

WEST WEBER 1, 2, 3, & OGDEN UTAH WEBER NORTH STAKE PARKING LOT ADDITION

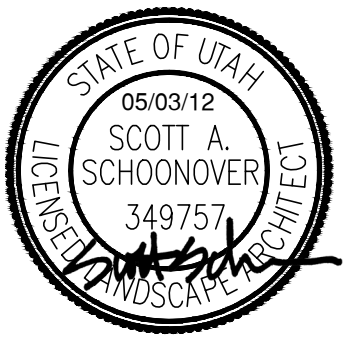
4080 WEST 900 SOUTH
WEST WEBER, UTAH
PROPERTY # 502-2681

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

MAY 2012

McNEIL GROUP

Designing for the Future Since 1983™
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WEST WEBER 1, 2, 3, &
The Church of JESUS CHRIST of Latter-Day Saints

OGDEN UTAH WEBER NORTH STAKE
4080 WEST 900 SOUTH
WEST WEBER, UTAH

REV	DATE	DESCRIPTION

PROJECT NO: 11358
 CAD DWG. FILE: 11358-sites.dwg
 DRAWN BY: NMD/MGS
 PROPERTY NO: 502-2681
 DESIGNED BY: NMD
 FIELD CREW: NMD/MGS
 CHECKED BY: RJD
 DATE: MAY 2012

SHEET TITLE
COVER SHEET

G1.00
SHEET 1 OF 17

GENERAL NOTES

- 1.1 COMPLIANCE
- ALL WORK TO CONFORM TO GOVERNING MUNICIPALITY'S STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
 - ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND THE MOST RECENT, ADOPTED EDITIONS OF THE FOLLOWING: INTERNATIONAL BUILDING CODE (IBC), APVA MANUAL OF STANDARD PLANS AND SPECIFICATIONS, ADA ACCESSIBILITY GUIDELINES.
 - ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS. ANY REVISIONS MUST HAVE PRIOR WRITTEN APPROVAL.
- 1.2 PERMITTING AND INSPECTIONS
- 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.
 - CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ARCHITECT/ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE OF COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
- 1.3 COORDINATION & VERIFICATION
- ALL DIMENSIONS, GRADES & UTILITY DESIGNATIONS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF NOT VERIFIED AND NOTIFICATION OF CONFLICTS HAVE NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
 - CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING AND BRING UP ANY QUESTIONS BEFOREHAND. NO ALLOWANCE WILL BE MADE FOR DISCREPANCIES OR OMISSIONS THAT CAN BE EASILY OBSERVED.
 - DO NOT SCALE DRAWING FOR QUANTITIES OR DIMENSIONS. IF THERE IS A QUESTION ON DIMENSIONS CONTACT ENGINEER FOR CLARIFICATION.
- 1.4 SAFETY AND PROTECTION
- CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION.
 - CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THE PROJECT AND SHALL MEET ALL OSHA REQUIREMENTS.
 - CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES, AND FOR THE PROTECTION OF WORKERS AND PUBLIC.
 - CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL EXISTING PUBLIC AND PRIVATE PROPERTY, ROADWAYS, AND UTILITY IMPROVEMENTS. DAMAGE TO EXISTING IMPROVEMENTS CAUSED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE TO THE SATISFACTION OF THE OWNER OF SAID IMPROVEMENTS.
 - CONTRACTOR IS REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE APPROVED PROJECT LIMITS. THIS INCLUDES, BUT IS NOT LIMITED TO, VEHICLE AND EQUIPMENT STAGING, MATERIAL STORAGE AND LIMITS OF TRENCH EXCAVATION.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMISSION AND/OR EASEMENTS FROM THE APPROPRIATE GOVERNMENT AGENCY AND/OR INDIVIDUAL PROPERTY OWNER(S) FOR WORK OR STAGING OUTSIDE OF THE PROJECT LIMITS.
 - CONTRACTOR SHALL PROVIDE BARRICADES, SIGNS, FLASHERS, OTHER EQUIPMENT AND FLAG PERSONS NECESSARY TO INSURE THE SAFETY OF WORKERS AND VISITORS. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
 - CONTRACTOR SHALL COMPLY WITH LOCAL NOISE ORDINANCE STANDARDS.
 - CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL, ACCORDING TO GOVERNING AGENCY STANDARDS.
 - CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH CONSTRUCTION.
 - CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION.
 - THE CONTRACTOR SHALL TAKE REASONABLE MEASURE TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE AND ALL SUCH IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR RECONSTRUCTED TO THE ENGINEER/OWNER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.

GENERAL NOTES CONTINUED

- 1.5 MATERIALS
- SITE CONCRETE - SEE SPECIFICATION
 - SLABS-ON-GRADE WILL BE TYPICALLY SCORED (1/4 THE DEPTH) AT INTERVALS NOT TO EXCEED THEIR WIDTH OR 12 TIMES THEIR DEPTH, WHICHEVER IS LESS. SCORING WILL BE PLACED TO PREVENT RANDOM CRACKING. FULL DEPTH EXPANSION JOINTS WILL BE PLACED AGAINST ANY OBJECT DEEMED TO BE FIXED, CHANGES IN DIRECTION AND AT EQUAL INTERVALS NOT TO EXCEED 50 FEET.
 - CONCRETE WATERWAYS, CURB WALLS, MOVESTRIPS, CURB AND GUTTER, ETC. WILL TYPICALLY BE SCORED (1/4 THE DEPTH AT INTERVALS NOT TO EXCEED 10 FEET AND HAVE FULL DEPTH EXPANSION JOINTS AT EQUAL SPACING NOT TO EXCEED 50 FEET.
 - UNLESS OTHERWISE NOTED, ALL SLABS-ON-GRADE WILL HAVE A MINIMUM 8" TURNED-DOWN EDGE TO HELP CONTROL FROST HEAVE.
 - UNLESS OTHERWISE NOTED, ALL ON-GRADE CONCRETE WILL BE PLACED ON A MINIMUM 4" GRAVEL BASE OVER A WELL COMPACTED (90%) SUBGRADE.
 - ALL EXPOSED SURFACES WILL HAVE A TEXTURED FINISH, RUBBED OR BROOMED. ANY "RUBBING" OR STONING OF NEW CONCRETE WILL BE DONE WHILE IT IS STILL "GREEN".
 - ALL JOINTS (CONTROL, CONSTRUCTION OR EXPANSION JOINTS, ETC.) WILL BE SEALED WITH A ONE PART POLYURETHANE SEALANT (SEE SPECIFICATION), CUT ALL NEW EXPANSION JOINT MATERIAL 1/2" BELOW FINISH SURFACE AND INSTALL NEW JOINT SEALANT. SEE SPECIFICATION.
 - IF ANY CONCRETE IS CHIPPED OR CRACKED DURING THE REMOVAL OF ASPHALT, CONCRETE, OR CAUSED BY CONSTRUCTION TRAFFIC, ALL SECTIONS OF CONCRETE ARE TO BE REPLACED AT CONTRACTOR'S EXPENSE.
 - ASPHALTIC CONCRETE PAVEMENT SHALL BE A MINIMUM 3" OVER 6" OF COMPACTED (95%) ROADBASE OVER PROPERLY PREPARED AND COMPACTED (90%) SUBGRADE, UNLESS NOTED OTHERWISE. SEE SPECIFICATIONS, AND DETAIL SHEET.
 - ASPHALT COMPACTION SHALL BE A MINIMUM 96% (MARSHALL DESIGN).
 - MIX DESIGN TO BE SUBMITTED FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO ANTICIPATED PAVING SCHEDULE.
 - AC PAVEMENT TO BE A 1/4" ABOVE LIP OF ALL GUTTER AFTER COMPACTION.
 - THICKNESSES OVER 3" WILL BE LAID IN TWO LIFTS WITH THE FIRST LIFT BEING AN APPROVED 3/4" MINUS DESIGN.
 - STRIPING WILL BE PER THE PLANS. STRIPING TO INCLUDE ALL HANDICAP INSIGNIAS, SIGNS, CROSSHATCHING, DIRECTION ARROWS, ETC. AS SHOWN.

