVIDE REINFORCEMENT AT WALL ENDS, INTERSECTIONS AND OPENINGS PER TYPICAL DETAILS D1/S50.01 .

4. DOWEL ALL CONCRETE WALLS TO FOOTING PER TYPICAL DETAIL C3/S50.01 .

5. PROVIDE COMPACTED STRUCTURAL FILL UNDER ALL CONCRETE FOOTINGS PER TYPICAL DETAIL A5/S50.01.

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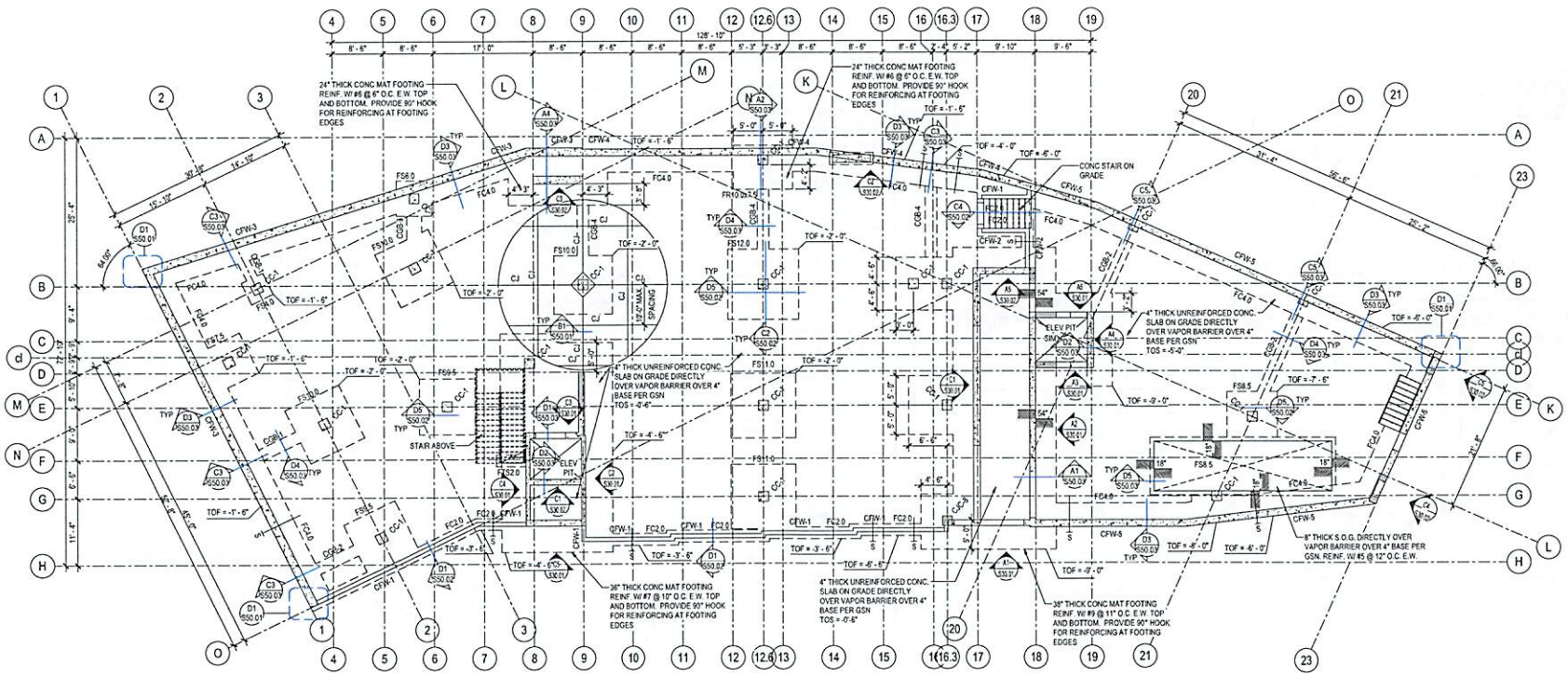

A1 / S20.01 FOOTING & FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

R&A
Architecture and Planning
4100 Sepulveda Boulevard, Suite 100
Culver City, CA 90230
tel: 310.736.6818
www.r-a-a-d.com

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POWDER MOUNTAIN

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FOOTING & FOUNDATION PLAN

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DATE 06-27-2017

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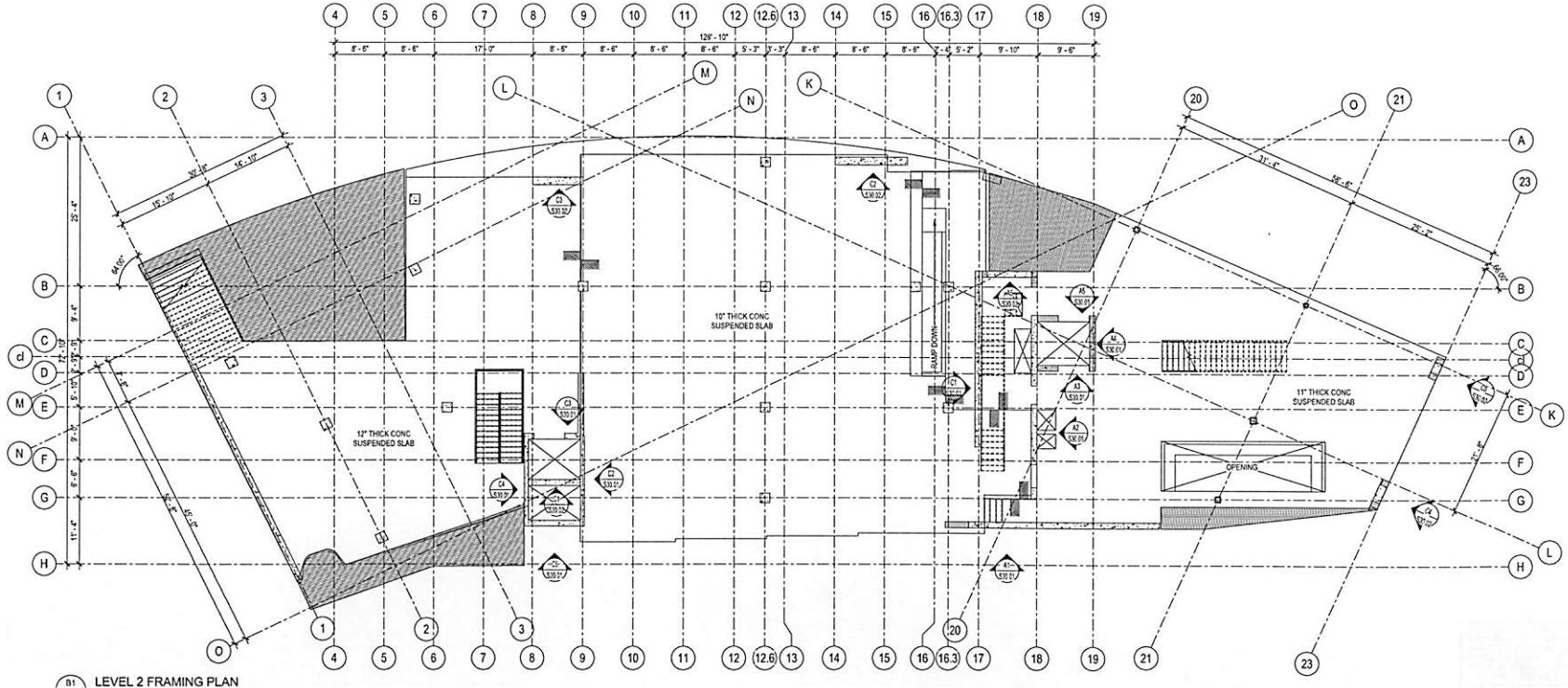

B1 / S22.01 LEVEL 2 FRAMING PLAN
SCALE: 1/8" = 1'-0"

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tel: 801.746.0818
www.r-a-a-f.com

REAVELEY
ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P: 801.486.3883
F: 801.486.3711
675 E. 500 S., Ste. 560
Salt Lake City, UT 84102
www.reaveley.com

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PROFESSIONAL STRUCTURAL ENGINEER NO. 270798 CRAIG A. REAVELEY STATE OF UTAH
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POWDER MOUNTAIN

5752 N. Copper Crest
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SHEET TITLE
LEVEL 2 FRAMING PLAN

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO. 236

DATE 06-27-2017

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SHEET NO. S22.01

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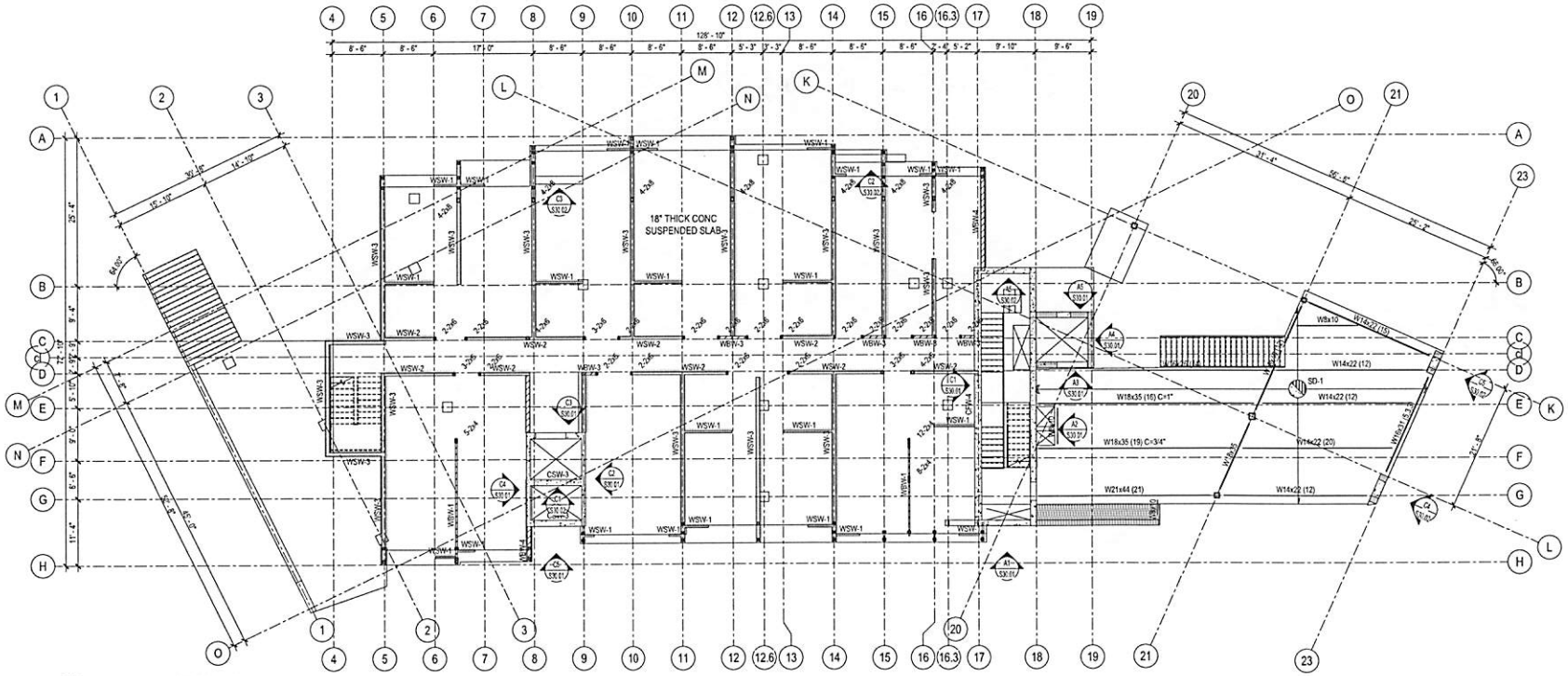

A1 / S22.02 LEVEL 3 FRAMING PLAN
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Culver City, CA 90230
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P: 801 486-3883
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SHEET TITLE
LEVEL 3 FRAMING PLAN

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JOB NO
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DATE
06-27-2017

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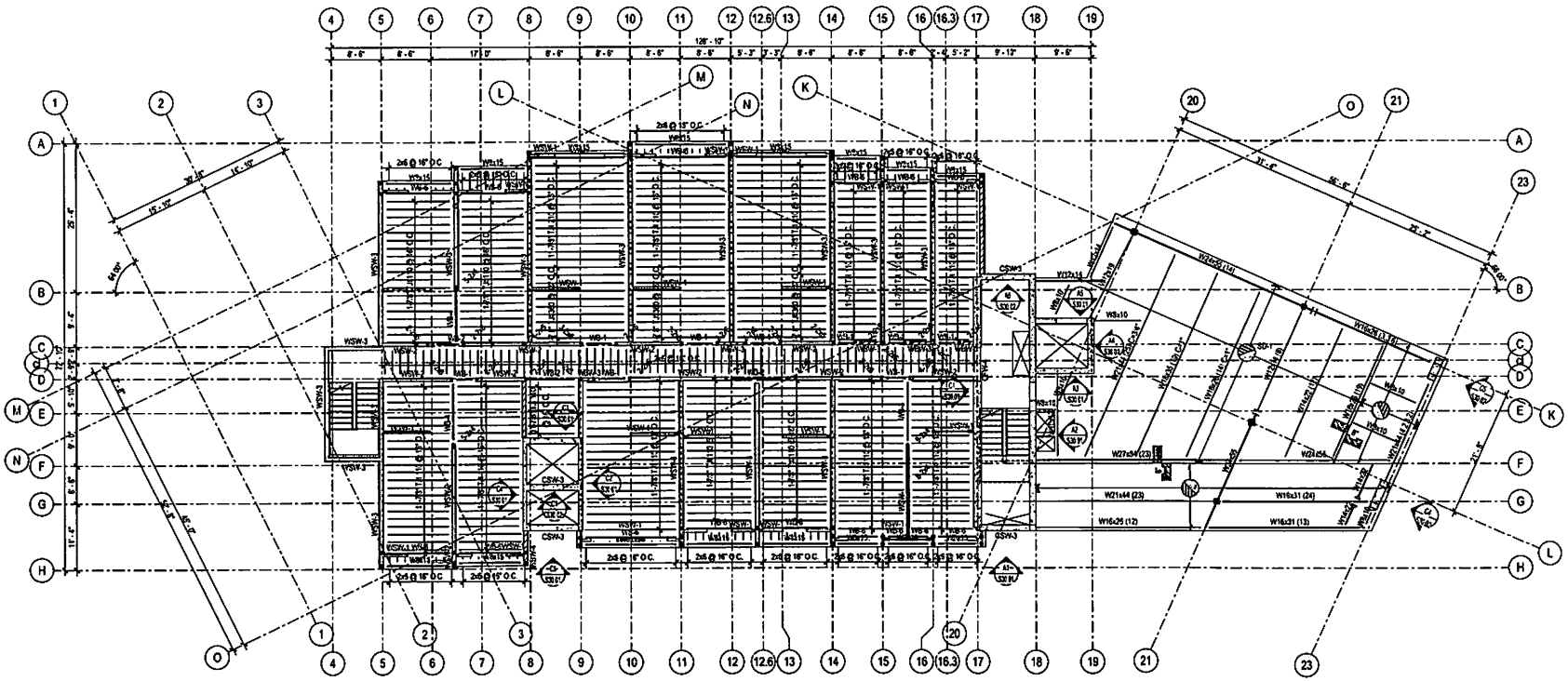

B1 / S22.01 LEVEL 4 FRAMING PLAN
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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
LEVEL 4 FRAMING PLAN

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

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DATE 06-27-2017
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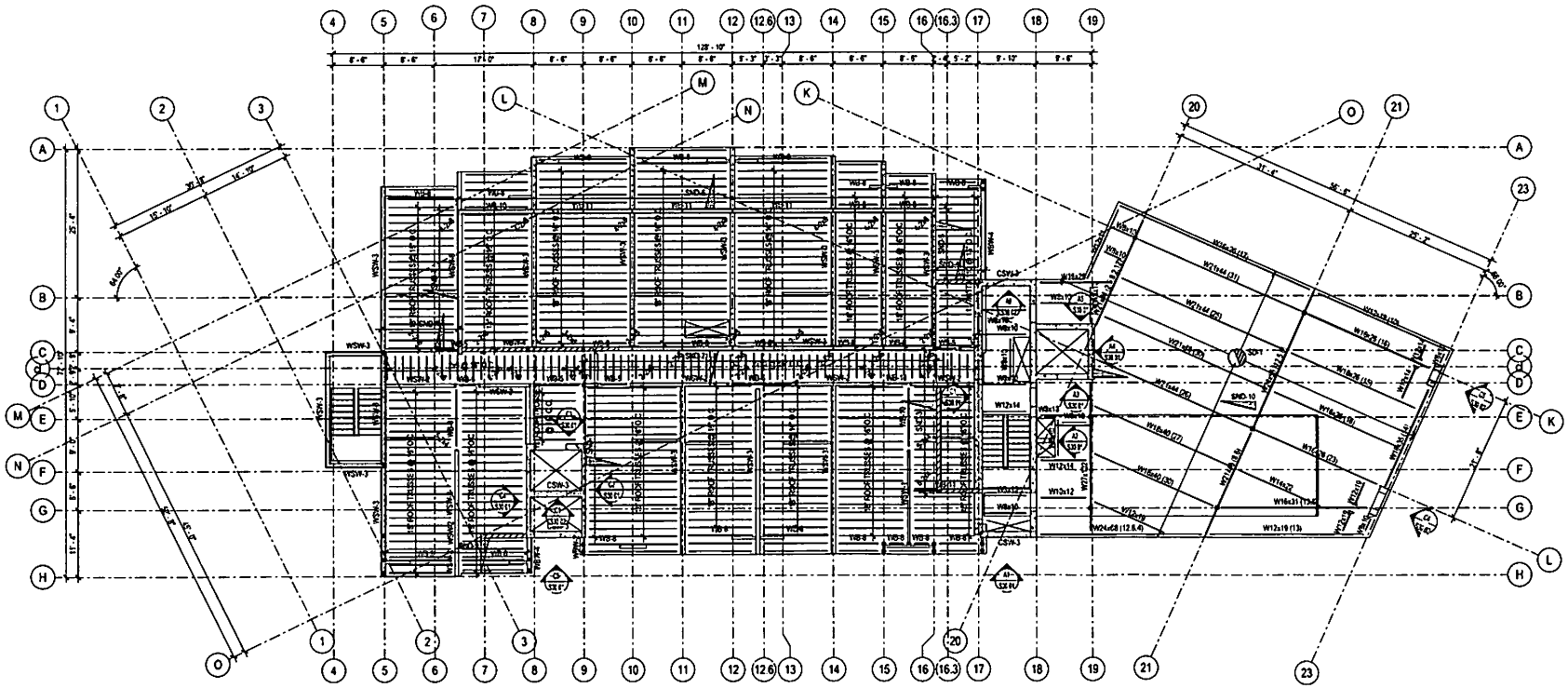

A1 / S22.04 ROOF LEVEL FRAMING PLAN
SCALE: 1/8" = 1'-0"

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POWDER MOUNTAIN

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SHEET TITLE
ROOF LEVEL FRAMING PLAN