1.6 GRADING / SOILS

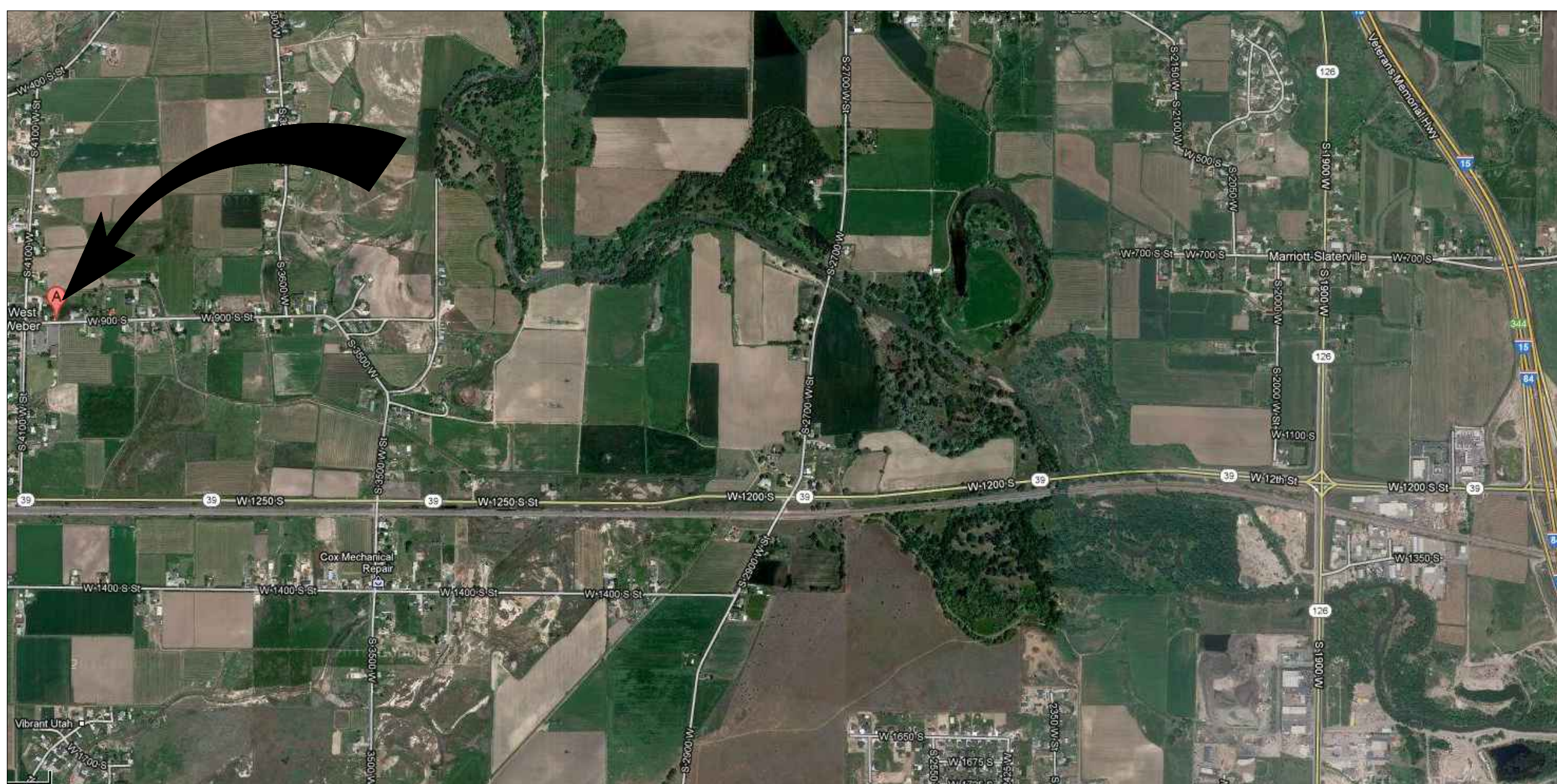
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
- PROCEDURE FOR UNSUITABLE MATERIALS:
 - EXCAVATE TO SUBGRADE.
 - SCARIFY A MINIMUM OF 12" DEEP AND ALLOW TO DRY, RESCARIFY EVERY 2-3 DAYS.
 - PROFROLL AND COMPACT.
 IF WHILE PROFROLLING, SOFT SPOTS TURN UP, IT WILL BE RESCARIFIED AND ALLOWED TO DRY (UP TO TWO WEEKS). AFTER TWO WEEKS, THE SOFT AREAS WILL BE MEASURED UP AND OVEREXCAVATED. THE OVEREXCAVATION WILL BE UNDER DIRECTION OF THE ARCHITECT/ENGINEER. THE SOFT MATERIAL WILL BE REMOVED AND REPLACED WITH SUITABLE MATERIALS AT RATE OF 1 CU. YD. THE BOTTOM OF THE EXCAVATION WILL RECEIVE A STABILIZATION FABRIC, MIRAFI 60X OR APPROVED BY ARCHITECT/ENGINEER, AND THE COMPENSATION FOR THE FABRIC WILL BE 1 SQ. FT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE DOCUMENTS.
- ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM TEST D-1557, EXCEPT UNDER BUILDING FOUNDATIONS WHERE IT SHALL BE 98% MIN. OF MAXIMUM DENSITY. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM.
- CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED REGISTERED SOILS ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITH THE AREAS TO BE PAVED, HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE DOCUMENTS.
- ALL EXISTING VALVES, MANHOLES, ETC. SHALL BE RAISED OR LOWERED TO GRADE AS REQUIRED.

GENERAL NOTES CONTINUED

- 1.7 UTILITIES
- IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES EITHER DIRECT OR THROUGH BLUE STAKE TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION.
 - ALL STORM DRAIN AND IRRIGATION CONDUITS SHALL BE INSTALLED WITH WATER TIGHT JOINTS AND CONNECTIONS.
 - ALL STORM DRAIN PIPE PENETRATIONS INTO BOXES SHALL BE CONSTRUCTED WITH WATER TIGHT SEALS ON THE OUTSIDE AND GROUTED SMOOTH WITH A NON-SHRINK GROUT ON THE INSIDE OF THE BOX.
 - ALL STORM DRAIN CONDUITS AND BOXES SHALL BE CLEAN AND FREE OF ROCKS, DIRT, AND CONSTRUCTION DEBRIS PRIOR TO FINAL INSPECTION.
- 1.8 SURVEY CONTROL
- CONTRACTOR IS RESPONSIBLE FOR ALL STAKING, GRADES, AND CONTROL POINTS.
 - THE CONTRACTOR SHALL PROTECT ALL STAKES AND MARKERS FOR VERIFICATION PURPOSES.
 - CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND REFERENCE MARKS WITHIN THE PROJECT SITE.
- 1.9 AMERICAN DISABILITIES ACT
- PEDESTRIAN / ADA ROUTES SHALL MEET THE FOLLOWING SPECIFICATIONS:
 - ROUTES SHALL HAVE A 2.00% (1:50) MAXIMUM CROSS SLOPE.
 - ROUTES SHALL HAVE A 5.00% (1:20) MAXIMUM RUNNING SLOPE.
 - RAMPS SHALL HAVE A 8.33% (1:12) MAXIMUM RUNNING SLOPE.
 - ADA PARKING STALLS AND ADJACENT ROUTES SHALL HAVE A 2.00% MAXIMUM SURFACE SLOPE IN ANY DIRECTION.
 - THE CONTRACTOR SHALL ADHERE TO THE ABOVE SPECIFICATIONS. IN THE EVENT OF A DISCREPANCY IN THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO ANY CONSTRUCTION.

LEGEND

NEW	EXISTING		NEW	EXISTING	
---	---	SUBJECT PROPERTY LINE	PP	PP	POWER POLE
---	---	FENCE LINE	UP	UP	UTILITY POLE
P	P	POWER LINE	GUY	GUY	GUY ANCHOR
T	T	TELEPHONE LINE	TRANS	TRANS	POWER TRANSFORMER
ATMS	ATMS	ATMS CABLE	LP	LP	LIGHT POLE
FO	FO	FIBER-OPTIC CABLE	TB	TB	TELEPHONE RISER
G	G	NATURAL GAS LINE	TM	TM	TELEPHONE MANHOLE
W	W	WATER LINE	W	W	WATER MANHOLE
SW	SW	SECONDARY WATER LINE	WV	WV	WATER VALVE
S	S	SANITARY SEWER LINE	WM	WM	WATER METER
SD	SD	STORM DRAIN LINE	FH	FH	FIRE HYDRANT
IRR	IRR	IRRIGATION LINE	SSM	SSM	SANITARY SEWER MANHOLE
RD	RD	ROOF DRAIN LINE	SSCO	SSCO	SANITARY SEWER CLEANOUT
---	---	DITCH FLOWLINE	SDM	SDM	STORM DRAIN MANHOLE
72	4572	CONTOUR LINE	SDCB	SDCB	STORM DRAIN CATCH BASIN
---	---	CURB & GUTTER (STD)	GR	GR	GRATE
---	---	CURB & GUTTER (OUTFALL)	SDM	SDM	STORM DRAIN CLEANOUT
---	---	BUILDING	+	+	SPOT ELEVATION
---	---	CONCRETE PAVEMENT	---	---	FLOW DIRECTION
---	---	STD. DUTY ASPHALT	CT	CT	CONIFEROUS TREE
---	---	HEAVY DUTY ASPHALT	DT	DT	DECIDUOUS TREE
			S	S	SIGN
			EM	EM	ELECTRICAL METER
			GM	GM	GAS METER
			AC	AC	AC UNIT
			RD	RD	ROOF DRAIN



VICINITY MAP
N.T.S.

ABBREVIATIONS

AC	AIR CONDITIONING	IE	INVERT ELEVATION	SDCB	STORM DRAIN CATCH BASIN
BC	BUILDING	IRR	IRRIGATION	S	SOUTH
B&C	BAR & CAP	LF	LINEAR FEET	SAD	SEE ARCHITECTURAL DRAWINGS
BM	BENCHMARK	LIP	LIP OF GUTTER	SS	SANITARY SEWER
BOW	BACK OF WALK	MAX	MAXIMUM	SD	STORM DRAIN
Q	CENTERLINE	MIN	MINIMUM	SEC	SECTION
CP	CONTROL POINT	MON	MONUMENT	SPEC	SPECIFICATION
CU FT	CUBIC FOOT	N	NORTH	SQ	SQUARE
CU YD	CUBIC YARD	NG	NATURAL GROUND	SQ FT	SQUARE FEET
CONC	CONCRETE	NOTE	SEE NOTE	SQ YD	SQUARE YARD
CONST	CONSTRUCTION	NTS	NOT TO SCALE	STA	STATION
CMP	CORRUGATED METAL PIPE	OG	ORIGINAL GROUND	STD	STANDARD
DIA or φ	DIAMETER	PC	POINT OF CURVATURE	STM	STORM
E	EAST	PCC	POINT OF COMPOUND CURVE	T	TOWNSHIP
EOA	EDGE OF ASPHALT	PI	POINT OF INTERSECTION	TBC	TOP BACK OF CURB
EOC	EDGE OF CONCRETE	PRC	POINT OF REVERSE CURVE	TBR	TOP BACK OF RETAINING WALL
ELEV	ELEVATION	RT	POINT OF TANGENCY	TOA	TOP OF ASPHALT
EX	EXISTING	POC	POINT OF CONNECTION	TOC	TOP OF CONCRETE
FFE	FINISHED FLOOR ELEVATION	PWR	POWER	TOE	TOE OF SLOPE
FG	FINISHED GRADE	P	PROPERTY LINE	TOP	TOP OF BANK
FT	FEET	PVC	POLYVINYL CHLORIDE PIPE	TOS	TOP OF SIDEWALK
FL	FLOW LINE	R	RANGE	TOW	TOP OF WALL
FOW	FRONT OF WALK	RCP	REINFORCED CONCRETE PIPE	TRANS	TRANSFORMER
GB	GRADE BREAK	RD	ROOF DRAIN	UN.L.O.	UNLESS NOTED OTHERWISE
HDPE	HIGH DENSITY POLYETHYLENE	REV	REVISION	WTR	WATER
HW	HIGH WATER	ROW	RIGHT-OF-WAY	WV	WATER VALVE
HWY	HIGHWAY			W	WEST