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	06-27-2017

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DATE
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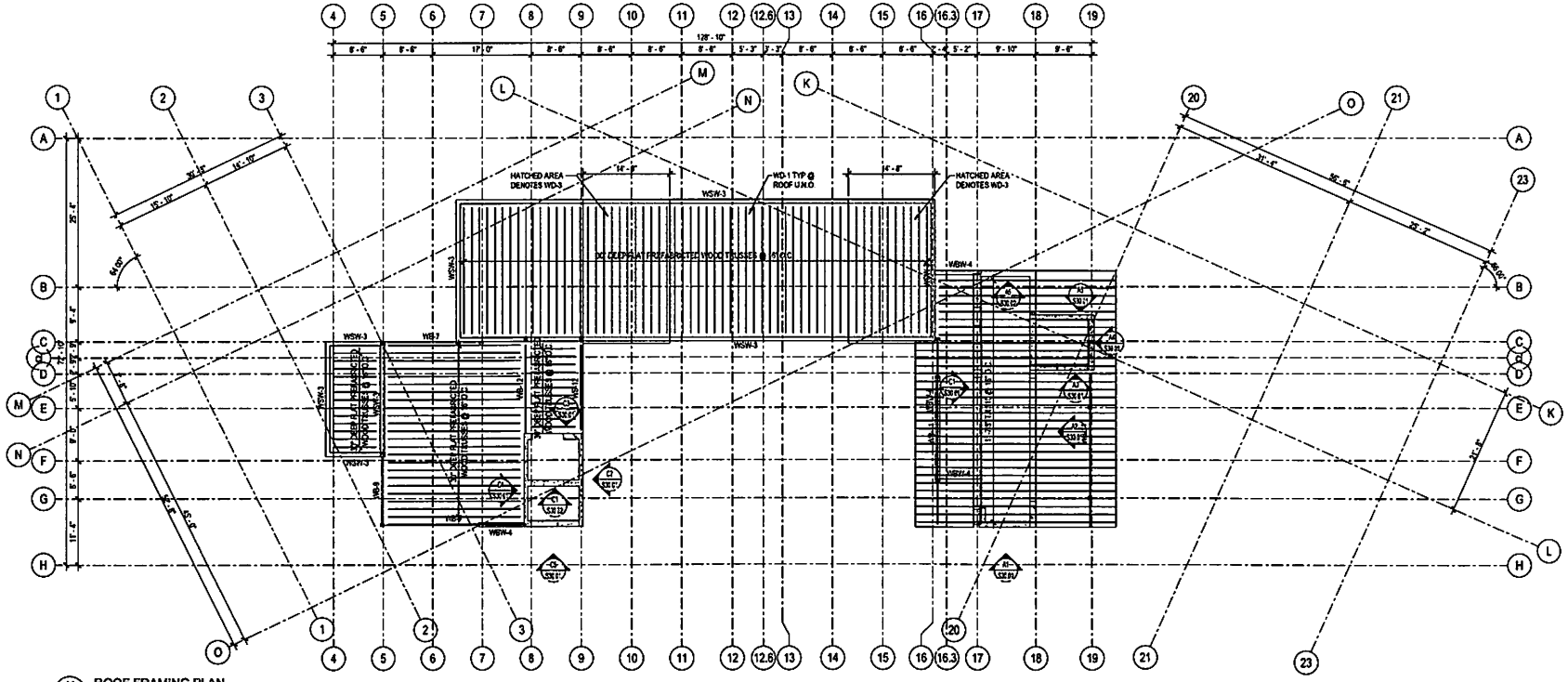

A1 S22.05 ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

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ROOF FRAMING PLAN

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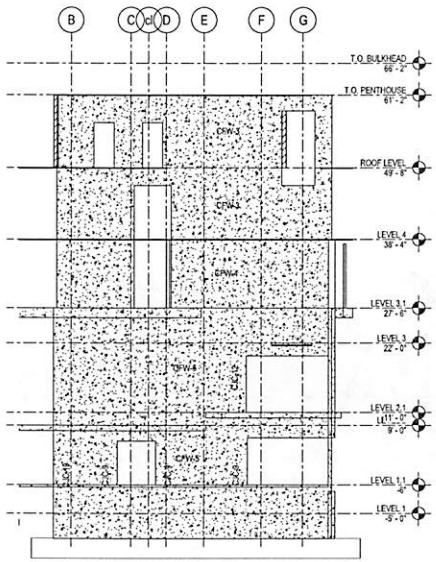
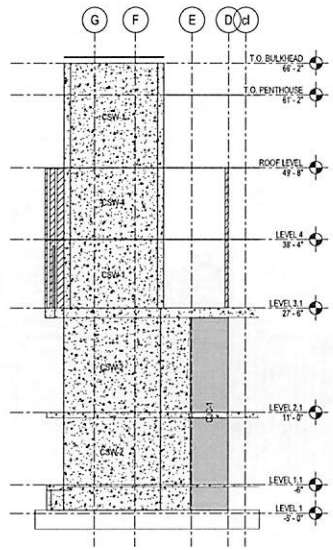
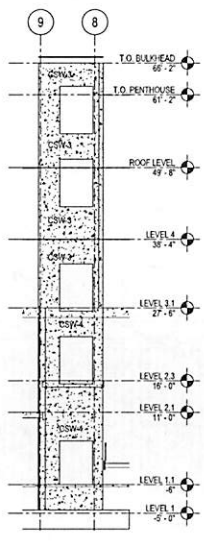


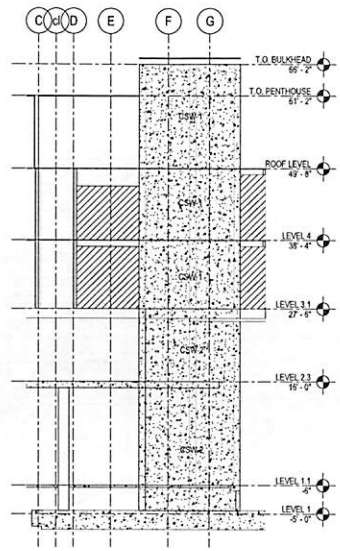
C1 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



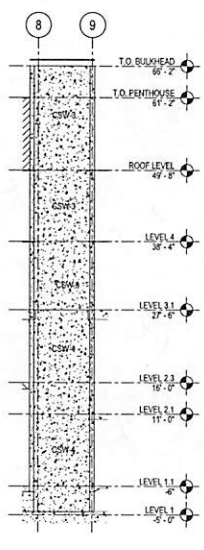
C2 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



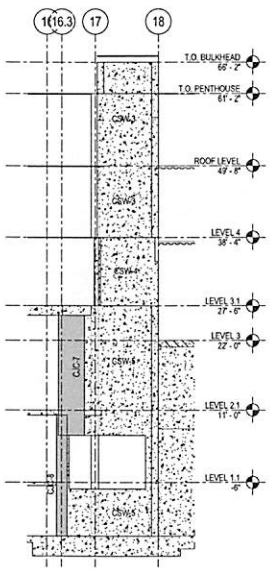
C3 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



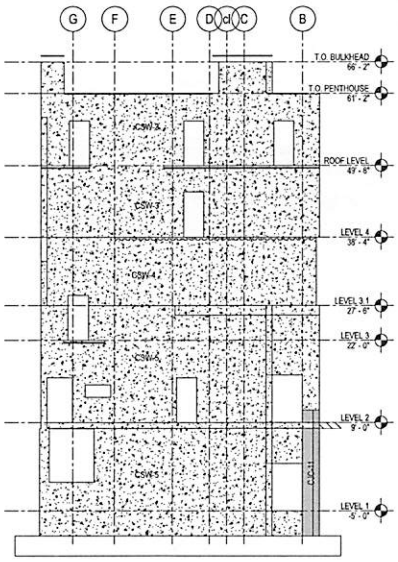
C4 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



C5 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



A1 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



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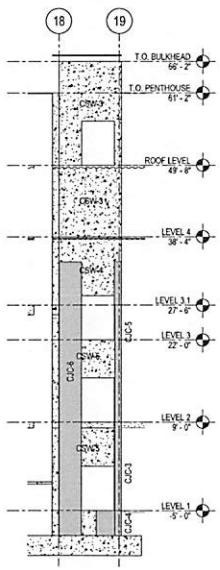
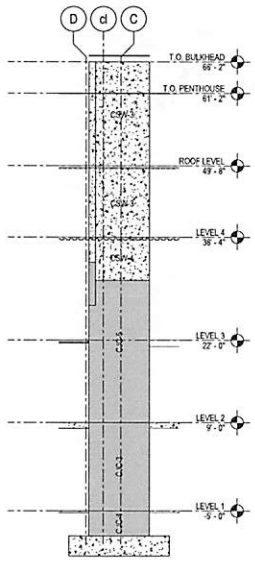
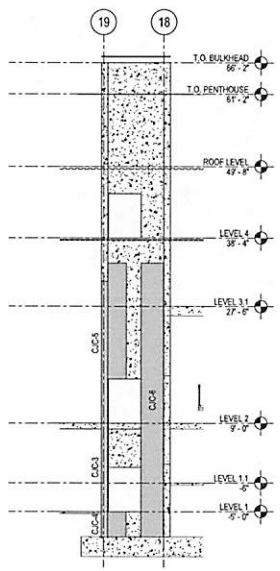
SCALE: 1/8" = 1'-0"



A3 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



A4 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



A5 S30.01 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"

CONCRETE SHEAR WALL NOTES

1. VERIFY ALL DATUM ELEVATIONS W/ ARCHITECTURAL DRAWINGS.
2. VERIFY ALL OPENING LOCATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. CONCRETE JAMB COLUMN LOCATIONS (CJC) ARE APPROXIMATE. SEE ARCHITECTURAL FOR ROUGH OPENINGS AND OFFSET DISTANCE FOR DOOR JAMBS, WINDOW JAMBS AND ANY ARCHITECTURAL COVERS.
4. VERIFY ALL MECHANICAL OPENINGS LOCATIONS AND DIMENSIONS WITH MECHANICAL DRAWINGS.
5. CONCRETE FOOTINGS TO BE CENTERED ON SCHEDULED THICKNESS OF CONCRETE SHEAR WALL TYPICAL UNO.
5. SEE SHEET SF210 FOR TYPICAL CONCRETE SHEAR WALL REINFORCEMENT DIAGRAM.
6. SEE -/— FOR TYPICAL SLEEVED OPENING THROUGH CONCRETE WALL.
7. SEE FOR ADDITIONAL REINFORCEMENT AT MISCELLANEOUS OPENINGS THROUGH CONCRETE WALLS.
8. SEE D1/S30.11 FOR TYPICAL CONCRETE SHEAR WALL REINFORCEMENT TO CONCRETE FOOTING.
9. TERMINATE ALL HORIZONTAL CONCRETE SHEAR WALL REINFORCEMENT AT JAMB COLUMNS PER DETAIL D2/S30.11.
10. SEE C1/S30.11 FOR TYPICAL VERTICAL REINFORCEMENT SPLICES AT CONCRETE SHEAR WALLS.
11. SEE SHEET SF212 FOR CONCRETE COUPLING BEAM SCHEDULE AND DETAILS.
12. SEE D1/S30.13 FOR TYPICAL CONCRETE JAMB COLUMN REINFORCEMENT TO CONCRETE FOOTING.
13. SEE -/— FOR TYPICAL CONCRETE JAMB COLUMN REINFORCEMENT/TIE DIAGRAMS.
14. SEE D2/S30.13 FOR TYPICAL VERTICAL REINFORCEMENT SPLICES AT CONCRETE JAMB COLUMNS
15. # INDICATES STEEL BEAM COLLECTOR CONNECTION TO CONCRETE SHEAR WALL. SEE DETAIL C1/S30.14 FOR SCHEDULE AND DETAILS.
16. ◇ INDICATES WALL PIER ANCHORS. SEE DETAIL C2/S30.11 FOR SCHEDULE AND DETAIL.

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Architecture Land Planning Design
4790 Sauvignon Boulevard, Suite 100
Culver City, CA 90230
tel. 310.730.6618
www.ra-a-c.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P. 801.486.3883
F. 801.486.3711
675 E. 500 S., Ste. 400
Salt Lake City, UT 84102
www.reaveley.com

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

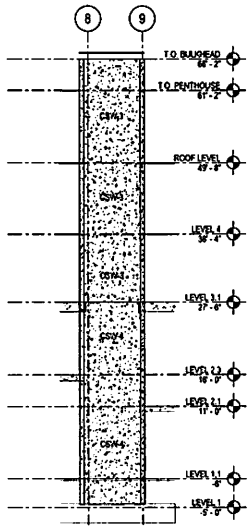
SHEET TITLE
CONCRETE SHEAR WALL ELEVATIONS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

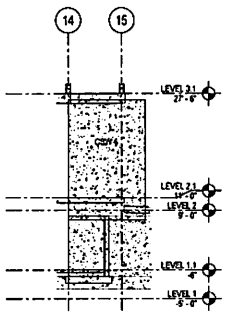
JOB NO. 236
DATE 06-27-2017
SCALE 1/8" = 1'-0"
SHEET NO. S30.01

6/27/2017 5:43:00 PM

R&A IF THIS SHEET IS NOT 30" x 42", IT IS A REDUCED PRINT



C1 S30.02 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



C2 S30.02 CONCRETE SHEAR WALL ELEVATION
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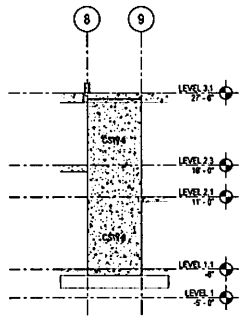
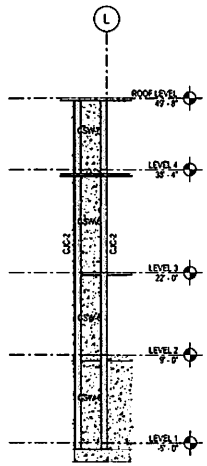
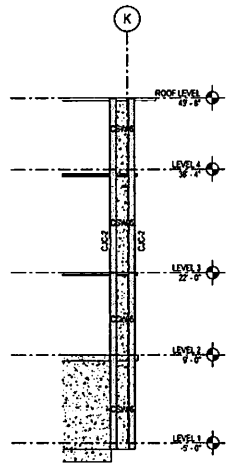


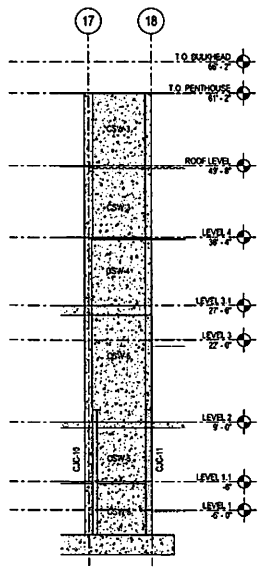
C3 S30.02 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



C4 S30.02 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



C5 S30.02 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"



A5 S30.02 CONCRETE SHEAR WALL ELEVATION
SCALE: 1/8" = 1'-0"

CONCRETE SHEAR WALL NOTES

1. VERIFY ALL DATUM ELEVATIONS W/ ARCHITECTURAL DRAWINGS.
2. VERIFY ALL OPENING LOCATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS
3. CONCRETE JAMB COLUMN LOCATIONS (CJC) ARE APPROXIMATE, SEE ARCHITECTURAL FOR ROUGH OPENINGS AND OFFSET DISTANCE FOR DOOR JAMBS, WINDOW JAMBS AND ANY ARCHITECTURAL COVERS.
4. VERIFY ALL MECHANICAL OPENINGS LOCATIONS AND DIMENSIONS WITH MECHANICAL DRAWINGS.
5. CONCRETE FOOTINGS TO BE CENTERED ON SCHEDULED THICKNESS OF CONCRETE SHEAR WALL, TYPICAL UNO.
6. SEE SHEET SF310 FOR TYPICAL CONCRETE SHEAR WALL REINFORCEMENT DIAGRAM
7. SEE -/— FOR TYPICAL SLEEVED OPENING THROUGH CONCRETE WALL.
8. SEE FOR ADDITIONAL REINFORCEMENT AT MISCELLANEOUS OPENINGS THROUGH CONCRETE WALLS
9. SEE D1/S30.11 FOR TYPICAL CONCRETE SHEAR WALL REINFORCEMENT TO CONCRETE FOOTING
10. TERMINATE ALL HORIZONTAL CONCRETE SHEAR WALL REINFORCEMENT AT JAMB COLUMNS PER DETAIL D2/S30.11.
11. SEE C1/S30.11 FOR TYPICAL VERTICAL REINFORCEMENT SPLICES AT CONCRETE SHEAR WALLS.
12. SEE SHEET SF312 FOR CONCRETE COUPLING BEAM SCHEDULE AND DETAILS
13. SEE D1/S30.13 FOR TYPICAL CONCRETE JAMB COLUMN REINFORCEMENT TO CONCRETE FOOTING.
14. SEE -/— FOR TYPICAL CONCRETE JAMB COLUMN REINFORCEMENT/TIE DIAGRAMS.
15. SEE D2/S30.13 FOR TYPICAL VERTICAL REINFORCEMENT SPLICES AT CONCRETE JAMB COLUMNS
16. 2 INDICATES STEEL BEAM COLLECTOR CONNECTION TO CONCRETE SHEAR WALL. SEE DETAIL C1/S30.14 FOR SCHEDULE AND DETAILS
17. ◇ INDICATES WALL PIER ANCHORS SEE DETAIL C2/S30.11 FOR SCHEDULE AND DETAIL.

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POWDER MOUNTAIN

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE SHEAR WALL ELEVATIONS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO 236

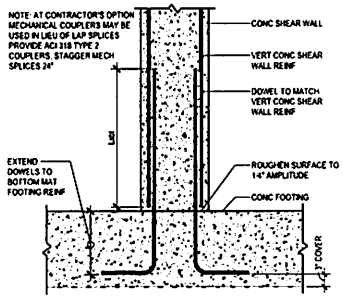
DATE 06-27-2017

SCALE 1/8" = 1'-0"

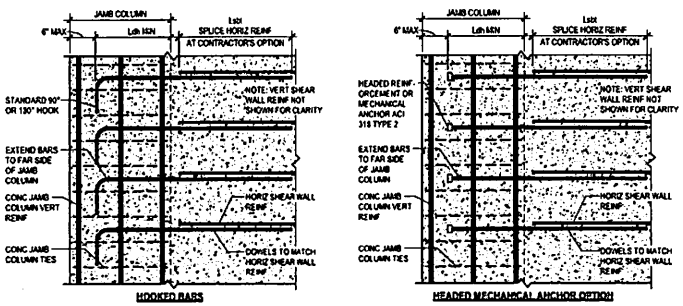
SHEET NO S30.02

6/27/2017 5:43:01 PM

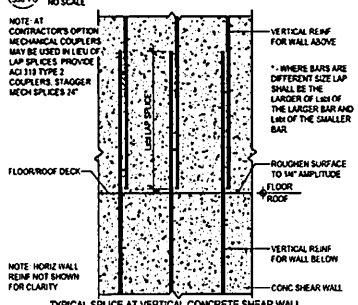
R&A IF THIS SHEET IS NOT 36"x 42", IT IS A REDUCED PRINT



D1 S30 11/ TYPICAL CONCRETE SHEAR WALL REINFORCEMENT TO CONCRETE FOOTING
NO SCALE



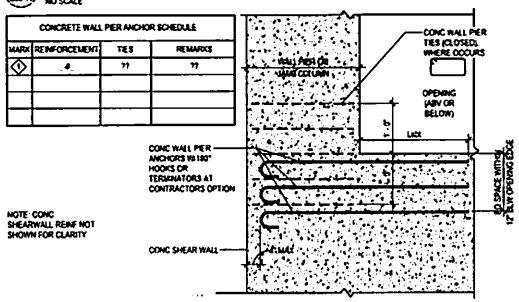
D2 S30 11/ TYPICAL HORIZONTAL SHEAR WALL REINFORCEMENT AT CONCRETE JAMB COLUMN
NO SCALE



C1 S30 11/ TYPICAL SPLICE AT VERTICAL CONCRETE SHEAR WALL REINFORCEMENT
NO SCALE

CONCRETE WALL PIER ANCHOR SCHEDULE

MARK	REINFORCEMENT	TIES	REMARKS
1	-#-	??	??