DESIGN TEAM

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REVISIONS

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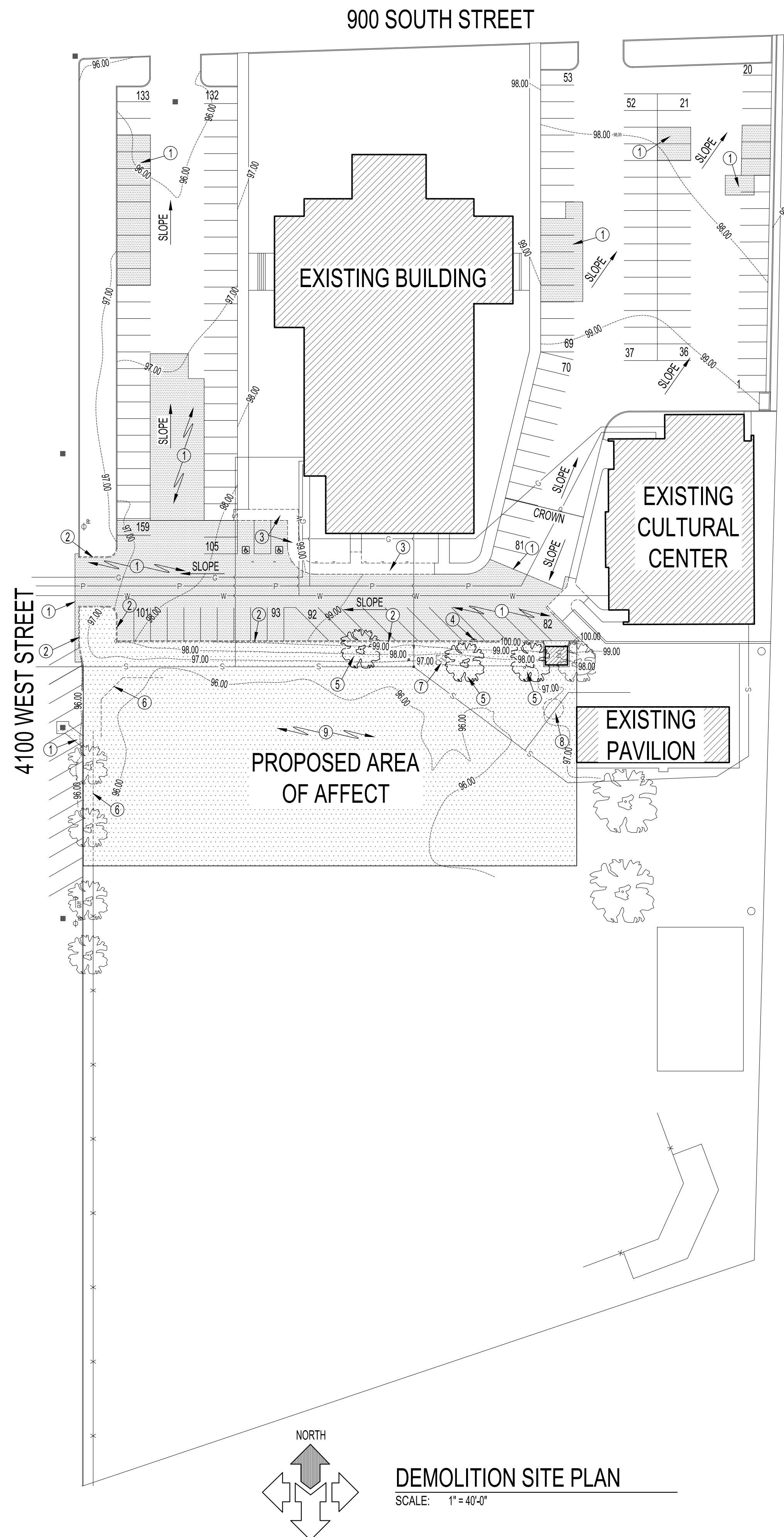
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SHEET TITLE
GENERAL NOTES, LEGEND, AND ABBREVIATIONS

G1.01
SHEET 2 OF 17

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MCNEIL ENGINEERING - SURVEYING, L.C. MCNEIL ENGINEERING STRUCTURAL, L.C. MCNEIL ASPEN CONSULTANTS, L.C. MCNEIL ENGINEERING - CIVIL, L.C.

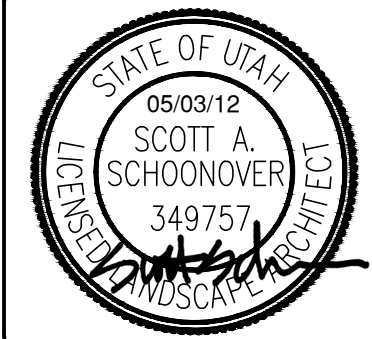


DEMOLITION SITE PLAN
SCALE: 1" = 40'-0"

SCOPE OF WORK:

- ① SAWCUT AND REMOVE EXISTING ASPHALT AND ROAD BASE 9" BELOW FINISH GRADES. REMOVE ADDITIONAL ASPHALT AND BASE MATERIAL TO DEPTH AS REQUIRED TO CONNECT NEW PIPE IN STREET.
- ② SAWCUT AND REMOVE SECTIONS OF CURB WALL FROM JOINT TO JOINT AS SHOWN ON PLAN AND LEGALLY DISPOSE.
- ③ SAWCUT AND REMOVE SECTIONS OF SIDEWALK FROM JOINT TO JOINT. SAWCUT AND REMOVE SECTION OF CONCRETE RAMP TO PAVILION AREA FROM TO JOINT TO JOINT AS SHOWN ON SITE PLAN. LEGALLY DISPOSE OF ALL MATERIALS ON PROJECT.
- ④ REMOVE AND DISPOSE OF EXISTING BASKETBALL STANDARD.
- ⑤ REMOVE (3) LARGE TREES FROM SOUTH SIDE OF EXISTING PARKING LOT.
- ⑥ REMOVE EXISTING FENCE FROM STREET AND SOFTBALL BACKSTOP FENCING.
- ⑦ REMOVE AND DISPOSE OF EXISTING DRINKING FOUNTAIN AND CONCRETE IN GRASS AREA.
- ⑧ REMOVE EXISTING FLAG POLE AND CONCRETE. PROTECT EXISTING FLAG POLE DURING CONSTRUCTION TO REINSTALL IN NEW CONCRETE AT NEW ELEVATION.
- ⑨ REMOVE SOD, TOPSOIL, SUBGRADE, GRAVEL, IRRIGATION SYSTEM, ETC. FROM AREA OF CONSTRUCTION DOWN 9" BELOW FINISH GRADES. AREAS ALREADY 9" BELOW NEW FINISH GRADE WILL BE CLEARED AND GRUBBED AND HAVE ALL IRRIGATION COMPONENTS REMOVED OR PERMANENTLY CAPPED AND DISCONNECTED FROM EXISTING AND NEW IRRIGATION SYSTEM.

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 The Church of JESUS CHRIST of Latter-Day Saints**

OGDEN UTAH WEBER NORTH STAKE
 4080 WEST 900 SOUTH
 WEST WEBER, UTAH

REV#	DATE	DESCRIPTION

PROJECT NO:	11358
CAD DWG. FILE:	11358-site.dwg
DRAWN BY:	NMD/MGS
PROPERTY NO:	502-2681
DESIGNED BY:	NMD
FIELD CREW:	NMD/MGS
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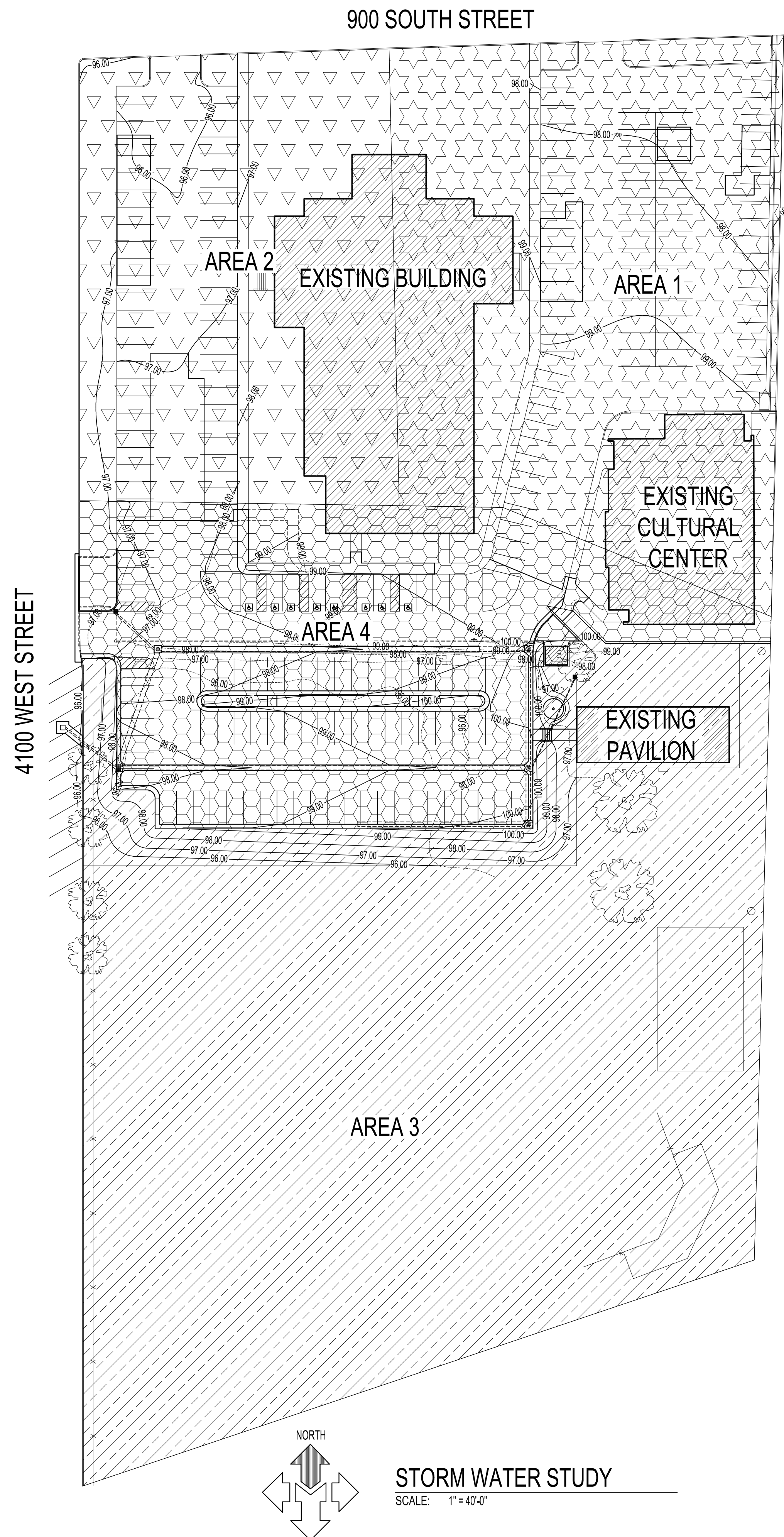
AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY.
Call Before You Dig
 1-800-662-4111

NOTICE!
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SHEET TITLE
DEMOLITION SITE PLAN

C1.01
 SHEET 3 OF 17

C:\Users\medusa\MCNEIL_6800\p\medusa\local\temp\4-26-12\11358-sites.dwg, May 03, 2012 - 5:00pm
 MCNEIL ENGINEERING - SURVEYING, L.C. MCNEIL ENGINEERING STRUCTURAL, L.C. MCNEIL ASPEN CONSULTANTS, L.C. MCNEIL ENGINEERING - CIVIL, L.C.



AREA 1

WATER IN THIS AREA FLOWS EAST TO EXISTING CURB AND GUTTER AND THEN FLOWS NORTH TOWARDS 900 SOUTH STREET. THE WATER IS DISCHARGED INTO AN EXISTING IRRIGATION DITCH THAT FLOWS EAST ALONG 900 SOUTH.