C2 S30 11/ TYPICAL CONCRETE WALL PIER ANCHOR DIAGRAM AND SCHEDULE
NO SCALE

CONCRETE SHEAR WALL SCHEDULE

MARK	THICK	VERTICAL REINFORCING	HORIZONTAL REINFORCING	T & B HORIZ BARS	PLACEMENT
CSW-1	8"	#4 @ 12" O.C.	#4 @ 12" O.C.	2-#5	TYPE A
CSW-2	8"	#5 @ 12" O.C.	#5 @ 12" O.C.	2-#5	TYPE A
CSW-3	1'-0"	#4 @ 12" O.C. E.F.	#4 @ 12" O.C. E.F.	2-#5	TYPE C
CSW-4	1'-0"	#5 @ 12" O.C. E.F.	#5 @ 12" O.C. E.F.	2-#5	TYPE C
CSW-5	1'-0"	#6 @ 12" O.C. E.F.	#6 @ 12" O.C. E.F.	2-#5	TYPE C
CSW-6	1'-4"	#5 @ 12" O.C. E.F.	#5 @ 12" O.C. E.F.	2-#5	TYPE C

NOTES
1 HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS THRU CONSTRUCTION & CONTROL JOINTS
2 SPLICES IN HORIZONTAL WALL REINFORCEMENT SHALL BE TYPE Ldst, STAGGERED SUCH THAT SPLICES DO NOT OVERLAP SPLICES IN TWO CURTAINS SHALL NOT OCCUR IN THE SAME LOCATION
3 U.N.O. HORIZONTAL WALL REINFORCEMENT SHALL HAVE A STANDARD HOOK OR CORNER BAR DOWEL ENGAGING THE VERTICAL BAR AT WALL ENDS AND WALL CORNERS SEE "TYPICAL CONCRETE WALL REINFORCING AT ENDS, CORNERS AND INTERSECTIONS" DETAIL

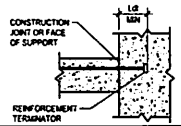
PLACEMENT TYPES

EF = EACH FACE
OF = OUTSIDE FACE (AGAINST SOIL)
IF = INSIDE FACE
3L = THREE LAYERS

CONCRETE LINTEL SCHEDULE

MARK	THICK	DEPTH	REINFORCEMENT		REMARKS
			HORIZONTAL	STIRRUPS	
CL-1	?	?	?	?	?

NOTES
1 EXTEND ALL HORIZONTAL LINTEL BARS 1.d DEVELOPMENT LENGTH BEYOND EDGES OF OPENINGS.



TENSION DEVELOPMENT LENGTH FOR BAR TERMINATORS (Ldt)

BAR SIZE	NORMAL WEIGHT CONCRETE, f'c = PSI				
	3,000	4,000	4,500	5,000	6,000
#3	6"	6"	6"	6"	6"
#4	8"	7"	7"	7"	7"
#5	10"	9"	8"	8"	7"
#6	12"	10"	10"	9"	8"
#7	14"	12"	11"	11"	10"
#8	16"	14"	13"	12"	11"
#9	18"	15"	14"	14"	13"
#10	20"	17"	16"	15"	14"
#11	22"	19"	18"	17"	16"
#14	37"	32"	31"	29"	27"
#18	50"	43"	41"	39"	35"

NOTES
1. VALUES HERE VALID FOR ALL CASES IF
SIDE COVER ≥ 2 1/2"
END COVER ≥ 2"

2. MULTIPLY VALUES IN SCHEDULE BY 1.2 FOR LIGHTWEIGHT CONCRETE

3. MULTIPLY VALUES IN SCHEDULE BY 1.2 FOR USE WITH EPOXY COATED REBAR

A2 S30 11/ TENSION DEVELOPMENT SCHEDULE FOR BAR TERMINATORS
NO SCALE

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE SHEARWALL SCHEDULE AND DETAILS

No	Submissions	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO 236
DATE 06-27-2017
SCALE 1" = 1'-0"
SHEET NO S30.11

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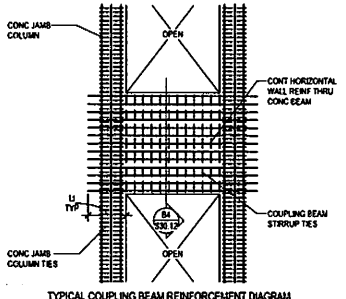
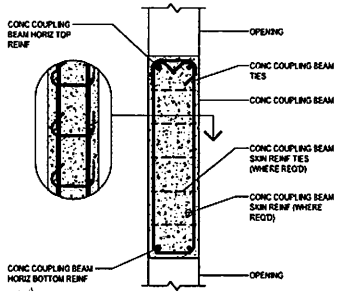
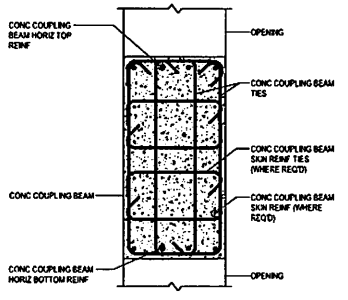
CONCRETE COUPLING BEAM SCHEDULE										
MARK	TOP REINFORCEMENT			BOTTOM REINFORCEMENT			STIRRUPS			NOTES
	NO.	SIZE	# LAYERS	NO	SIZE	# LAYERS	NO	SIZE	SPACING	
CCB-_	-	-	-	-	-	-	-	-	-	

NOTES:
1. HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH COUPLING BEAMS.
2. EXTEND TOP & BOTTOM HORIZONTAL REINFORCEMENT A DISTANCE EQUAL TO THE TENSION DEVELOPMENT LENGTH, Ld BEYOND THE EDGE OF THE OPENING OR TERMINATE AT END OF WALL OR COLUMN WITH STANDARD HOOK.
3. PLACE SKIN REINFORCEMENT WHERE REQUIRED SEE DETAIL A5/SF213 FOR REQUIREMENTS AND DIAGRAM
4. SEE DETAIL C5/SF213 FOR CONCRETE COUPLING BEAM REINFORCEMENT DIAGRAM

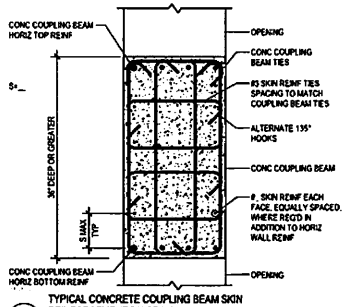


C5 / S30.12 TYPICAL COUPLING BEAM REINFORCEMENT DIAGRAM (WITHOUT DIAGONALS)
NO SCALE





B4 / S30.12 TYPICAL COUPLING BEAM REINFORCEMENT DIAGRAM
NO SCALE



A5 / S30.12 TYPICAL CONCRETE COUPLING BEAM SKIN REINFORCEMENT DIAGRAM
NO SCALE

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE COUPLING BEAM SCHEDULE & DETAILS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO. 236

DATE 06-27-2017

SCALE 1" = 1'-0"

SHEET NO S30.12

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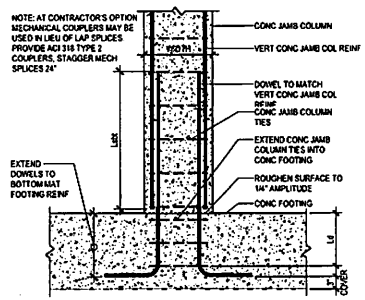
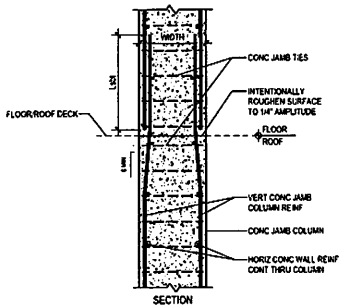
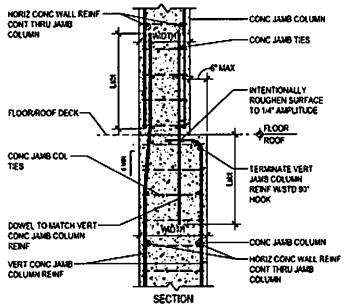


D1 / S30.13 TYPICAL CONCRETE JAMB COLUMN REINFORCING TO CONCRETE FOOTING

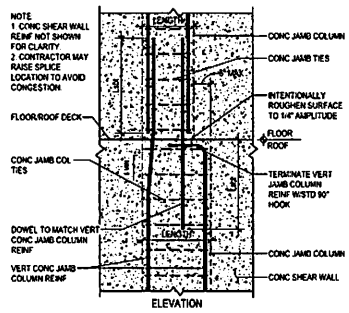
NO SCALE



SECTION



SECTION

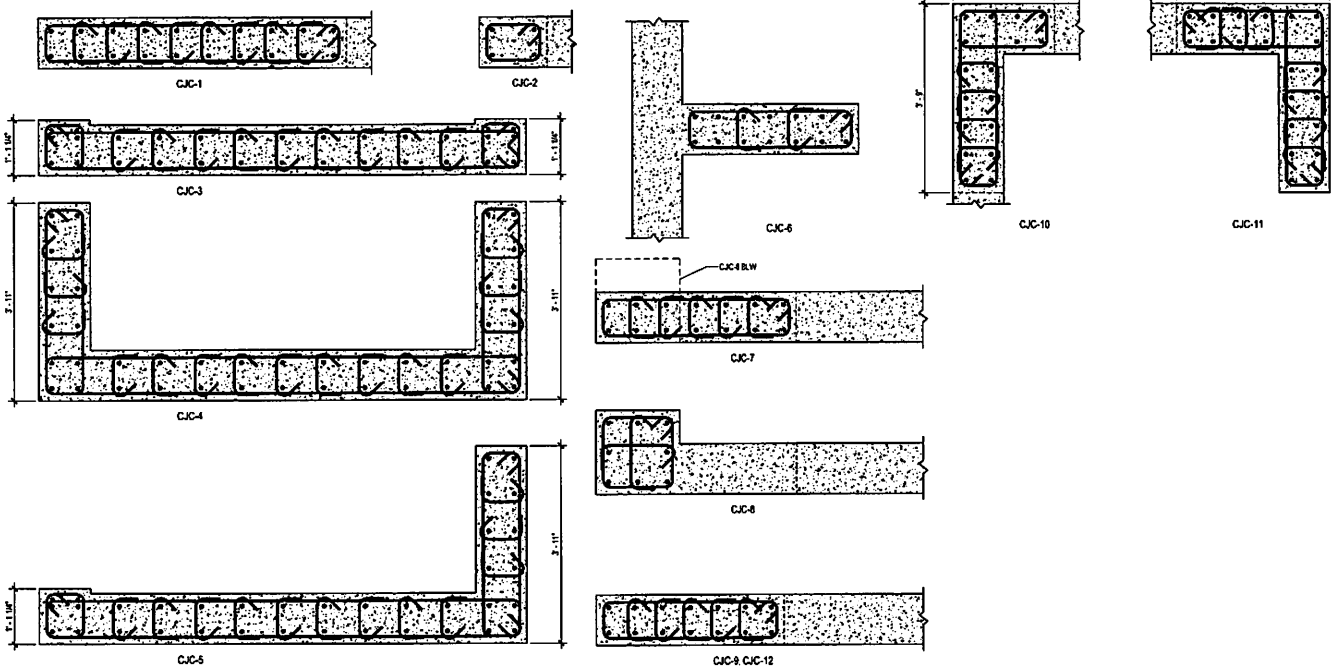


ELEVATION

D2 / S30.13 TYPICAL SPLICE AT CONCRETE JAMB COLUMN

NO SCALE

CONCRETE JAMB COLUMN SCHEDULE					
	DIMENSIONS		REINFORCING		
MARK	WIDTH	LENGTH	VERTICAL	TIES	REMARKS
CJC-1	1'-0"	6'-0"	20-#7	#4 @ 4" O.C.	
CJC-2	1'-0"	1'-4"	4-#5	#4 @ 8" O.C.	
CJC-3	1'-0"	5'-6"	34-#6	#4 @ 4" O.C.	SEE DETAIL
CJC-4	1'-0"	8'-6"	46-#6	#4 @ 4" O.C.	SEE DETAIL
CJC-5	1'-0"	8'-6"	43-#6	#4 @ 4" O.C.	SEE DETAIL
CJC-6	1'-0"	3'-6"	14-#6	#4 @ 4" O.C.	
CJC-7	1'-0"	4'-0"	14-#7	#4 @ 4" O.C.	
CJC-8	1'-0"	1'-8"	8-#7	#4 @ 4" O.C.	
CJC-9	1'-0"	3'-9"	14-#6	#4 @ 4" O.C.	
CJC-10	1'-0"	3'-9"	16-#6	#4 @ 4" O.C.	SEE DETAIL
CJC-11	1'-0"	2'-8"	22-#6	#4 @ 4" O.C.	SEE DETAIL
CJC-12	1'-0"	3'-9"	14-#6	#4 @ 8" O.C.	



B1 / S30.13 TYPICAL CONCRETE JAMB COLUMN REINFORCEMENT/TIE DIAGRAM (PLAN VIEW)

NO SCALE

R&A
REAVELEY ENGINEERS + ASSOCIATES

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE JAMB COLUMN SCHEDULE AND DETAILS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

FOR REFERENCE ONLY - NOT FOR CONSTRUCTION

JOB NO
236

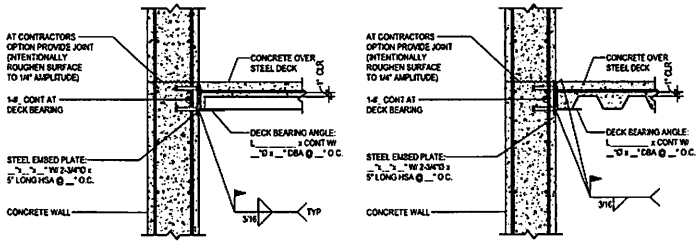
DATE
06-27-2017

SCALE
1" = 1'-0"

SHEET NO
S30.13

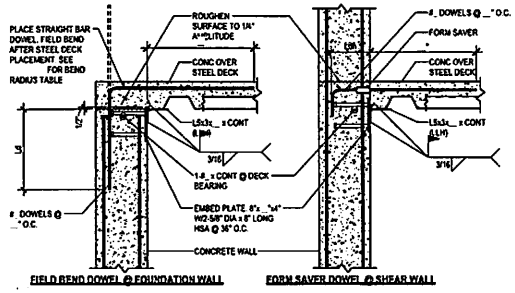
6/27/2017 5:43:03 PM

ARA IF THIS SHEET IS NOT 30" x 42" IT IS A REDUCED PRINT



DECK BEARING PERPENDICULAR TO CONCRETE WALL

DECK BEARING PARALLEL TO CONCRETE WALL

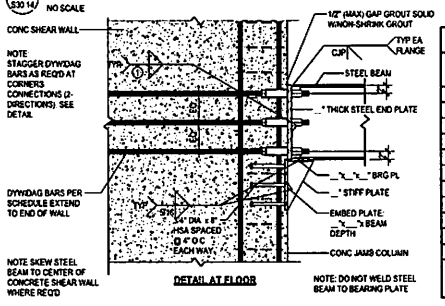


FIELD BEND DOWEL @ FOUNDATION WALL

FORM SAVER DOWEL @ SHEAR WALL

C1 S30.14 TYPICAL CONCRTE OVER FLOOR DECK BEARING AT CONCRETE WALL - BEARING PERPENDICULAR & PARALLEL

NO SCALE



DETAIL AT FLOOR

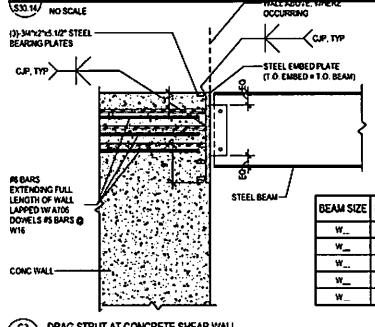
NOTE: DO NOT WELD STEEL BEAM TO BEARING PLATE

COLLECTOR CONNECTION SCHEDULE		
MARK	DYWDAG BARS	LENGTH
1	—	
2		
3		
4		
5		
6		
7		
8		
9		

NOTE
1. FILLET WELD TWO SIDES. WELD THICKNESS IS WEB THICKNESS MINUS 1/16" (1/4" MIN)

C3 S30.14 COMPOSITE DECK CONNECTION TO CONCRETE WALL

NO SCALE



BEAM SIZE	EMBED PLATE	REBAR (A706)
W__	?????	2-#5 x 4'-0" @ 8" O.C.
W__	?????	2-#5 x 4'-0" @ 8" O.C.
W__	?????	2-#5 x 4'-0" @ 8" O.C.
W__	?????	2-#5 x 4'-0" @ 8" O.C.
W__	?????	2-#5 x 4'-0" @ 8" O.C.