AREA 2

WATER IN THIS AREA FLOWS NORTH TOWARDS A CATCH BASIN NEAR THE ENTRANCE FROM 800 SOUTH STREET. NO STORM DRAIN PIPES ARE VISIBLE ENTERING OR EXISTING THE BOX. THIS IS ASSUMED TO BE A SUMP, ALLOWING THE STORM WATER TO PERCOLATE OUT OF THE BOX.

AREA 3

WATER IN THIS AREA IS CONTAINED ATOP THE EARTH UNTIL IT PERCOLATES INTO THE GROUND NATURALLY. THIS AREA AS AN AVERAGE STORAGE CAPACITY OF 5 1/2' OF WATER BEFORE SPILLING OVER THE CURB WALL INTO THE SHOULDER OF 4100 WEST STREET.

AREA 4

WATER IN THIS AREA FLOWS TO WATERWAYS WHICH DIRECTS FLOW TOWARDS NEW CATCH BASINS. ALL NEW CATCH BASINS TIE TOGETHER AT THE SOUTHWEST END OF THE PARKING LOT. THE WATER IS DETAINED IN AN UNDERGROUND PIPE SYSTEM THAT WILL DISCHARGE WATER AT .1 CFS INTO A CATCH BASIN IN THE SHOULDER OF 4100 WEST STREET. THIS SYSTEM HAS BEEN DESIGNED TO DETAIN A 100 YEAR STORM. SEE THE STORM WATER CALCULATIONS ON THIS SHEET, AND SITE PLAN AND DETAILS FOR DESIGN OF THIS SYSTEM.

DRAINAGE CALCULATIONS

Drainage Criteria:

Maximum Discharge	0.10 cfs/ac.
Design Storm	100 year
Using NOAA rainfall data for	412483 N 112.092 W

Storm water within the new parking area will sheet flow to a catch basin inlet that will be conveyed to the existing storm drain system on the west side of the property. The required capacity of the new parking area is 1,864 c.f.. A new 1.39" orifice plate will control the release rate to .1 cfs/acre or 0.04 cfs.

Proposed Design:

Solution using Rational Formula:

Detention Calculations:

Q = CIA where	
C _{roof} =	
C _{paved} =	0.90
C _{landscaped} =	0.15
I = Rainfall Intensity	
A = Tributary Area	
Roof Area =	3,106
Paved Area =	36,303
Landscape Area =	5,133
Total Tributary Area =	44,542

Page 2 Weighted Coefficient (C) = 0.75

C * A = 33,443

100 yr Storage Requirements:

Time (min)	Rate (in/hr)	Rainfall (Inches)	Accum. Flow (cu.ft.)	Discharge (cu.ft.)	Req'd Storage (cu.ft.)
15	4.08	1.02	2,843	92	2,751
30	2.76	1.38	3,846	184	3,662
60	1.70	1.70	4,738	368	4,370
120	0.93	1.85	5,156	736	4,420
180	0.63	1.90	5,295	1,104	4,191
360	0.35	2.11	5,880	2,209	3,672
720	0.22	2.58	7,190	4,417	2,773
1,440	0.12	2.84	7,915	8,835	0

Storage Required: 4,420
 Surplus Storage: 0
 New Storage Available: 4,438
 Total storage: 4,438 **okay**

Restrictor Orifice Size:

Allowable Discharge (Q) =	0.10 cfs
Average Head (H) =	3.75 ft
Orifice Coefficient =	0.62
Orifice Diameter =	1.39 inches

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY.

Call Digs

1-800-662-4111

NOTICE!

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REVISIONS

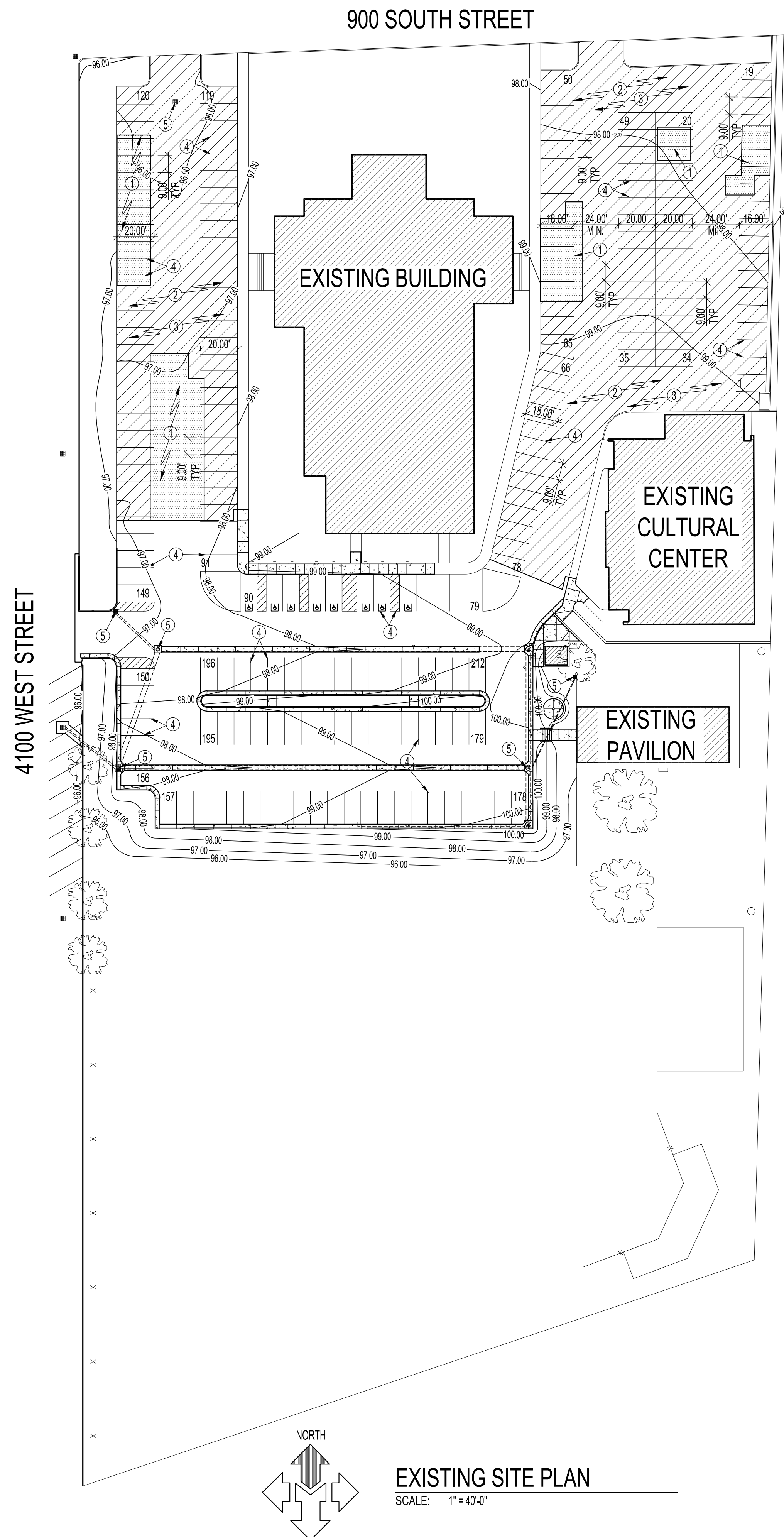
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PROJECT NO: 11358
 CAD DWG. FILE: 11358-sites.dwg
 DRAWN BY: NMD/MGS
 PROPERTY NO: 502-2681
 DESIGNED BY: NMD
 FIELD CREW: NMD/MGS
 CHECKED BY: RJD
 DATE: MAY 2012