C1 S30.14 TYPICAL COLLECTOR CONNECTION SCHEDULE AND DETAILS AT CONCRETE SHEAR WALLS

NO SCALE

C3 S30.14 DRAG STRUT AT CONCRETE SHEAR WALL

NO SCALE

R&A
4180 Townsgate Boulevard, Suite 100
Carson City, CA 89703
tel 310.716.6610
www.r-a-e.com
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Consulting Structural Engineers

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5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE SHEARWALL DETAILS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO 236

DATE 06-27-2017

SCALE 1" = 1'-0"

SHEET NO S30.14

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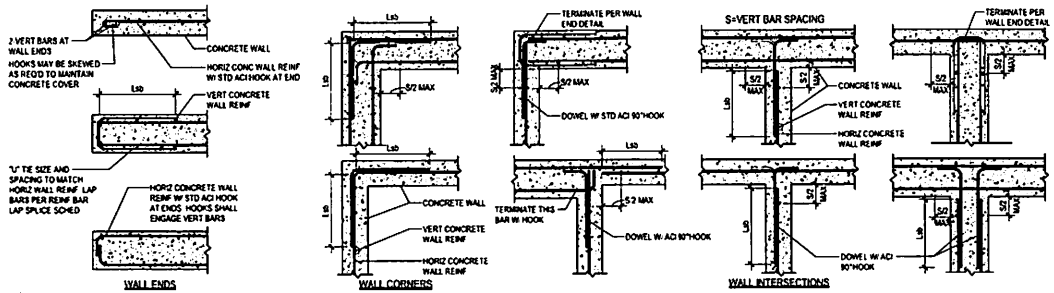
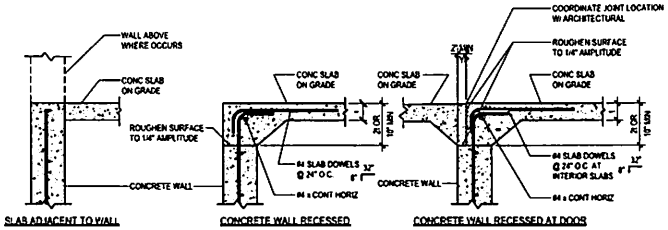
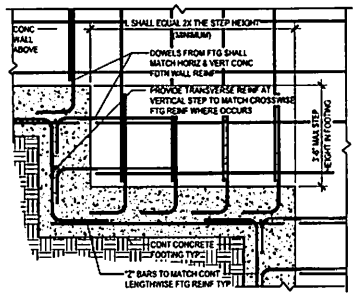


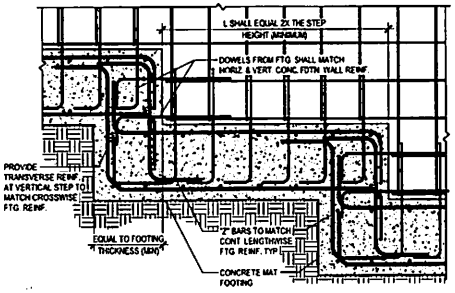
D1 TYPICAL CONCRETE WALL REINFORCING AT ENDS, CORNERS AND INTERSECTIONS (PLAN VIEWS)
S50.01 NO SCALE



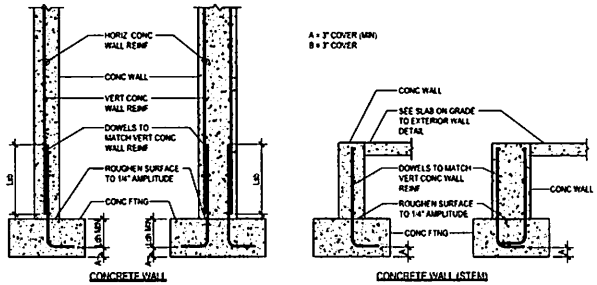
D4 TYPICAL CONCRETE SLAB ON GRADE TO CONCRETE WALL
S50.01 NO SCALE



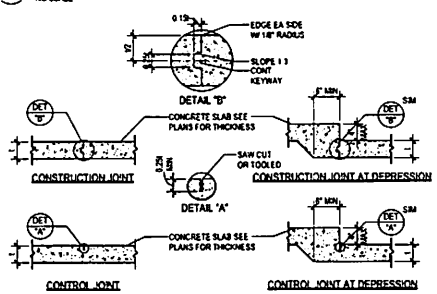
C1 TYPICAL STEP DETAIL AT CONTINUOUS FOOTING
S50.01 NO SCALE

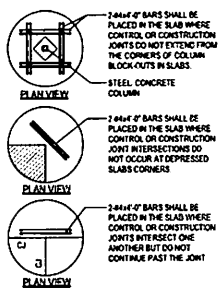


C2 TYPICAL STEP DETAIL AT MAT FOOTING
S50.01 NO SCALE

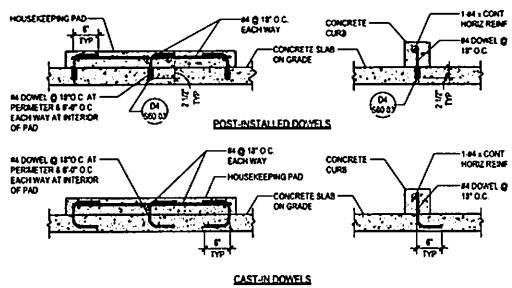


C3 TYPICAL CONCRETE WALL CONNECTION TO CONCRETE FOOTING
S50.01 NO SCALE

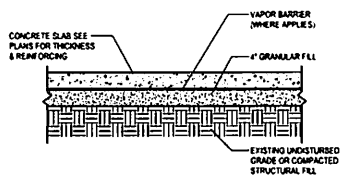




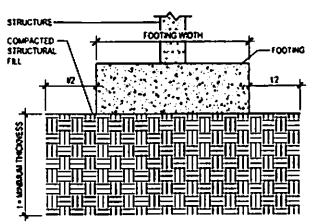
B1 TYPICAL CONCRETE SLAB ON GRADE DETAILS
S50.01 NO SCALE



B3 TYPICAL HOUSEKEEPING PAD & CURB DETAILS AT CONCRETE SLAB ON GRADE
S50.01 NO SCALE



B5 TYPICAL CONCRETE SLAB ON GRADE PROFILE
S50.01 NO SCALE



A5 TYPICAL COMPACTED STRUCTURAL FILL DETAIL
S50.01 NO SCALE

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POWDER MOUNTAIN

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
TYP FOOTING & FOUNDATION DETAILS

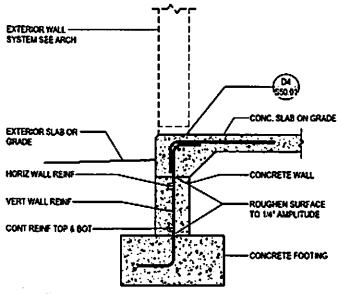
No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	06-27-17

JOB NO 236

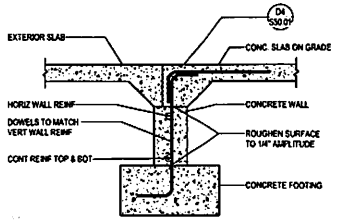
DATE 06-27-2017

SCALE As indicated

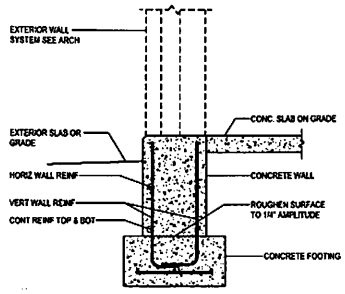
SHEET NO S50.01



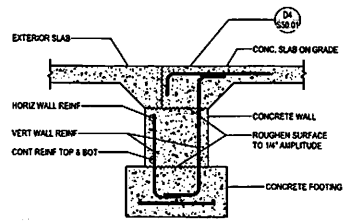
D1 S50.02 TYPICAL CONCRETE SLAB TO FOUNDATION WALL AT CURTAIN WALL
NO SCALE



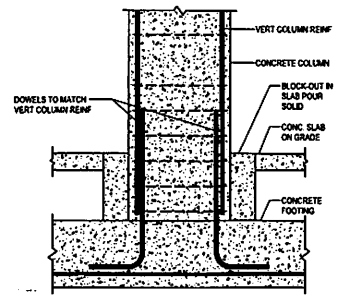
D2 S50.02 TYPICAL CONCRETE SLAB TO FOUNDATION WALL AT DOOR OPENING
NO SCALE



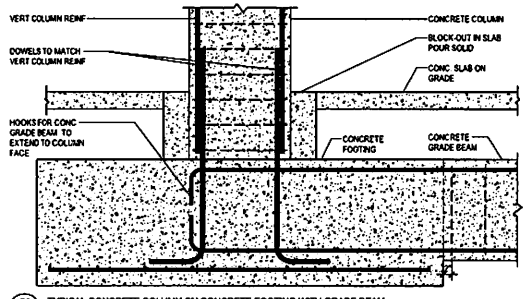
D3 S50.02 TYPICAL CONCRETE WALL ON CONCRETE FOOTING
NO SCALE



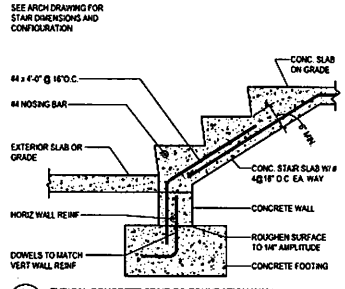
D4 S50.02 TYPICAL CONCRETE SLAB TO FOUNDATION WALL AT DOOR OPENING
NO SCALE



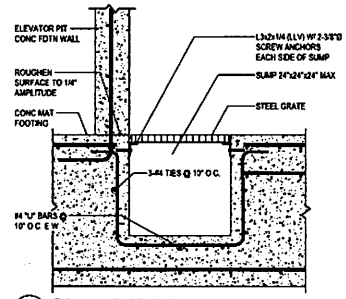
D5 S50.02 TYPICAL CONCRETE COLUMN ON CONCRETE FOOTING
NO SCALE



C2 S50.02 TYPICAL CONCRETE COLUMN ON CONCRETE FOOTING WITH GRADE BEAM
NO SCALE



C4 S50.02 TYPICAL CONCRETE STAIR TO FOUNDATION WALL
NO SCALE



C5 S50.02 TYPICAL SUMP AT ELEVATOR PIT WALL
NO SCALE

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POWDER MOUNTAIN

5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
FOOTING & FOUNDATION DETAILS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO. 236

DATE 06-27-2017

SCALE 1" = 1'-0"

SHEET NO. S50.02

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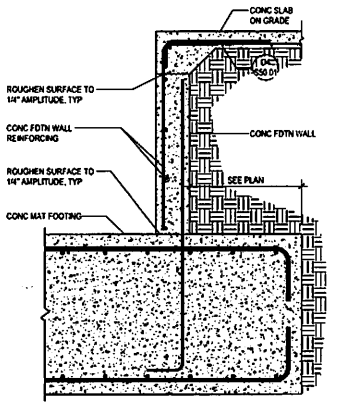
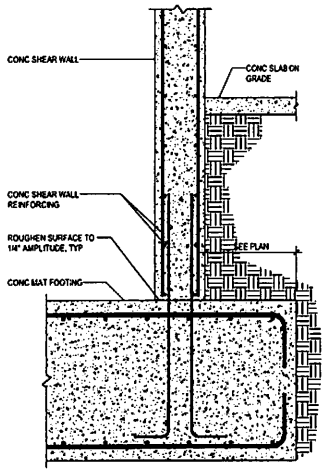
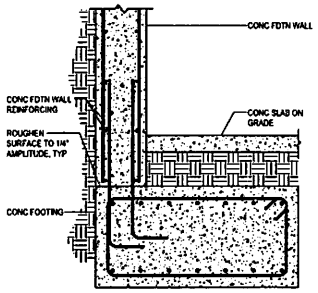


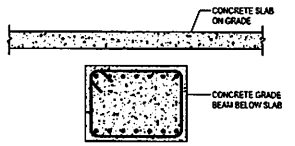
D1 S50.03 TYPICAL ELEVATOR PIT DETAIL AT DOOR OPENING
NO SCALE



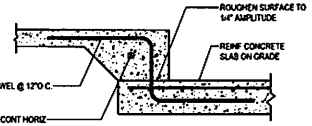
D2 S50.03 TYPICAL ELEVATOR PIT DETAIL
NO SCALE



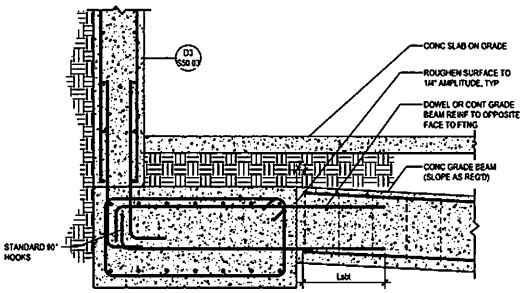
D3 S50.03 TYPICAL CONCRETE WALL TO FOOTING DETAIL
NO SCALE



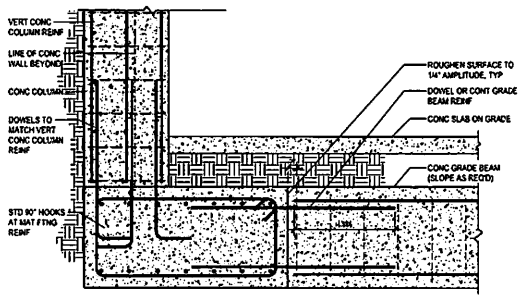
D4 S50.03 TYPICAL CONCRETE GRADE BEAM BELOW SLAB ON GRADE
NO SCALE



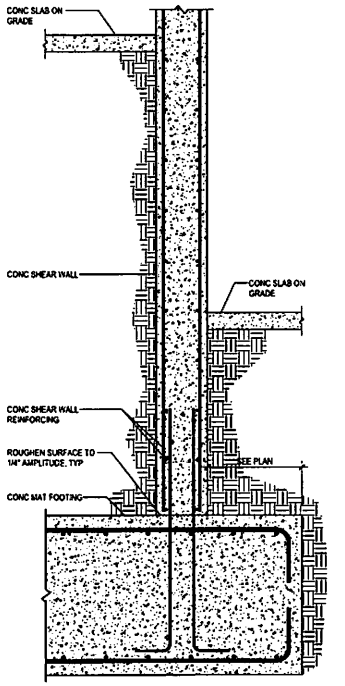
D5 S50.03 TYPICAL 12" STEP IN CONCRETE SLAB ON GRADE
NO SCALE



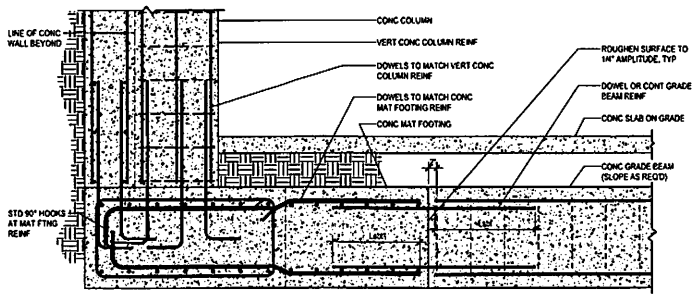
C3 S50.03 CONCRETE WALL TO FOOTING DETAIL WITH CONCRETE GRADE BEAM
NO SCALE



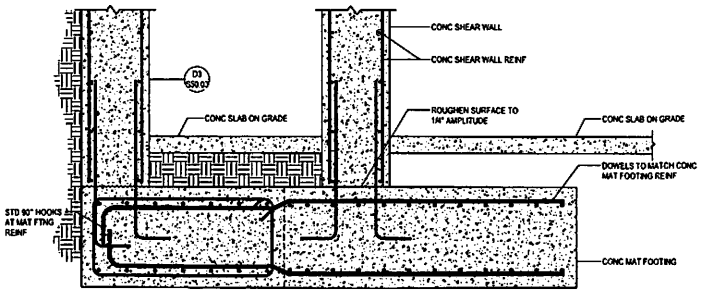
C5 S50.03 TYPICAL CONCRETE COLUMN TO FOOTING DETAIL WITH CONCRETE GRADE BEAM
NO SCALE



A1 S50.03 SHEAR WALL DETAIL TO FOOTING AT FLOOR STEP
NO SCALE



A2 S50.03 CONCRETE WALL/COLUMN TO FOOTING DETAIL
NO SCALE



A4 S50.03 CONCRETE WALL TO FOOTING DETAIL
NO SCALE

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
FOOTING & FOUNDATION DETAILS

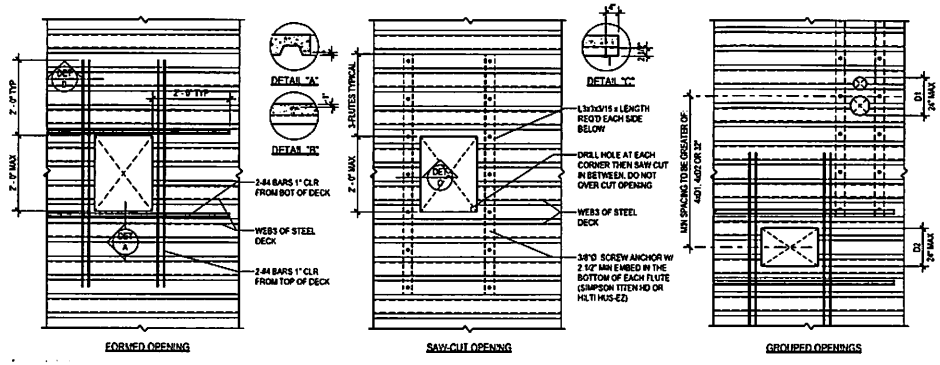
No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/6/27

JOB NO 236

DATE 06-27-2017

SCALE 1" = 1'-0"

SHEET NO S50.03



NOTES:
1 UNREINFORCED OPENINGS
A. OPENINGS UP TO 6"Ø DO NOT REQUIRE REINFORCING PROVIDED THEY ARE NOT SPACED LESS THAN 12" O.C.

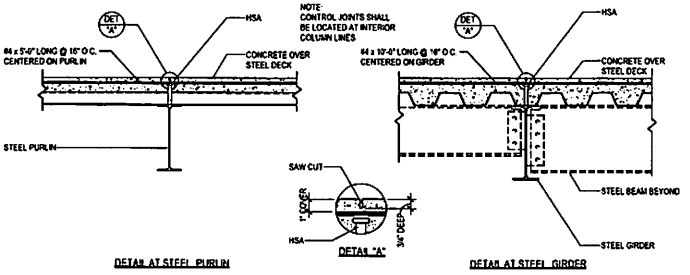
2 FORMED OPENINGS
A. LEAVE METAL DECK INTACT. PLACE REBAR & FORM OPENING. REMOVE METAL DECK ONCE CONCRETE REACHES 2500psi

3 SAW-CUT OPENINGS
A. SHIM CAPS BETWEEN ANGLE AND BOTTOM FLUTE.
B. INSTALL ANCHORS PER ICC REPORT.

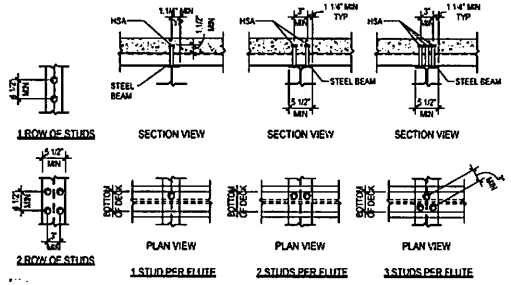
4 GROUPED OPENINGS
A. OPENINGS SPACED CLOSER THAN THE MIN SPACING SHALL BE REINFORCED AS A SINGLE OPENING.
B. THE SIZE OF OPENINGS MEASURED PARALLEL TO THE DECK FLUTES IS NOT LIMITED

5. OPENINGS LARGER THAN ALLOWED ON THESE DETAILS REQUIRE A FRAME. CONTACT ENGINEER IF FRAME IS NOT PROVIDED ON THE PLAN

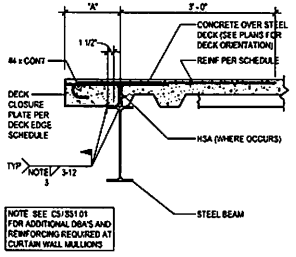
D1 S51.01 TYPICAL MISCELLANEOUS FLOOR OPENING (UP TO 24") REINFORCING DETAIL FOR COMPOSITE STEEL DECK
NO SCALE



D4 S51.01 TYPICAL COMPOSITE DECK CONTROL JOINTS
NO SCALE



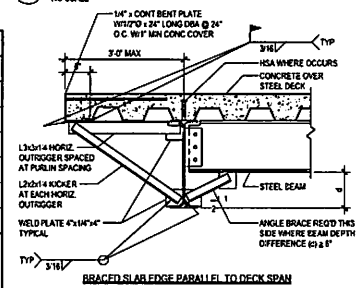
C1 S51.01 TYPICAL STUD PLACEMENT DIAGRAMS
NO SCALE



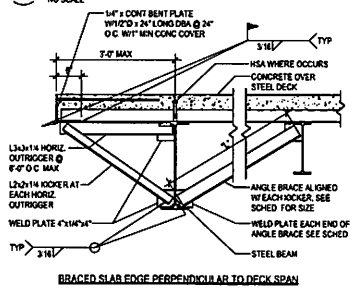
TYPICAL SLAB EDGE DETAIL

DECK EDGE SCHEDULE			
"A"	DECK CLOSURE PLATE THICKNESS	DECK CLOSURE PLATE ANCHORS	REINFORCING
0" TO 6"	3/16"	1/2" Ø x 18" LONG DBA @ 24" O.C.	NONE
UP TO 12"	3/16"	1/2" Ø x 24" LONG DBA @ 24" O.C.	#4 @ 12" O.C.
UP TO 15"	1/4"	1/2" Ø x 24" LONG DBA @ 24" O.C.	#4 @ 12" O.C.
UP TO 18"	5/16"	1/2" Ø x 24" LONG DBA @ 24" O.C.	#4 @ 10" O.C.
UP TO 20"	3/8"	1/2" Ø x 24" LONG DBA @ 24" O.C.	#4 @ 8" O.C
OVER 20"	USE BRACED SLAB EDGE DETAILS		

NOTES
1 CONTRACTOR SHALL VERIFY ALL DECK EDGE DIMENSIONS WITH ARCH. DRAWINGS PRIOR TO DETAILING AND FABRICATION OF CLOSURE PLATES
2 COORDINATE CLOSURE PLATES WITH EMBEDS, BLOCKOUTS OR INSERTS THAT ARE REQ'D TO SUPPORT CLADDING, ELEVATOR RAILS & SILLS ETC.
3 CLOSURE PLATE WELD THICKNESS SHALL BE THE PLATE THICKNESS W/MIN 1/16" - 3/16" MIN.



BRACED SLAB EDGE PARALLEL TO DECK SPAN

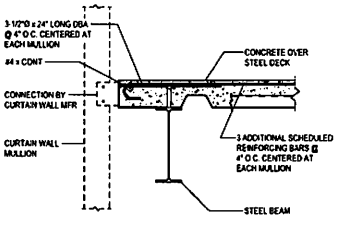


ANGLE BRACE SCHEDULE		
BRACE LENGTH "L"	ANGLE BRACE SIZE	WELD PLATE SIZE
UP TO 4'-0"	L2x2x1/4	4"x1/4"x4"
4'-0" TO 8'-0"	L3x3x1/4	4"x1/4"x4"
8'-0" TO 12'-0"	L4.2 l2.2 l2.2 l x1/4	4"x3/8"x6"
OVER 12'-0"	2-L3x3x1/4	5"x3/8"x5"

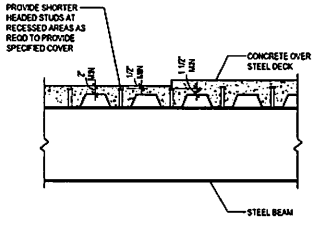
NOTE:
1 WHERE DOUBLE ANGLES ARE USED PROVIDE 3"x3/8" SPACER PLATES AT THIRD POINTS

C2 S51.01 TYPICAL COMPOSITE DECK BEARING DETAIL AT STEEL BEAM (DECK GIRDER FILLER)
NO SCALE

C4 S51.01 TYPICAL HOUSEKEEPING PAD & CURB DETAILS AT CONCRETE OVER STEEL DECK
NO SCALE

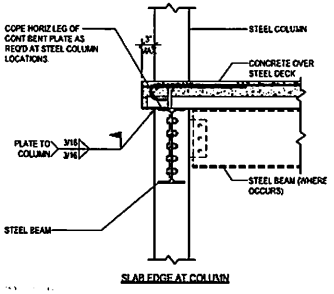


C5 S51.01 TYPICAL DECK EDGE REINFORCEMENT AT CURTAIN WALL MULLIONS
NO SCALE

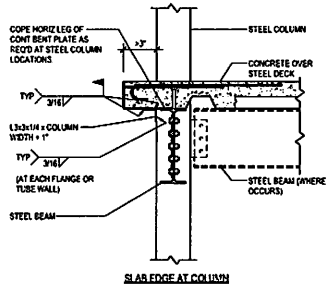


D5 S51.01 TYPICAL COMPOSITE STEEL BEAM AT SLAB RECESS
NO SCALE

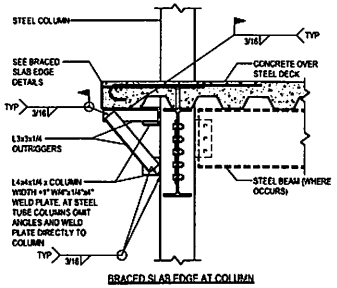
B1 S51.01 TYPICAL CONCRETE OVER STEEL DECK SLAB EDGE DETAILS AT STEEL BEAMS
NO SCALE



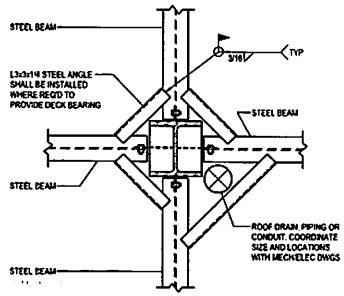
SLAB EDGE AT COLUMN



SLAB EDGE AT COLUMN



BRACED SLAB EDGE AT COLUMN



A1 S51.01 TYPICAL CONCRETE OVER STEEL DECK SLAB EDGE DETAILS AT STEEL COLUMNS
NO SCALE

A4 S51.01 TYPICAL DECK BEARING AT STEEL COLUMN (PLAN VIEW)
NO SCALE

6/27/2017 3:43:08 PM

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4180 Sorensen Parkway, Suite 100
Coker Co, CA 92078
tel. 310.776.6616
www.r-&-a.com

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Consulting Structural Engineers
tel. 801.566.5599
fax. 801.566.5581
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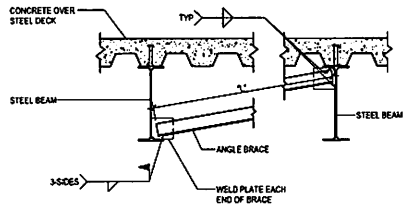
POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
TYP CONCRETE OVER STEEL DECK DETAILS

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

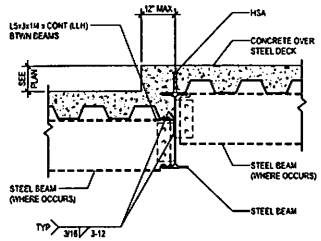
JOB NO. 236
DATE 06-27-2017
SCALE As indicated
SHEET NO S51.01

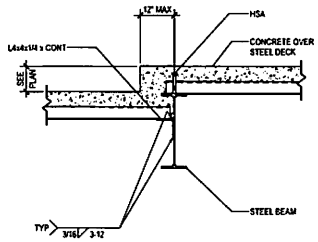


ANGLE BRACE SCHEDULE		
BRACE LENGTH "L"	ANGLE BRACE SIZE	WELD PLATE SIZE
UP TO 4'-0"	L2x2x1/4	4"x1/4"x4"
4'-0" TO 8'-0"	L3x3x1/4	4"x1/4"x4"
8'-0" TO 12'-0"	2-L2 1/2x2 1/2x1/4	4"x3/8"x4"
OVER 12'-0"	2-L3x3x1/4	5"x3/8"x5"

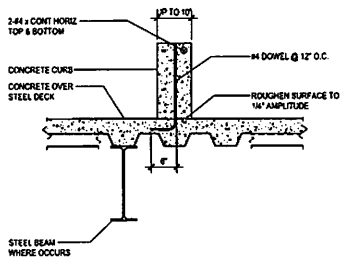
NOTE
1. WHERE DOUBLE ANGLES ARE USED PROVIDE 3"x3/8" SPACER PLATES AT THIRD POINTS

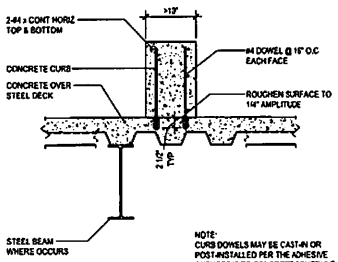
D1 / S51.02 TYPICAL STEEL BEAM BOTTOM FLANGE BRACE DETAIL
NO SCALE





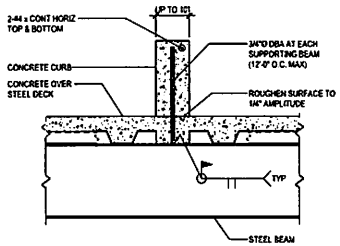
D3 / S51.02 TYPICAL DETAIL AT STEP IN COMPOSITE FLOOR DECK
NO SCALE

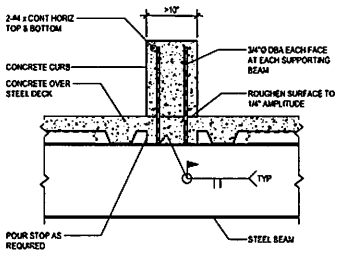




NOTE:
CURB DOWELS MAY BE CAST-IN OR POST-INSTALLED PER THE ADHESIVE ANCHORING TO CONCRETE SCHEDULE

C1 / S51.02 TYPICAL CONCRETE CURB WALL ON COMPOSITE FRAMING
NO SCALE





C3 / S51.02 TYPICAL CONCRETE CURB WALL ON COMPOSITE FRAMING
NO SCALE

R&A
REAVELEY ENGINEERS + ASSOCIATES

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
TYPICAL FLOOR FRAMING DETAILS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO
236

DATE
06-27-2017

SCALE
1" = 1'-0"

SHEET NO
S51.02

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CONCRETE FOUNDATION WALL SCHEDULE

MARK	THICK	HORIZONTAL REINFORCING	VERTICAL REINFORCING	T & B HORIZ. BARS	PLACEMENT
CFW-1	8"	#5 @ 12" O.C.	#4 @ 16" O.C.	1-#5	TYPE A
CFW-2	8"	#5 @ 12" O.C.	#4 @ 16" O.C.	1-#5	TYPE A
CFW-3	1'-4"	#5 @ 15" O.C. E.F.	#9 @ 8" O.C. I.F. #5 @ 18" O.C. O.F.	1-#5 E.F.	TYPE C
CFW-4	1'-2"	#4 @ 11" O.C. E.F.	#7 @ 11" O.C. I.F. #4 @ 11" O.C. O.F.	1-#4 E.F.	TYPE C
CFW-5	1'-2"	#4 @ 11" O.C. E.F.	#8 @ 8" O.C. I.F. #4 @ 11" O.C. O.F.	1-#4 E.F.	TYPE C

NOTES
1. HORIZONTAL WALL REINFORCING SHALL BE CONTINUOUS THRU CONSTRUCTION & CONTROL JOINTS.
2. SPLICES IN HORIZONTAL WALL REINFORCING SHALL BE TYPE Lsb. STAGGERED SUCH THAT SPLICES DO NOT OVERLAP. SPLICES IN TWO CURTAINS SHALL NOT OCCUR IN THE SAME LOCATION.

PLACEMENT TYPES

E.F. = EACH FACE
O.F. = OUTSIDE FACE (AGAINST SOIL)
I.F. = INSIDE FACE
3L = THREE LAYERS

CONCRETE FOOTING SCHEDULE

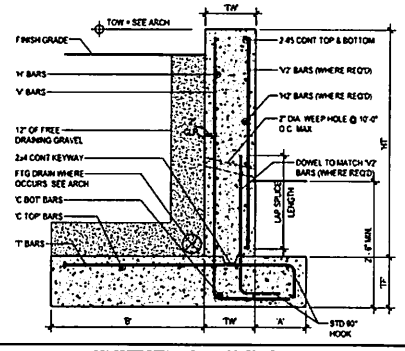
MARK	WIDTH	LENGTH	THICK	CROSSWISE REINFORCING NO.	CROSSWISE REINFORCING SIZE	CROSSWISE REINFORCING LENGTH	CROSSWISE REINFORCING SPACE	LENGTHWISE REINFORCING NO.	LENGTHWISE REINFORCING SIZE	LENGTHWISE REINFORCING LENGTH	LENGTHWISE REINFORCING SPACE	REMARKS
FTS2.0	2'-0"	CONT.	1'-0"	–	NONE	REQ'D	–	3	#4	CONT	9"	
FC2.0	2'-0"	CONT.	1'-0"	–	NONE	REQ'D	–	3	#4	CONT	9"	
FC4.0	4'-0"	CONT.	2'-0"	–	#4	–	6"	7	#7	CONT	7"	TOP AND BOTTOM SEE NOTE #5
FS4.0	4'-0"	4'-0"	1'-2"	7	#4	3'-6"	7"	7	#4	3'-6"	7"	
FS6.0	6'-0"	6'-0"	2'-0"	9	#5	5'-6"	8.25"	9	#5	5'-6"	8.25"	
FS7.5	7'-6"	7'-6"	2'-0"	9	#6	7'-0"	10.5"	9	#6	7'-0"	10.5"	
FS8.5	8'-6"	8'-6"	2'-1"	12	#6	8'-0"	8.8"	12	#6	8'-0"	8.8"	
FS9.5	9'-6"	9'-6"	2'-5"	14	#6	9'-0"	8.31"	14	#6	9'-0"	8.31"	
FS10.5	10'-0"	10'-0"	2'-6"	12	#7	9'-6"	10.4"	12	#7	9'-6"	10.4"	
FS11.5	11'-0"	11'-0"	2'-9"	14	#7	10'-6"	9.63"	14	#7	10'-6"	9.63"	
FS12.5	12'-0"	12'-0"	2'-11"	13	#8	11'-6"	11.5"	13	#8	11'-6"	11.5"	
FR15.0x7.5	7'-6"	15'-0"	3'-11"			7'-0"				7'-0"		

1. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER UNLESS NOTED OTHERWISE.
2. TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" CLEAR CONCRETE COVER.
3. SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS, UNLESS NOTED OTHERWISE.
4. ALL FOOTINGS SHALL BE FORMED. FOOTINGS SHALL NOT BE EARTH FORMED OR OVERSIZED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.
5. CROSSWISE REINFORCING CONSISTS OF CLOSED TIES. SEE FOOTING AND FOUNDATION DETAIL.

CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE LENGTH SCHEDULE

BAR SIZE	f'c = 3000 PSI				f'c = 4000 PSI				f'c = 4500 PSI				f'c = 5000 PSI				f'c = 6000 PSI				f'c = ALL	
	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ldc	Lsc
#3	17"	22"	22"	28"	15"	19"	19"	25"	14"	18"	18"	23"	13"	17"	17"	22"	12"	16"	16"	20"	6"	12"
#4	22"	29"	29"	38"	19"	25"	25"	33"	18"	24"	24"	31"	17"	23"	23"	29"	16"	21"	21"	27"	10"	15"
#5	28"	36"	36"	47"	24"	31"	31"	41"	23"	30"	30"	39"	22"	28"	28"	36"	20"	26"	26"	33"	12"	19"
#6	33"	43"	43"	56"	29"	37"	37"	49"	27"	35"	35"	46"	26"	34"	34"	44"	24"	31"	31"	40"	15"	23"
#7	48"	63"	63"	81"	42"	54"	54"	71"	40"	51"	51"	67"	38"	49"	49"	63"	34"	45"	45"	58"	17"	27"
#8	55"	72"	72"	93"	48"	62"	62"	81"	45"	59"	59"	78"	43"	56"	56"	72"	39"	51"	51"	66"	19"	30"
#9	62"	81"	81"	105"	54"	70"	70"	91"	51"	66"	66"	86"	48"	63"	63"	81"	44"	57"	57"	74"	22"	34"
#10	78"	91"	91"	118"	61"	79"	79"	102"	57"	74"	74"	96"	54"	71"	71"	92"	50"	64"	64"	84"	24"	39"
#11	78"	101"	101"	131"	67"	87"	87"	114"	64"	82"	82"	107"	60"	78"	78"	102"	55"	71"	71"	93"	27"	43"
#14	93"	121"	NA	NA	81"	105"	NA	NA	76"	99"	NA	NA	72"	94"	NA	NA	65"	86"	NA	NA	33"	NA
#18	124"	161"	NA	NA	108"	140"	NA	NA	101"	132"	NA	NA	96"	125"	NA	NA	86"	114"	NA	NA	43"	NA

NOTES
1. DEFINITIONS
   - Ld: TENSION DEVELOPMENT LENGTH FOR REINFORCEMENT SATISFYING THE FOLLOWING CONDITIONS:
     - SLABS AND WALLS: CLEAR SPACING > 3db AND CONCRETE CLEAR COVER > db
     - BEAMS AND COLUMNS: CLEAR COVER SPACING > db AND CONCRETE CLEAR COVER > db
   - Lt: DEVELOPMENT LENGTH FOR TOP BARS IN TENSION
   - Lsb: TENSION LAP SPLICE LENGTH FOR OTHER THAN TOP BARS (CLASS B)
   - Lsbt: TENSION LAP SPLICE LENGTH OF TOP BARS
   - Ldc: DEVELOPMENT LENGTH FOR BARS IN COMPRESSION
   - Lsc: TIED COLUMN LAP SPLICE IN COMPRESSION
   - db: NOMINAL BAR DIAMETER (INCHES)
   - TOP BARS: HORIZONTAL BEAM REINFORCEMENT WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW
2. MULTIPLY VALUES IN SCHEDULE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET REQUIREMENTS FOR Ld IN NOTE 1
3. MULTIPLY VALUES IN SCHEDULE BY 1.3 FOR USE IN LIGHTWEIGHT AGGREGATE CONCRETE.
4. FOR EPOXY COATED BAR MULTIPLY VALUES IN SCHEDULE BY 1.5 FOR BARS WITH CLEAR COVER < 3db OR CLEAR SPACING < 6db. OTHERWISE MULTIPLY VALUES BY 1.2
5. a. FOR BUNDLED BARS OF THREE OR LESS MULTIPLY LENGTHS BY 1.2
   b. FOR BUNDLED BARS OF FOUR OR MORE MULTIPLY LENGTHS BY 1.33
   c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED
6. SCHEDULE LENGTHS ARE FOR fy=60ksi REINFORCING. MULTIPLY LENGTHS BY 1.25 FOR fy=75ksi REINFORCING
7. LAP SPLICES ARE NOT PERMITTED FOR #14 & #18 BARS. USE BAR COUPLERS PER G.S.N.

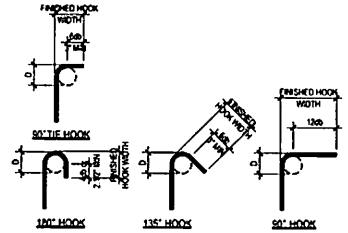


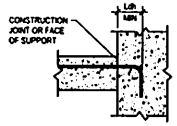
CONCRETE RETAINING WALL SCHEDULE

MARK	'HT'	'A'	'B'	'TW'	'TF'	'V' BARS SIZE	'V' BARS SPACE	'H' BARS SIZE	'H' BARS SPACE	'V2' BARS SIZE	'V2' BARS SPACE	'H2' BARS SIZE	'H2' BARS SPACE	'T' BARS SIZE	'T' BARS SPACE	'C TOP' BARS SIZE	'C TOP' BARS SPACE	'C BOT' BARS SIZE	'C BOT' BARS SPACE

1. 'V' BARS SHALL NOT BE SPLICED BELOW MID-HEIGHT OF WALL.
2. FOR WALLS WITH HT OF 9'-0" & GREATER ONE HALF OF THE 'V' BARS CAN BE DISCONTINUED FROM MID-HEIGHT TO TOP OF WALL.