SHEET TITLE
STORM WATER STUDY

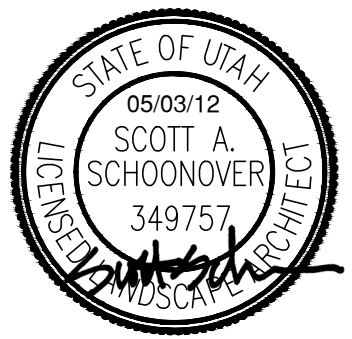
C1.02

SHEET 4 OF 17



SCOPE OF WORK:

- 1. GRADE WITH UNIFORM SLOPE AND INSTALL 6" ROAD BASE WITH 3" ASPHALT.
- 2. INSTALL 2,000 LIN. FT. OF CRACK SEAL IN PARKING LOT.
- 3. SWEEP AND CLEAN ENTIRE PARKING LOT AND INSTALL NEW TYPE I SLURRY SEAL.
- 4. STRIPE PARKING LOT AND ADA STALLS AS SHOWN ON SITE PLAN. SEE DETAILS D/C5.01 AND B/C5.02. RESTRIPE ALL EXISTING STALLS ALONG 4100 WEST STREET.
- 5. CLEAN OUT DEBRIS FROM CATCH BASINS AND PIPES AT END OF PROJECT. MAKE SURE THEY ARE WORKING PROPERLY, AND SEALED WATERTIGHT.



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 The Church of Jesus Christ of Latter-Day Saints

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 4080 WEST 900 SOUTH
 WEST WEBER, UTAH

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SHEET TITLE
SHEET TITLE
 SHEET TITLE
 PLAN

C1.01
 SHEET 7 OF 17

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY.

Call Before You Dig

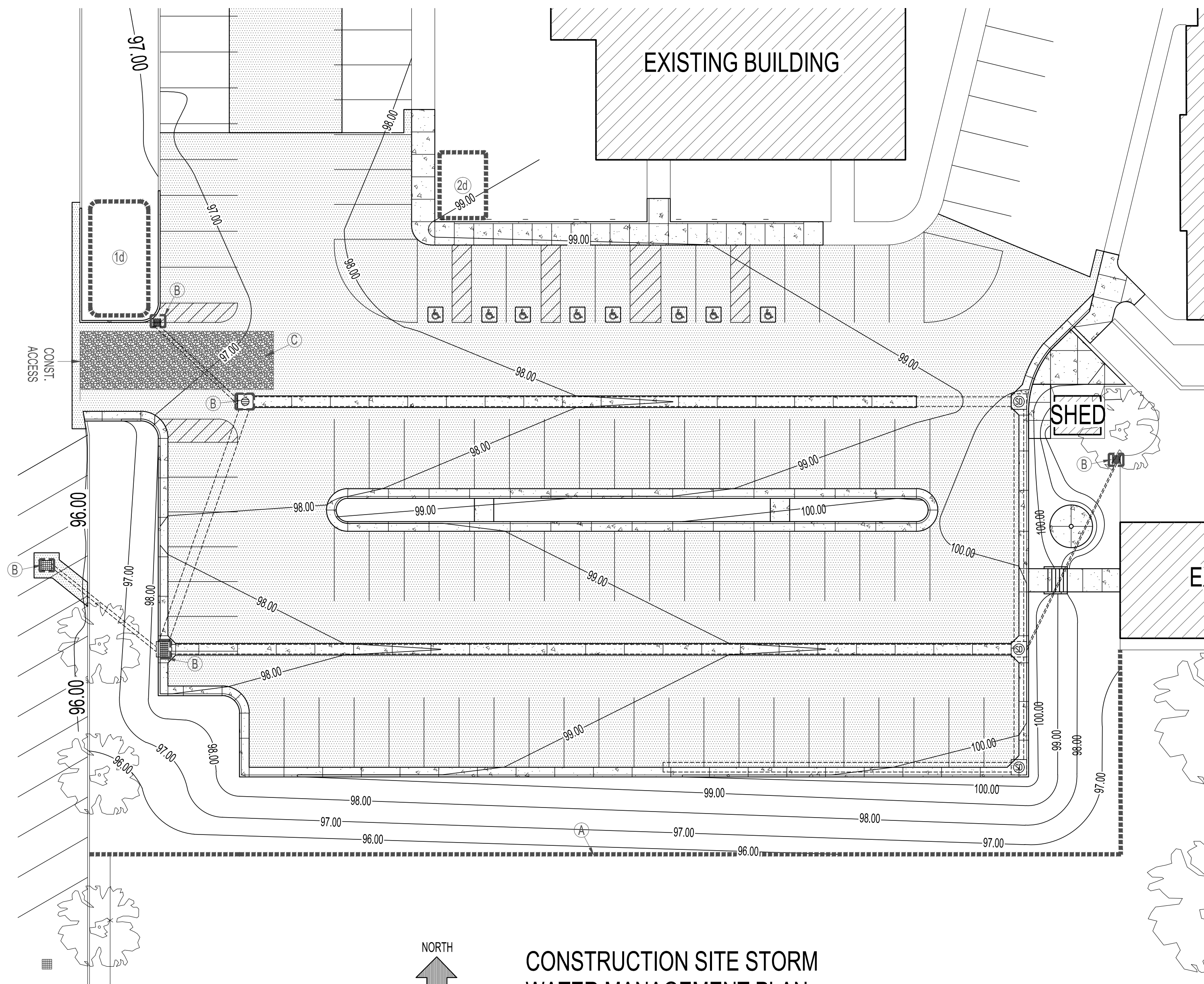
1-800-662-4111

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4100 WEST STREET



CONSTRUCTION SITE STORM WATER MANAGEMENT PLAN

SCALE: 1"=20'-0"