S2 / S60.01 TYPICAL CONCRETE RETAINING WALL SCHEDULE AND DETAIL
NO SCALE





TENSION HOOK DEVELOPMENT LENGTH (Ldh)

BAR SIZE	NORMAL WEIGHT CONCRETE, f'c = PSI 3,000	4,000	4,500	5,000	6,000
#3	6"	6"	6"	6"	6"
#4	6"	7"	7"	7"	7"
#5	10"	9"	9"	9"	7"
#6	12"	10"	10"	9"	9"
#7	14"	12"	11"	11"	10"
#8	16"	14"	13"	12"	11"
#9	18"	15"	14"	14"	13"
#10	20"	17"	16"	15"	14"
#11	22"	19"	18"	17"	16"
#14	37"	32"	31"	29"	27"
#18	50"	43"	41"	39"	35"

NOTES:
1. VALUES HERE VALID FOR ALL CASES IF
   SIDE COVER ≥ 2 1/2"
   END COVER ≥ 2"
2. MULTIPLY VALUES IN SCHEDULE BY 1.2 FOR LIGHTWEIGHT CONCRETE
3. MULTIPLY VALUES IN SCHEDULE BY 1.2 FOR USE WITH EPOXY COATED REBAR

END HOOK SCHEDULE

BAR SIZE	D	FINISHED HOOK WIDTH 180° HOOK	135° HOOK	90° HOOK	90° TIE HOOK
#3	2 1/4"	3"	4 1/4"	6"	6"
#4	3"	4"	4 1/2"	8"	4 1/2"
#5	3 1/4"	5"	5 1/2"	10"	8"
#6	4 1/2"	6"	8"	12"	–
#7	5 1/4"	7"	9"	14"	–
#8	6"	8"	10 1/2"	16"	–
#9	9 1/2"	11 3/4"	–	19"	–
#10	10 3/4"	13 1/4"	–	22"	–
#11	12"	14 3/4"	–	24"	–
#14	16 1/4"	21 3/4"	–	31"	–
#18	21"	28 1/2"	–	41"	–

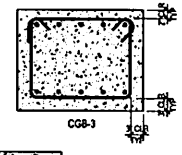
D4 / S60.01 REINFORCEMENT END HOOK SCHEDULE
NO SCALE

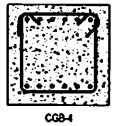
B5 / S60.01 TENSION HOOK DEVELOPMENT SCHEDULE
NO SCALE

CONCRETE GRADE BEAM SCHEDULE

MARK	WIDTH	DEPTH	LENGTHWISE REINFORCING	CLOSED TIES	REMARKS
CGB-1	2'-0"	1'-6"	4-#5 TOP AND BOTTOM	#4 @ 5" O.C.	
CGB-2	2'-0"	2'-0"	4-#6 TOP AND BOTTOM	#4 @ 8" O.C.	
CGB-3	2'-6"	2'-0"	5-#6 TOP AND BOTTOM	#4 @ 8" O.C.	
CGB-4	2'-0"	2'-0"	6-#5 TOP AND BOTTOM	#4 @ 7" O.C.	


CGB-1 & CGB-2




CGB-4

1 / S60.01 Grade Beam Details
SCALE: 1" = 1'-0"

R&A
6965 Fairmile Boulevard, Suite 102
Cohen City, CA 95678
ph. 310.758.1646
www.r-a-d.com
REAVELEY
ENGINEERS + ASSOCIATES
Consulting Structural Engineers

STAMP
NO. 270798
CRAIG A. REAVELEY
STATE OF UTAH
REGISTERED PROFESSIONAL ENGINEER
06-27-2017

NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE SCHEDULES

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	06 Feb 17

ISSUE NO. 236
DATE 06-27-2017
SCALE 1" = 1'-0"
SHEET NO. S60.01

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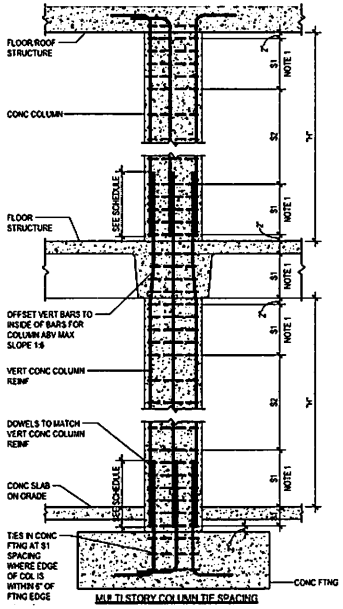
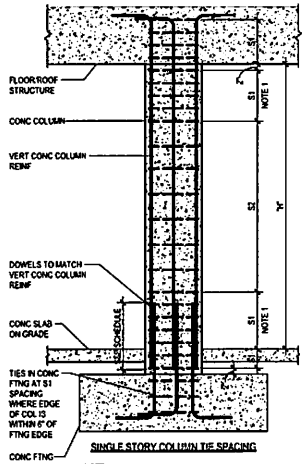
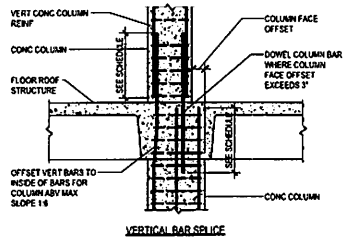
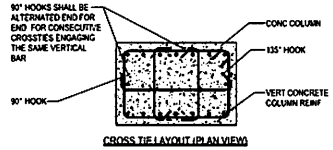


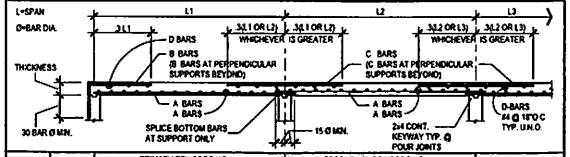






C1 TYPICAL CONCRETE COLUMN TIE DIAGRAMS
S60.02/ NO SCALE

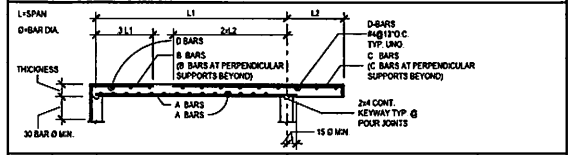
CONCRETE SUSPENDED SLAB SCHEDULE



MARK	THICK	PRIMARY REINFORCING			SECONDARY REINFORCING			D BARS
		A BARS	B BARS	C BARS	A BARS	B BARS	C BARS	
CSS-1	?	?	?	?	?	?	?	?

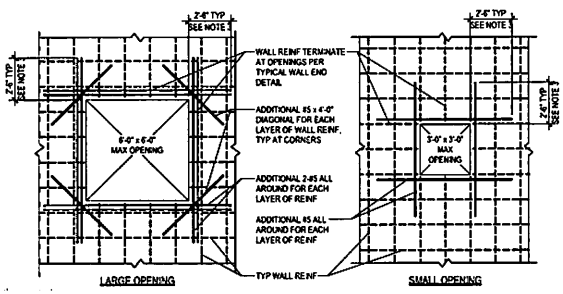
NOTES
1 PRIMARY REINFORCING SHALL RUN PARALLEL TO THE DIRECTION OF THE ARROW ( )
2 PRIMARY BOTTOM REINFORCING SHALL BE PLACED BELOW SECONDARY BOTTOM REINFORCING PRIMARY TOP REINFORCING SHALL BE PLACED ABOVE SECONDARY TOP REINFORCING.

CANTILEVERED CONCRETE SUSPENDED SLAB SCHEDULE



MARK	THICK	PRIMARY REINFORCING			SECONDARY REINFORCING			D BARS
		A BARS	B BARS	C BARS	A BARS	B BARS	C BARS	
CSS-1	?	?	?	?	?	?	?	?

NOTES
1. PRIMARY REINFORCING SHALL RUN PARALLEL TO THE DIRECTION OF THE ARROW ( )
2 PRIMARY BOTTOM REINFORCING SHALL BE PLACED BELOW SECONDARY BOTTOM REINFORCING PRIMARY TOP REINFORCING SHALL BE PLACED ABOVE SECONDARY TOP REINFORCING.



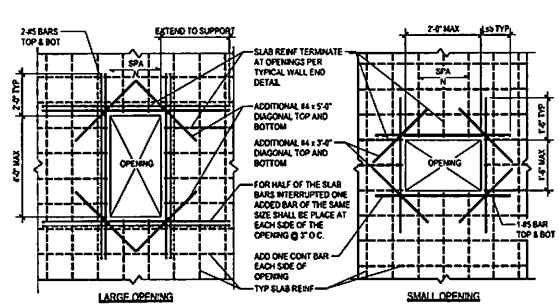
NOTES:
1 OMIT ADDED REINFORCEMENT SHOWN WHEN SPECIAL REINFORCEMENT INDICATED ON PLANS OR DETAILS, EXCEEDS THIS REINFORCEMENT.
2. CONTRACTOR SHALL VERIFY ALL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS WITH THE STRUCTURAL ENGINEER BEFORE PLACEMENT.
3 WHEN EDGE OF CONCRETE CLOSE TO OPENING WILL NOT ALLOW THIS LENGTH TERMINATE AT EDGE WITH STANDARD HOOK
4 WHERE MULTIPLE OPENINGS OCCUR WITHIN TWO TIMES THE OPENING DIMENSION, THE GROUP OF OPENINGS SHALL BE TREATED AS A SINGLE OPENING

B1 TYPICAL OPENINGS THROUGH CONCRETE WALLS
S60.02/ NO SCALE

CONCRETE COLUMN SCHEDULE

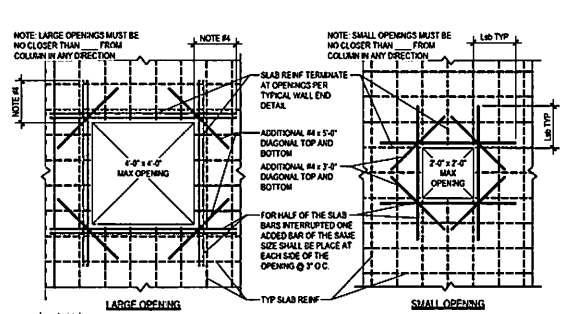
MARK	SIZE	REINFORCING					REMARKS
		VERTICAL	SPLICE	TIES	S1 SPACING	S2 SPACING	
CC-1	20" x 20"	4-#9	-	#5	4"	6"	

NOTES:
1. SEE DETAIL FOR TYPICAL CONCRETE COLUMN TIE SPACING AND PLACEMENT.
2 SEE CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE LENGTH SCHEDULE.



NOTES:
1. OMIT ADDED REINFORCEMENT SHOWN WHEN SPECIAL REINFORCEMENT INDICATED ON PLANS OR DETAILS, EXCEEDS THIS REINFORCEMENT.
2. CONTRACTOR SHALL VERIFY ALL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS WITH THE STRUCTURAL ENGINEER BEFORE PLACEMENT.
3. WHEN EDGE OF CONCRETE CLOSE TO OPENING WILL NOT ALLOW THIS LENGTH TERMINATE AT EDGE WITH STANDARD HOOK.
4. EXTEND NEW REINFORCEMENT TO END OF INTERRUPTED REINFORCEMENT OR 12"-0" BEYOND EDGE OF OPENING WHICHEVER IS SMALLER
5. WHERE MULTIPLE OPENINGS OCCUR WITHIN TWO TIMES THE OPENING DIMENSION, THE GROUP OF OPENINGS SHALL BE TREATED AS A SINGLE OPENING

A1 TYPICAL OPENING THROUGH ONE WAY CONCRETE SUSPENDED SLAB (PLAN VIEW)
S60.02/ NO SCALE



NOTES:
1 OMIT ADDED REINFORCEMENT SHOWN WHEN SPECIAL REINFORCEMENT INDICATED ON PLANS OR DETAILS, EXCEEDS THIS REINFORCEMENT.
2 CONTRACTOR SHALL VERIFY ALL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS WITH THE STRUCTURAL ENGINEER BEFORE PLACEMENT
3. WHEN EDGE OF CONCRETE CLOSE TO OPENING WILL NOT ALLOW THIS LENGTH TERMINATE AT EDGE WITH STANDARD HOOK.
4. EXTEND NEW REINFORCEMENT TO END OF INTERRUPTED REINFORCEMENT OR 12"-0" BEYOND EDGE OF OPENING WHICHEVER IS SMALLER
5. WHERE MULTIPLE OPENINGS OCCUR WITHIN TWO TIMES THE OPENING DIMENSION, THE GROUP OF OPENINGS SHALL BE TREATED AS A SINGLE OPENING

A3 TYPICAL DETAIL AT OPENINGS THROUGH TWO WAY CONCRETE SUSPENDED SLAB (PLAN VIEW)
S60.02/ NO SCALE

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE SCHEDULES

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO 236
DATE 06-27-2017
SCALE As indicated
SHEET NO S60.02

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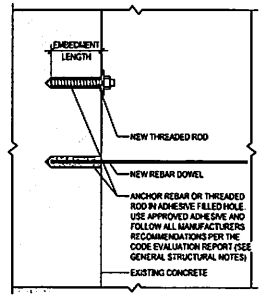
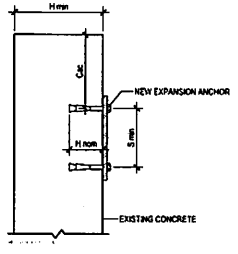


ADHESIVE ANCHORS IN CONCRETE SCHEDULE

REINFORCING BAR		THREADED ROD	
DOWEL SIZE #	EMBEDMENT LENGTH (SEE NOTE #2)	SIZE	EMBEDMENT LENGTH (SEE NOTE #2)
3	6"	3/8"Ø	4 1/2"
#4	6"	1/2"Ø	6"
#5	9"	5/8"Ø	7 1/2"
#6	10"	3/4"Ø	9"
#7	12 1/2"	7/8"Ø	10 1/2"
#8	13"	1"Ø	12"
#9	14"	1 1/4"Ø	15"
#10	18"		
#11	19"		

NOTES:
1. THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DRAWINGS AND AT OTHER LOCATIONS WITH APPROVAL OF THE STRUCTURAL ENGINEER.
2. EMBEDMENT LENGTHS SPECIFIED ON PLANS OR DETAILS TAKE PRECEDENCE OVER EMBEDMENT LENGTHS IN THIS SCHEDULE
3. WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER IS NOT SUFFICIENT TO ACHIEVE SCHEDULED EMBEDMENT AND SPECIFIED CLEAR COVER FOR THE ANCHOR, CONTACT THE STRUCTURAL ENGINEER.
4. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED ADHESIVES AND OTHER REQUIREMENTS FOR ADHESIVE ANCHORING.

D4 / S60.03 ADHESIVE ANCHORS IN CONCRETE SCHEDULE
NO SCALE

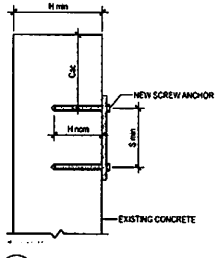


EXPANSION ANCHORS IN CONCRETE SCHEDULE

ANCHOR SIZE	MINIMUM EDGE DISTANCE (Cac)	EMBEDMENT LENGTH (H nom)	MINIMUM CONCRETE THICKNESS (H min)	MINIMUM ANCHOR SPACING (S min)
3/8"Ø	6 1/2"	2 7/8"	4 1/2"	3 3/4"
1/2"Ø	10"	3 7/8"	6"	5"
5/8"Ø	10"	5 1/8"	8"	6"
3/4"Ø	16"	5 3/4"	10"	7"

NOTES:
1. THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DRAWINGS. ANCHORS AT OTHER LOCATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. EDGE DISTANCE, Cac, AND EMBEDMENT LENGTHS, H nom, AND ANCHOR SPACING SPECIFIED ON PLANS OR DETAILS TAKE PRECEDENCE OVER VALUES IN THIS SCHEDULE.
3. ANCHORS LOCATED WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER DOES NOT MEET THE REQUIRED MINIMUM CONCRETE THICKNESS MUST BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
4. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED ANCHORS AND OTHER REQUIREMENTS FOR USING EXPANSION ANCHORS.

C4 / S60.03 EXPANSION ANCHORS IN CONCRETE SCHEDULE
NO SCALE



SCREW ANCHORS IN CONCRETE SCHEDULE

ANCHOR SIZE	MINIMUM EDGE DISTANCE (Cac)	EMBEDMENT LENGTH (H nom)	MINIMUM CONCRETE THICKNESS (H min)	MINIMUM ANCHOR SPACING (S min)
3/8"Ø	3 3/4"	3 1/4"	5"	3"
1/2"Ø	4 1/2"	4"	6 1/4"	3 1/2"
5/8"Ø	6 3/8"	5 1/2	8 1/2"	3 3/4"
3/4"Ø	7 5/16"	6 1/4"	10"	4 1/2"

NOTES:
1. THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DRAWINGS AND AT OTHER LOCATIONS WITH APPROVAL OF THE STRUCTURAL ENGINEER.
2. EDGE DISTANCE, Cac, AND EMBEDMENT LENGTHS, H nom, AND ANCHOR SPACING SPECIFIED ON PLANS OR DETAILS TAKE PRECEDENCE OVER VALUES IN THIS SCHEDULE
3. ANCHORS LOCATED WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER DOES NOT MEET THE REQUIRED MINIMUM CONCRETE THICKNESS MUST BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION .
4. SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION OF ALL SCREW ANCHORS PER THE CODE EVALUATION REPORT FOR THE ANCHOR AND THE QUALITY ASSURANCE SECTION OF THE GENERAL STRUCTURAL NOTES.
5. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED ANCHORS AND OTHER REQUIREMENTS FOR USING SCREW ANCHORS
6. SCREW ANCHORS SHALL ONLY BE USED IN INTERIOR DRY LOCATIONS

S4 / S60.03 SCREW ANCHORS IN CONCRETE SCHEDULE
NO SCALE

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
CONCRETE ANCHOR SCHEDULES

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

JOB NO 236
DATE 06-27-2017
SCALE 1" = 1'-0"
SHEET NO S60.03

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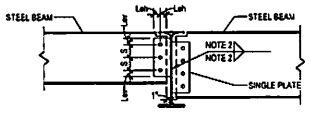
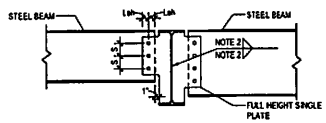
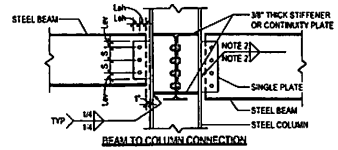


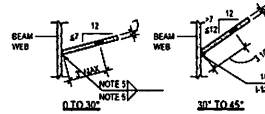
BEAM TO BEAM CONNECTION

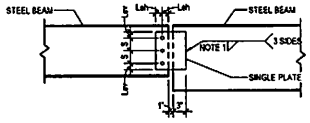


BEAM TO BEAM CONNECTION AT FULL HEIGHT STIFFENER



BEAM TO COLUMN CONNECTION





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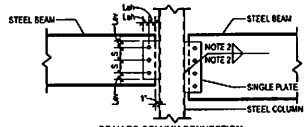

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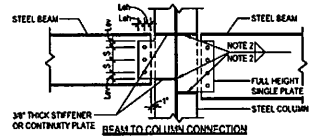

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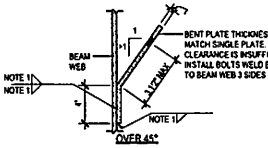
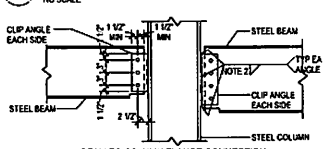


SKEWED CONNECTION (PLAN VIEW)

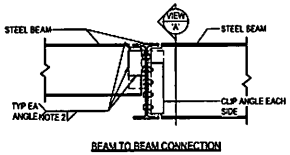
SINGLE PLATE CONNECTION SCHEDULE			
BEAM SIZE	WEB PLATE THICKNESS (t)	A325N BOLTS	
		NUMBER	SIZE
W8 AND W10	3/8"	2	7/8"Ø
W12 AND W14	3/8"	3	7/8"Ø
W16	3/8"	4	7/8"Ø
W18	3/8"	5	7/8"Ø
W21	3/8"	6	7/8"Ø
W24	3/8"	7	7/8"Ø
W27	3/8"	8	7/8"Ø
W30	3/8"	9	7/8"Ø
W33	3/8"	10	7/8"Ø
W36	3/8"	11	7/8"Ø

NOTES:
1. FILLET WELD SHALL EQUAL THE PLATE THICKNESS MINUS 1/16" (1/4" MIN.)
2. FILLET WELD SHALL BE 5/6 THE PLATE THICKNESS (1/4" MIN.)
3. BOLT EDGE DISTANCE SHALL BE AS FOLLOWS Leh = 2 x BOLT DIAMETER Lev = 1 1/2".
4. BOLT SPACING (S) SHALL BE 3".
5. AT SKEWED JOINTS PROVIDE AN EQUIVALENT LEG SIZE TO NOTE 2 PER AWS D1.1.
6. PROVIDE SHORT SLOTTED HOLES WHEN 6 OR MORE BOLTS ARE REQUIRED AND BOLT DIAMETER IS ≤ 3/4"

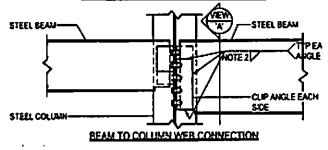
D1 S61.01 TYPICAL SINGLE PLATE CONNECTION DETAILS AND SCHEDULE
NO SCALE



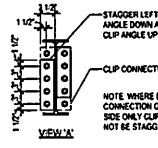
BEAM TO COLUMN FLANGE CONNECTION



BEAM TO BEAM CONNECTION



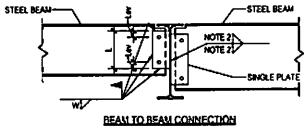
BEAM TO COLUMN WEB CONNECTION



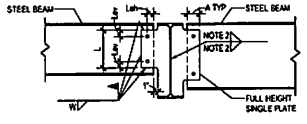
DOUBLE ANGLE CONNECTION SCHEDULE		
BEAM SIZE	A325N BOLTS	
	NO. PER LEG	SIZE
W3, W10	2	7/8"Ø
W12, W14	3	7/8"Ø
W16	4	7/8"Ø
W18	5	7/8"Ø
W21	6	7/8"Ø
W24, W27	7	7/8"Ø
W30	8	7/8"Ø
W33	9	7/8"Ø
W36	10	7/8"Ø

NOTES:
1. CLIP ANGLES 2X4X3 1/2. THICKNESS SHALL BE EQUAL TO ONE-HALF THE BEAM WEB THICKNESS PLUS 1/16" (1/8" MIN.) FOR TWO ROWS OF BOLTS OR SKEWED CONNECTIONS. USE BOLT PLATES.
2. FILLET WELD SHALL BE ANGLE THICKNESS MINUS 1/16" (1/4" MIN.)
3. CONTRACTOR HAS OPTION TO BOLT CLIP ANGLES AT EITHER BEAM WEB IN BEAM TO BEAM CONNECTIONS
4. BOLT EDGE DISTANCE SHALL BE 1 1/2" MIN. AT ALL BEAM AND CLIP ANGLE EDGES. BOLT SPACING SHALL BE 3" O.C. MIN.

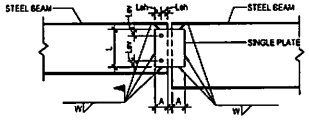
C1 S61.01 TYPICAL DOUBLE ANGLE CONNECTION DETAILS AND SCHEDULE
NO SCALE



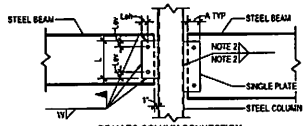
BEAM TO BEAM CONNECTION



BEAM TO BEAM CONNECTION AT FULL HEIGHT STIFFENER

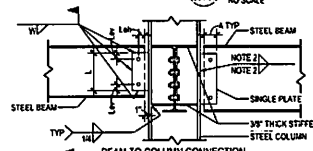


BEAM TO BEAM CONNECTION

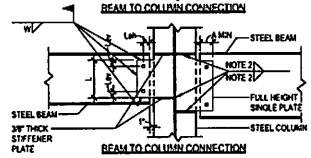


BEAM TO COLUMN CONNECTION

C3 S61.01 TYPICAL GRAVITY BEAM MOMENT CONNECTION
NO SCALE



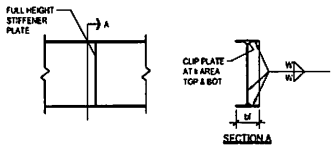
BEAM TO COLUMN CONNECTION



BEAM TO COLUMN CONNECTION

SINGLE PLATE COLLECTOR/CHORD CONNECTION SCHEDULE					
BEAM SIZE	WEB PLATE			WELD W	ERECTION BOLTS
	L	A	THICKNESS		
BEAM SIZE	"	"	"	1"	#

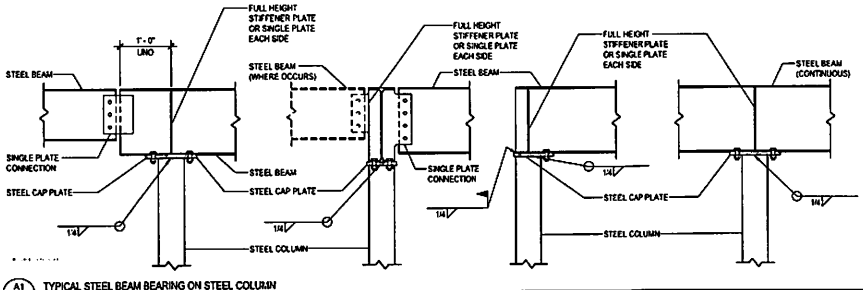
NOTES:
1. ERECTION BOLT SHALL BE 7/8"Ø A325N BOLTS
2. FILLET WELDS TWO SIDES SHALL BE 5/8 THE PLATE THICKNESS (1/4" MIN.) EACH SIDE
3. BOLT EDGE DISTANCE SHALL AS FOLLOWS Lev = 2 x BOLT DIAMETER Leh = 1 1/2"
4. BOLT SPACING (S) SHALL BE 3" MINIMUM.



WELD SCHEDULE		
bf	THICKNESS*	W
UP TO 8.25"	1/4"	3/16"
> 8.25" ≤ 12.25"	3/8"	1/4"
> 12.25" ≤ 16.5"	1/2"	5/16"
> 16.5" ≤ 22"	5/8"	5/16"

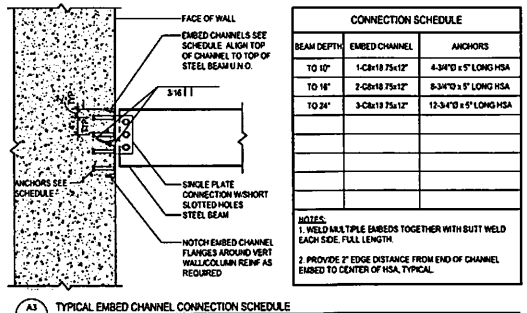
* STIFFENER THICKNESS IS BASED UPON WIDTH OF BEAM FLANGE (bf) UNLESS NOTED OTHERWISE IN DETAILS

B5 S61.01 TYPICAL STIFFENER PLATE DETAIL
NO SCALE



B1 S61.01 TYPICAL WELDED SINGLE PLATE COLLECTOR/CHORD CONNECTION DETAILS AND SCHEDULE
NO SCALE

A1 S61.01 TYPICAL STEEL BEAM BEARING ON STEEL COLUMN
NO SCALE



CONNECTION SCHEDULE		
BEAM DEPTH	EMBED CHANNEL	ANCHORS
TO 10"	1-C8x18.75x12"	4-3/4"Ø x 5" LONG HSA
TO 16"	2-C8x18.75x12"	8-3/4"Ø x 5" LONG HSA
TO 24"	3-C8x18.75x12"	12-3/4"Ø x 5" LONG HSA

NOTES:
1. WELD MULTIPLE EMBEDS TOGETHER WITH BUTT WELD EACH SIDE, FULL LENGTH.
2. PROVIDE 2" EDGE DISTANCE FROM END OF CHANNEL EMBED TO CENTER OF HSA, TYPICAL.

A3 S61.01 TYPICAL EMBED CHANNEL CONNECTION SCHEDULE
NO SCALE

R&A
4000 Vanguard Boulevard, Suite 100
Cedar City, UT 84720
ph: 310 710 6618
www.r-a-e.com
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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
TYPICAL STEEL FRAMING SCHEDULES

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

R&A JOB NO. 236

DATE 06-27-2017

SCALE 1" = 1'-0"

SHEET NO S61.01

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T.O. PENTHOUSE						T.O. PENTHOUSE
61' - 2"					HSS6x6x3/16	61' - 2"
ROOF LEVEL						ROOF LEVEL
42' - 8"	HSS6x6x5/16	HSS6x6x5/16	HSS6x6x5/16	HSS7x7x1/2		42' - 8"
LEVEL 4						LEVEL 4
33' - 4"	HSS12x12x3/8	HSS12x12x1/4	HSS8x8x5/16	HSS12x12x5/16		33' - 4"
LEVEL 2						LEVEL 2
9' - 0"	SBP-1	SBP-1	SBP-2	SBP-1		9' - 0"
LEVEL 1.1						LEVEL 1.1
0"						0"
LEVEL 1						LEVEL 1
-5' - 0"						-5' - 0"
Column Locations	G-21	K-20	K-21	L-21	2(1' - 3 1/8")-5	

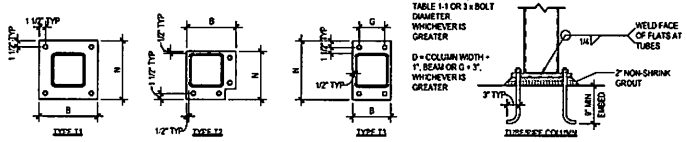
STEEL COLUMN SCHEDULE NOTES

1. SEE GRAVITY COLUMN STEEL BASE PLATE SCHEDULE FOR MINIMUM ANCHOR BOLT REQUIREMENTS
2. PROVIDE CAP PLATE PER TYPICAL GRAVITY COLUMN CAP PLATE DETAILS. CAP PLATE THICKNESS SHALL BE 3/4" THICK TYP. UNO
3. COLUMN SPLICES SHALL BE LOCATED PER SPLICE DETAILS. TYPICAL, U.N.O.

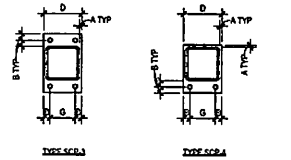
STEEL BASE PLATE SCHEDULE

BASE PLATE MARK	N	B	THICKNESS	C	TYPE	REMARKS
SBP-1	18"	12"	1.25"		T3	
SBP-2	14"	14"	1"		T1	

NOTES:
1. BASE PLATES BEARING ON CONCRETE SHALL BE INSTALLED W/ A307 ANCHOR RODS (PIO PROJECT ANCHOR RODS 3" MIN.) ABOVE THE TOP OF THE BASE PLATE. ALL BOLTS SHALL BE INSTALLED W/ HARDENED WASHERS BENEATH THE NUT. ANY BOLT HOLES LARGER THAN THE BOLT DIAMETER PLUS 5/16" SHALL HAVE 5/16" PLATE WASHERS INSTALLED BENEATH THE HARDENED WASHERS.
2. BASE PLATES BEARING ON STEEL SHALL BE INSTALLED W/ A-7819 A325 BOLTS, UNLESS NOTED OTHERWISE.
3. DO NOT WELD ANCHOR RODS.



D1 / S61.02 TYPICAL STEEL BASE PLATE SCHEDULE & DETAILS FOR GRAVITY COLUMNS
NO SCALE



A = 1/2" MIN.

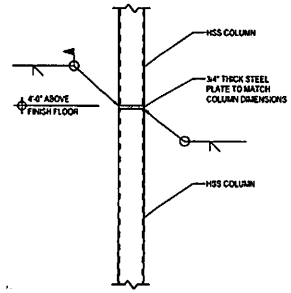
B = 1 1/2" MIN.

G = WORKABLE GAGE OF CONNECTED BEAM OR 3 x BOLT DIAMETER. WHICHEVER IS GREATER

D = COLUMN WIDTH + 1". BEAM OR GIRDER WIDTH + 1". G + 3". WHICHEVER IS GREATER

NOTE: ALL BOLTS IN CAP PLATES SHALL BE 7/8"Ø A325N TYPICAL UNO

B4 / S61.02 TYPICAL STEEL CAP PLATE DETAILS FOR GRAVITY COLUMNS
NO SCALE



A2 / S61.02 TYPICAL HSS STEEL COLUMN SPLICE FOR GRAVITY COLUMNS
NO SCALE

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
STEEL COLUMN SCHEDULE AND DETAILS

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017/06/27

R&A JOB NO. 236

DATE 06-27-2017

SCALE As indicated

SHEET NO. S61.02

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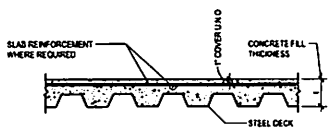
STEEL DECK SCHEDULE

MARK	STEEL DECK				CONCRETE FILL			STEEL DECK ATTACHMENT	MIN ALLOWABLE SHEAR CAPACITY	NOTES
	PROFILE	MIN I (in^4/ft)	MIN S (in^3/ft)	FINISH	THICKNESS (")	TYPE	REINFORCEMENT			
SD-1	TYPE W2 2" DEEP x 20 GA	0.422	0.323	PHOSPHATIZED/ PAINTED	4"	NORMAL WEIGHT	6x6-W2 0xW2 0 WWF OR FIBER	SDA-3	2400 PLF @ 6'-0"	1 HR FIRE RATING
SD-2	TYPE B 1 1/2" DEEP x 20 GA	0.219	0.230	GALVANIZED (G60)	-	-	-	SDA 2	1304 PLF @ 6'-0"	-

NOTES
1. STEEL DECK SHALL COMPLY WITH LATEST REQUIREMENTS OF THE STEEL DECK INSTITUTE (SDI).
2. SUBMIT CURRENT CODE EVALUATION REPORT (ICC OR IAPMO) WITH LOAD AND LATERAL SHEAR CAPACITIES WITH SHOP DRAWINGS
3. FIBER REINFORCEMENT, WHEN REQUIRED IN SCHEDULE, SHALL BE MACROSYNTHETIC FIBER REINFORCEMENT PER THE CONCRETE MATERIALS SECTION OF THE GENERAL STRUCTURAL NOTES.
4. ALL DECK SHALL BE 3-SPAN CONTINUOUS MINIMUM WHERE POSSIBLE. IN AREAS WHERE 3-SPAN CONDITIONS ARE NOT POSSIBLE THE CONTRACTOR SHALL VERIFY UN-SHORED DECK IS PERMITTED BY THE DECK MANUFACTURER FOR THE SPAN CONDITION, SPAN LENGTH, AND DECK GAUGE. WHERE DECK DOES NOT MEET THE REQUIREMENTS FOR UN-SHORED DECK, THE CONTRACTOR SHALL EITHER PROVIDE HEAVIER GAUGE DECK TO ALLOW FOR UN-SHORED DECK OR PROVIDE SHORING.
5. STEEL DECK WITHOUT CONCRETE FILL SHALL NOT BE USED TO SUPPORT LOADS FROM PLUMBING, HVAC DUCTS, LIGHT FIXTURES, ARCHITECTURAL ELEMENTS OR EQUIPMENT OF ANY KIND, UNLESS SPECIFICALLY NOTED OTHERWISE. LIGHTWEIGHT SUSPENDED ACOUSTICAL CEILINGS WITH A TOTAL WEIGHT PER WIRE NOT EXCEEDING 5LB MAY BE HUNG FROM THE STEEL ROOF DECK. THE HANGERS SHOULD BE STAGGERED TO DISTRIBUTE THE LOAD OVER MULTIPLE DECK FLUTES.
6. DECK SHALL HAVE 2" MINIMUM BEARING ON ALL SUPPORTING MEMBERS (MEMBERS PERPENDICULAR TO DECK) UNO. DECKS SHALL HAVE 1 1/2" MINIMUM BEARING AT PARALLEL MEMBERS.
7. DO NOT EMBED CONDUITS OR PIPES IN CONCRETE FILL OVER STEEL DECKS WITHOUT APPROVAL OF STRUCTURAL ENGINEER.
8. SEE TYPICAL DETAILS FOR REINFORCEMENT REQUIRED AT OPENINGS THROUGH STEEL DECK. OPENING REINFORCING SHALL BE INSTALLED PRIOR TO BAW CUTTING OPENINGS.
9. PROVIDE GALVANIZED STEEL DECK ABOVE & BELOW MECHANICAL ROOMS.
10 SEE PLANS AND DETAILS FOR LOCATIONS WHERE ADDITIONAL SLAB REINFORCEMENT IS REQUIRED

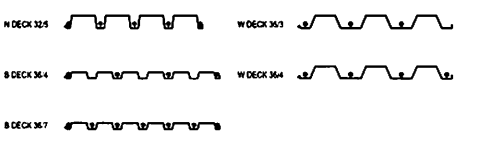


CONCRETE SLAB OVER STEEL DECK PROFILE

STEEL DECK ATTACHMENT SCHEDULE

MARK	WELDED			MECHANICAL		
	SUPPORTS	PARALLEL	SIDE LAP	SUPPORTS	PARALLEL	SIDE LAP
SDA-1	PW @ 36/4	PW @ 12" O.C.	3/16" BP @ 18" O.C.	-	-	-
SDA-2	PW @ 36/7	PW @ 12" O.C.	1 1/2" TSW @ 18" O.C.	PAF @ 36/7	PAF @ 12" O.C.	PSC @ 12" O.C.
SDA-3	PW @ 36/4	PW @ 12" O.C.	3/16" BP @ 18" O.C.	-	-	-
SDA-4	PW @ 32/5	PW @ 12" O.C.	1 1/2" TSW @ 18" O.C.	PAF @ 32/5	PAF @ 12" O.C.	PSC @ 8" O.C.

NOTES
1. PW = PUDDLE WELD - 1/2" EFFECTIVE DIAMETER ARC SPOT WELD AT INTERIOR FLUTES. 1" X 3/8" EFFECTIVE ARC SEAM WELD AT SUPPORTS ADJACENT TO SIDELAP
2. TSW = TOP SEAM WELD - 1 1/2" LONG TOP SEAM WELDS BETWEEN ADJACENT PIECES OF DECKING. CRIMP SIDE SEAMS BEFORE WELDING INTERLOCKING SEAMS
3. BP = BUTTON PUNCH - 3/16" BUTTON PUNCH BETWEEN ADJACENT PIECES OF DECK. CRIMP SEAMS BEFORE BUTTON PUNCHING INTERLOCKING SEAMS
4. PAF = POWDER ACTUATED FASTENER -
   HILTI X-HSN 24 AT SUPPORTS 3/16" THROUGH 3/8" THICK
   HILTI X-EHP-19 L15 AT SUPPORTS 1/4" THICK AND GREATER
   PNEUTEK SDK61075 AT SUPPORTS 0.113" THROUGH 0.155" THICK
   PNEUTEK SDK63075 AT SUPPORTS 0.155" THROUGH 0.250" THICK
   PNEUTEK K64062 AT SUPPORTS 0.187" THROUGH 0.312" THICK
   PNEUTEK K66062 OR K66075 AT SUPPORTS 0.291" THICK AND GREATER
5. SDS = SELF DRILLING SCREW. WHERE SIDELAPS HAVE SCREWED CONNECTION. THE DECK PROVIDED SHALL HAVE A SCREWABLE SIDE SEAM, UNO
6. PSC = PROPRIETARY SIDELAP CONNECTION - VERCO SIDELAP CONNECTION 2 FOR VERCO PUNCHLOK II SYSTEM. ASC DELTA GRIP FOR ASC DECKS
7. SPACING AT SUPPORTS IS NOTED AS (DECK PANEL WIDTH)/(ATTACHMENTS PER PANEL). FOR EXAMPLE. PW @ 36/4 INDICATES A 36" WIDE DECK SHEET WITH 4 PUDDLE WELDS AT EACH SUPPORT
8. HEADED STUD ANCHORS WELDED THROUGH DECK WITH 1" MINIMUM COVER FROM EDGE OF DECK TO STUD CENTERLINE MAY BE SUBSTITUTED ONE FOR ONE FOR PW. ALIGN AND SECURE DECK IN POSITION BEFORE INSTALLING STUDS
9. SEE PLANS AND SFRS SHEETS FOR ADDITIONAL FASTENERS REQUIRED AT MEMBERS DENOTED AS SFRS. OMIT ATTACHMENTS WHERE DENOTED AS PROTECTED ZONES IN SFRS
10. ALL WELDED SURFACES SHALL BE DRY BEFORE WELDING DECK OR STUDS TO SUPPORTS
11. ALIGN AND SECURE DECK IN POSITION BEFORE WELDING OR INSTALLING FASTENERS OR STUDS
12. ALTERNATE MEANS OF DECK ATTACHMENT ARE PERMITTED WITH APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL SUBMIT THE PROPOSED ATTACHMENT SYSTEM AND THE CODE EVALUATION REPORT DEMONSTRATING THE SYSTEM HAS THE STRENGTH TO MEET THE SPECIFIED DECK SHEAR. IF THE ALTERNATE METHOD IS APPROVED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE DECK TYPE AND PROFILE IS COMPATIBLE WITH THE FASTENING SYSTEM.



R&A
6165 Greenwood Plaza Boulevard, Suite 100
Englewood, CO 80111
tel 303.770.8884
www.rnaeng.com

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POWDER MOUNTAIN
5752 N. Copper Crest
Eden, UT 84310

SHEET TITLE
STEEL DECK SCHEDULES

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO. 236
DATE 06-27-2017
SCALE 1" = 1'-0"
SHEET NO. S61.03

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WOOD BEARING WALL SCHEDULE

MARK	WALL FRAMING				WALL ANCHORAGE	REMARKS
	STUDS	SPACING	BOTTOM PLATE	TOP PLATE	BOTTOM PLATE ANCHORAGE	
WSW-1	2x4	4" O.C.	2x4	2-2x4	NOTE 3	?
WSW-2	2x4	12" O.C.	2x4	2-2x4	NOTE 3	
WSW-3	2x6	16" O.C.	2x6	2-2x6	NOTE 3	
WSW-4	2x8	16" O.C.	2x8	2-2x8		

NOTES:
1. WHERE STUD MUST BE CUT DUE TO THE PLACEMENT OF ANCHOR BOLTS OR OTHER PRODUCTS, AN ADDITIONAL STUD SHALL BE INSERTED ALONG SIDE

2. ALL ANCHOR BOLTS FOR BOTTOM PLATE ANCHORAGE INTO CONCRETE OR MASONRY SHALL HAVE 8" MIN EMBEDMENT, TYPICAL UNO

3. SEE DETAIL FOR WALL ANCHORAGE CONNECTIONS

WOOD BEAM SCHEDULE

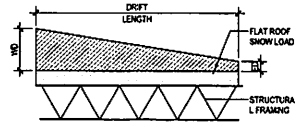
MARK	SIZE	REMARKS
WB-1	1 1/4x11 7/8 LSL	?
WB-2	2-1 1/4x11 7/8 LSL	
WB-3	3-1 1/4x11 7/8 LSL	
WB-4	4-1 1/4x11 7/8 LSL	
WB-5	3 1/2x18 GLB	
WB-6	5 1/2x12 GLB	
WB-7	5 1/2x15 GLB	
WB-8	5 1/2x18 GLB	
WB-9	6 3/4x15 GLB	
WB-10	6 3/4x18 GLB	
WB-11	6 3/4x18 GLB	
WB-12	6 3/4x24 GLB	

NOTES:
1 SEE DETAIL __/__ FOR TYPICAL MULTIPLE MEMBER BEAM CONNECTIONS

SNOW DRIFT SCHEDULE

MARK	DRIFT LENGTH	WD (PSF)	ED (PSF)
SND-1	16' - 0"	131	0
SND-2	14' - 3"	107	0
SND-3	14' - 10"	111	0
SND-4	9' - 8"	73	38
SND-5	7' - 4"	131	102
SND-6	12' - 0"	107	17
SND-7	16' - 6"	131	65
SND-8	16' - 0"	120	0
SND-9	10' - 4"	120	43
SND-10	14' - 1"	106	0
SND-11	18' - 5"	133	0
SND-12	14' - 5"	108	0
SND-13	30' - 4"	227	0
SND-14	19' - 10"	148	0
SND-15	13' - 0"	88	0

NOTES:
1. DRIFT LOADS SHALL BE IN ADDITION TO ALL LOADS INDICATED ON PLANS.



WOOD DIAPHRAGM SCHEDULE

LEVEL	WOOD SHEATHING THICKNESS	WOOD SHEATHING EDGES	COMMON NAIL SPACING		
			A	B	C
WD-1	1 1/8	UNBLOCKED	6" O.C.	12" O.C.	12" O.C.
WD-2	1 1/8	BLOCKED	6" O.C.	6" O.C.	12" O.C.
WD-3	1 1/8	BLOCKED	4" O.C.	4" O.C.	12" O.C.

NOTES:
1 COMMON NAIL SPACING CRITERIA:
A. NAIL SPACING AT DIAPHRAGM BOUNDARIES AND SUPPORTING MEMEBERS
B. ALL OTHER WOOD SHEATHING PANEL EDGES
C. INTERMEDIATE WOOD SHEATHING PANEL SUPPORTS (IN FIELD NAILING)
D. ALL SHEATHING SHALL BE A.P.A. RATED EXPOSURE 1.

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SHEET TITLE
WOOD SCHEDULES

No	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	2017-06-27

JOB NO. 236
DATE 06-27-2017
SCALE 1" = 1'-0"
SHEET NO. S62.01

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ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

ABBREV.	DESCRIPTION
A	AMP OR AMPS
AC	ABOVE COUNTER
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
EM	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EWC	ELECTRIC WATER COOLER
EXIST.	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
GFCI	GROUND FAULT INTERRUPTER
GND	GROUND CONDUCTOR
HP	HORSE POWER
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INS	INSULATED
ISO	ISOLATED
KVA	KILO VOLT AMPERES
KW	KILOWATTS

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

ABBREV.	DESCRIPTION
LED	LIGHT EMITTING DIODE
LFMC	LIQUID-TIGHT METAL CONDUIT
LFNC	LIQUID-TIGHT NONMETAL CONDUIT
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
N.I.C.	NOT IN CONTRACT
NL	NIGHT LIGHT
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
O.C.	ON CENTER(S)
OCP	OVER CURRENT PROTECTION
REQ.	REQUIREMENTS
RMC	RIGID METAL CONDUIT
RMP	ROCKY MOUNTAIN POWER
RNC	RIGID NONMETALLIC CONDUIT
SPD	SURGE PROTECTIVE DEVICE
SS	SURGE SUPPRESSION
ST	SHUNT TRIP
TR	TAMPER RESISTANT
TYP	TYPICAL
TTB	TELEPHONE TERMINAL BOARD
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
WP	WEATHERPROOF
XFMR	TRANSFORMER

POWER SYMBOLS LEGEND

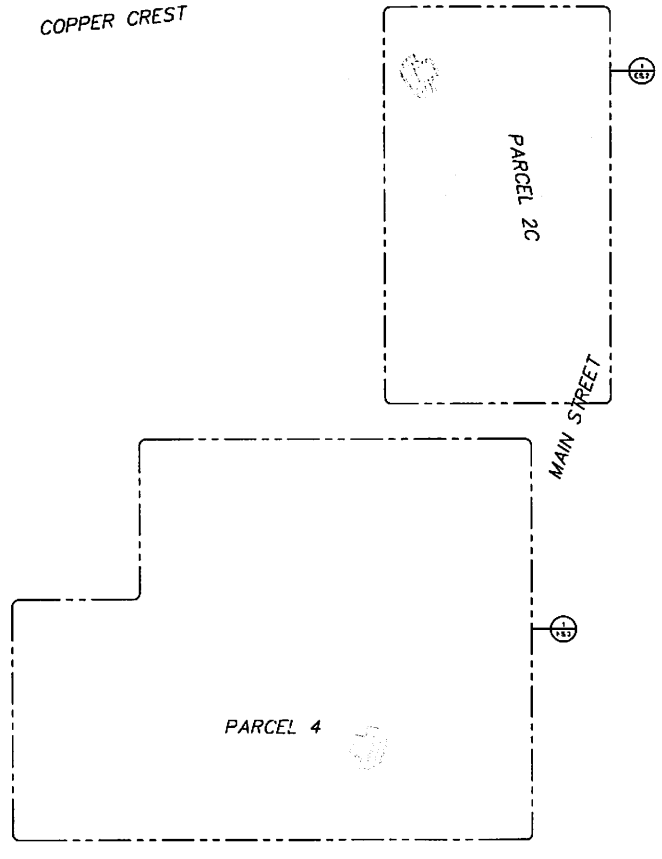
SYMBOL	DESCRIPTION
	SIMPLEX RECEPTACLE
	208/240V OVEN RECEPTACLE
	TWIST-LOCK RECEPTACLE
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE - GFCI
	DROP DUPLEX RECEPTACLE - GFCI
	HALF-SWITCHED DUPLEX RECEPTACLE
	FLOOR BOX OUTLET WITH DUPLEX 120V RECEPTACLE
	FLOOR BOX OUTLET 4ETH & FLEX 120V RECEPTACLE AND VOICE/DATA OUTLET
	FOURPLEX RECEPTACLE
	FOURPLEX RECEPTACLE - GFCI
	DROP FOURPLEX RECEPTACLE - GFCI
	SPECIAL PURPOSE RECEPTACLE - THREE PHASE
	SPECIAL PURPOSE RECEPTACLE - SINGLE PHASE
	NON FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION STARTER/FUSED DISCONNECT
	STARTER
	ELECTRICAL PANEL
	TELEPHONE TERMINAL BOARD
TT	GROUND BUSS BAR
	THERMAL SWITCH
	ELECTRIC MOTOR
J	J-BOX
M	METER
VFD	VARIABLE FREQUENCY DRIVE
TV	TV OUTLET, INCLUDES COAX & PHONE JACKS U.O.N.
	POWER/COMMUNICATIONS POLE FOR WORKSTATION FURNITURE
	VOICE RECEPTACLE
	DATA RECEPTACLE
	COMBINATION VOICE/DATA RECEPTACLE
TYPE	SECURITY CAMERA (TYPE*) INDICATES TYPE OF CAMERA)
CR	CARD READER
KP	SECURITY SYSTEM KEYPAD
	HOME RUN TO PANEL BOARD

CALLOUTS/NOTES LEGEND

SYMBOL	DESCRIPTION
EX-1	MECHANICAL EQUIPMENT CALLOUT
1	REVISION CALLOUT
X	LIGHT FIXTURE CALLOUT
(XXX)	OWNER PROVIDED EQUIPMENT CALLOUT
X	KEYED NOTE
X	WIRE CONDUIT - ALUMINUM
X	WIRE CONDUIT - COPPER
X/X	DETAIL CALLOUT
X/X	ELEVATION CALLOUT

KEYED NOTES:

◇ .



1 ELECTRICAL SITE PLAN
Scale: 1/32" = 1'-0"

N

HUNT ELECTRIC INC.
1983 W ALEXANDER ST.
(2410 SOL)
SALT LAKE CITY, UTAH 84116
801-575-5004 FAX 801-575-5005
QUALITY, INTEGRITY, PERFORMANCE, & VERSATILITY

DESIGN-BUILD SERVICES

R&A Architecture and Design

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08/28/2017

POWDER MOUNTAIN
8569 EAST SPRING PARK
EDEN, UT 84310

SHEET TITLE

ELECTRICAL SITE PLAN

No.	Description	Date
1	ISSUED FOR FOUNDATION PERMIT	3/17/17

JOB NO

DATE 6/28/2017

SCALE 1/32" = 1'-0"

SHEET NO ES.1

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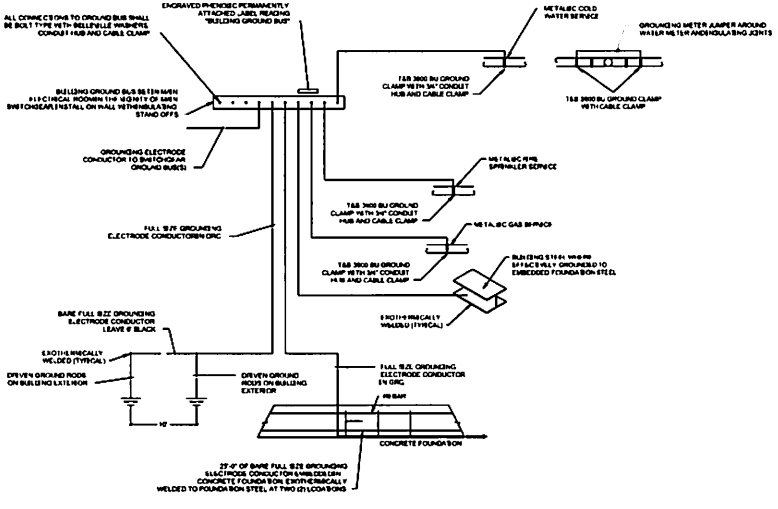
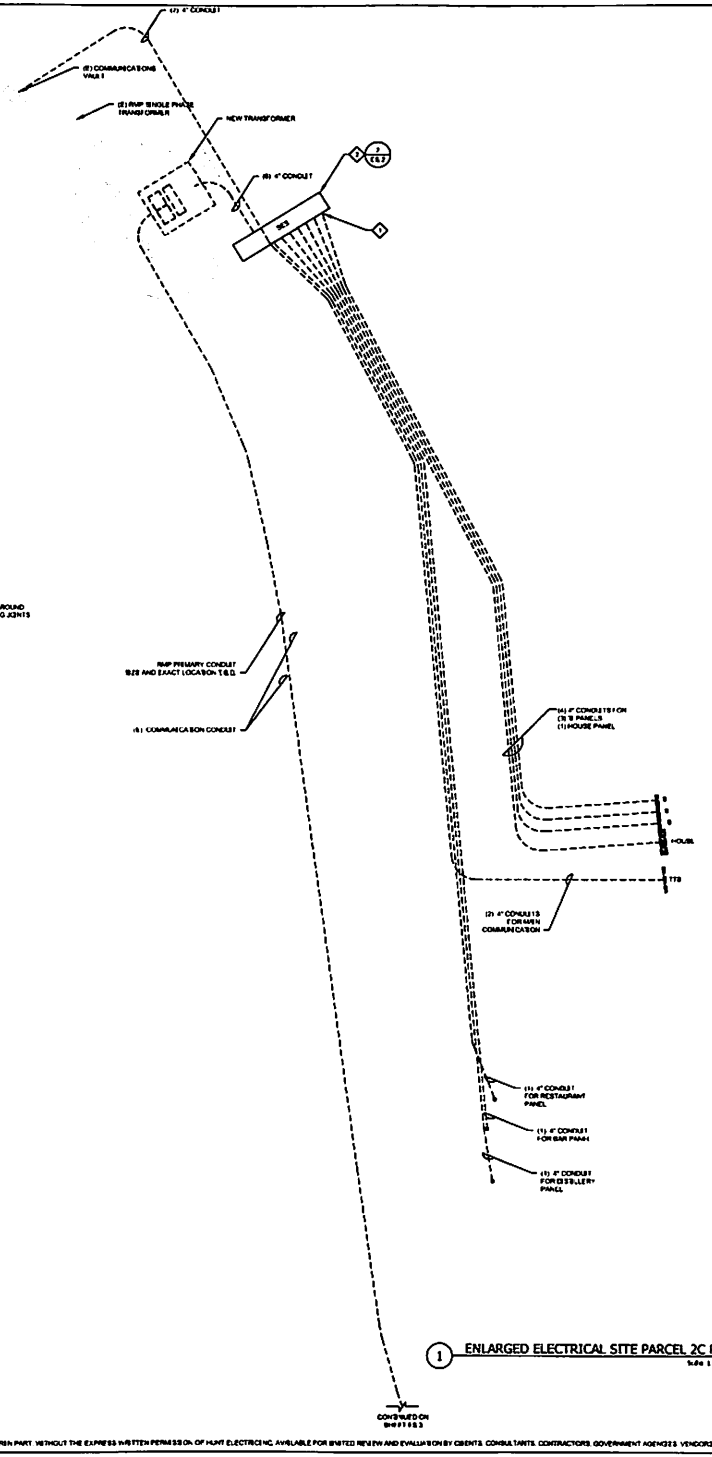


NOTES:
1. WHERE AVAILABLE CONTRACTOR SHALL PROVIDE ALL GROUNDING AS INDICATED ON CONTRACTOR SHALL REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR GROUNDING ELECTRODE CONDUCTOR SIZE. CONTRACTOR SHALL REFER TO ELECTRICAL SPECIFICATIONS FOR SPECIFICS OF GROUNDING SYSTEM INSTALLATIONS AND MATERIALS.

2 SERVICE ENTRANCE SWITCHBOARD TYPICAL GROUNDING DETAIL

Scale: NONE



KEYED NOTES

1. STRUCTURAL BLOCK OUT (S) OR MAIN SERVICE ENTRANCE GEAR. EXACT BLOCK OUT DIMENSIONS TO BE DETERMINED AFTER FINAL GEAR SELECTION.
2. SEE DETAIL 2 ON SHEET ES.2 FOR GROUNDING AT MAIN SERVICE ENTRANCE GEAR.

1 ENLARGED ELECTRICAL SITE PARCEL 2C PLAN

Scale: 1/8" = 1'-0"

N

HUNT ELECTRIC

1882 W ALEXANDER ST.
SUITE 202
SALT LAKE CITY, UTAH 84116
801-972-5544 FAX 801-972-5555

QUALITY, AUTHORITY, PROFESSIONALISM, & WORKMANSHIP

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POWDER MOUNTAIN
8569 EAST SPRING PARK
EDEN, UT 84310

SHEET TITLE
ENLARGED ELECTRICAL SITE PARCEL 2C PLAN

No	Description	Date
1	ISSUED FOR	2017-06
	FOUNDATION	17
	PERMIT	

JOB NO

DATE 6/28/2017

SCALE 1/8" = 1'-0"

SHEET NO ES.2