GENERAL NOTES:

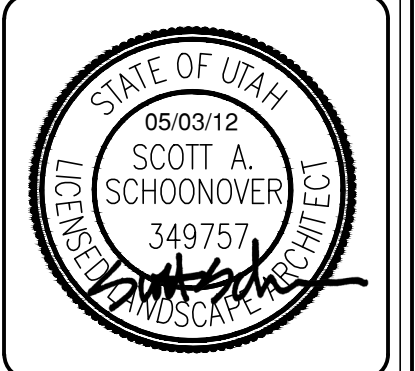
- INTENT OF STORM WATER POLLUTION PREVENTION PLAN:**
BY CONTRACT WITH THE CONTRACTOR THE PROPERTY OWNER HAS DELEGATED HIS OBLIGATION TO INSURE COMPLIANCE WITH ALL APPLICABLE STORM WATER REGULATIONS TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE INTENT OF THIS PLAN IS TO IDENTIFY POLLUTANTS OF STORM WATER AND PRESENT POLLUTION CONTROL MEASURES THAT WILL ASSIST IN ENSURING IMPLEMENTATION AND MAINTENANCE OF BEST MANAGEMENT PRACTICES (BMP'S) AND HELP THE CONTRACTOR IN SECURING THE NECESSARY PERMITS. CONTRACTOR WILL MODIFY THIS PLAN AS REQUIRED TO MEET LOCAL REQUIREMENTS.
- BEST MANAGEMENT PRACTICES (BMP'S):**
THE CONTRACTOR IS TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. SPECIFIC DETAILS SHOWN SHALL BE USED IN COMBINATION WITH OTHER ACCEPTED LOCAL PRACTICES. THE MAINTENANCE OF THE BMP'S IS THE RESPONSIBILITY OF THE PERMITEE, AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMP'S MAY RESULT IN ENFORCEMENT ACTION BY THE GOVERNING AGENCIES. IF INSTALLED BMP'S FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.
- PERMITS AND APPROVALS:**
CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LOCAL AGENCY'S EROSION CONTROL STANDARDS AND SPECIFICATIONS AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE AGENCY HAVING JURISDICTION. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.
- EXISTING UTILITIES:**
THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATIONS OF ALL EXISTING UTILITIES. IF CONFLICTS OCCUR, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
- DUST CONTROL:**
THE CONTRACTOR SHALL PROVIDE ADEQUATE DUST CONTROL. BLOWING DUST MUST BE CONTROLLED AT ALL TIMES. INSTALLATION OF A SILT FENCE AND SITE WATERING SHALL BE USED TO CONTROL DUST. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS ABSOLUTELY PROHIBITED.
- FIELD MODIFICATIONS:**
THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS INTENDED. A REPRESENTATIVE OF THE GOVERNING AGENCIES MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.
- SCHEDULING:**
CONTRACTOR SHOULD FOLLOW A SPECIFIED WORK SCHEDULE THAT COORDINATES THE TIMING OF LAND-DISTURBING ACTIVITIES. THE REMOVAL OF SURFACE GROUND COVER LEAVES A SITE VULNERABLE TO ACCELERATED EROSION. THEREFORE:
 - LIMIT LAND CLEARING AND RESTORE PROTECTIVE COVER QUICKLY.
 - SCHEDULE PROJECTS TO DISTURB ONLY SMALL PORTIONS OF THE SITE AT ANY ONE TIME.
 - COMPLETE GRADING AS SOON AS POSSIBLE AND IMMEDIATELY STABILIZE THE DISTURBED PORTION BEFORE GRADING THE NEXT AREA.
 - STABILIZE OPEN TRENCHES AS SOON AS POSSIBLE.
 - SEQUENCE TRENCHING PROJECTS SO THAT MOST OPEN PORTIONS OF THE TRENCH ARE CLOSED BEFORE NEW TRENCHING IS BEGUN.
 - DURING THE RAINY SEASON THE AMOUNT OF EXPOSED SOIL ALLOWED AT ONE TIME SHALL NOT EXCEED THAT WHICH CAN BE ADEQUATELY PROTECTED BY THE PROPERTY OWNER IN THE EVENT OF A RAINSTORM.
 - 100% OF ALL SUPPLIES NEEDED FOR BMP MEASURES SHALL BE RETAINED ON THE JOB SITE IN A MANNER THAT ALLOWS FULL DEPLOYMENT AND COMPLETE INSTALLATION IN 48 HOURS OR LESS OF A FORECAST RAIN.
 - WHEN GRADING OPERATIONS HAVE BEEN COMPLETED AND THE DISTURBED GROUND SHALL BE LEFT "OPEN" FOR 30 DAYS OR MORE THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS OF THE AREA.
- MAINTENANCE:**
 - ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE.
 - SILT EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT. ANY NEEDED CLEANING AND REPAIRS SHALL BE DONE IMMEDIATELY UPON DISCOVERY.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) DUE TO GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT.
 - THE OWNER'S REPRESENTATIVE SHALL MAKE ROUTINE CHECKS ON ALL EROSION CONTROL MEASURES TO DETERMINE IF REPAIRS OR SEDIMENT REMOVAL IS NECESSARY. DUE TO CONDITIONS THAT MAY ARISE IN THE FIELD, ADDITIONAL CONTROL MAY BE DETERMINED TO BE NECESSARY.
 - SILT FENCE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT THE LEAST DAILY DURING PROLONGED RAINFALL. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCES, END RUNS, AND UNDERCUTTING BENEATH SILT FENCING. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF SILT FENCING SHALL BE ACCOMPLISHED PROMPTLY.
 - SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- STREETS:**
THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE STREETS CLEAN AND FREE FROM DEBRIS DEPOSITED BY TRAFFIC FROM THE SITE. CONTRACTOR SHALL USE VEHICLE TRACKING CONTROL AT ALL LOCATIONS WHERE VEHICLES WILL ENTER OR EXIT THE SITE. CONTROL FACILITIES SHALL BE MAINTAINED WHILE CONSTRUCTION IS IN PROGRESS, MOVED WHEN NECESSARY, AND REMOVED WHEN THE SITE IS PAVED.

- WASH WATER:**
ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM THE SITE. ALL UTILITY LINES SHALL BE CLEANED OF DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. DOWNGRADE LINES MUST BE PROTECTED FROM WASH-WATER DURING THE CLEANING TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.
- LIMITS OF DISTURBANCE:**
THE LIMITS OF DISTURBANCE ARE TO BE STAKED BEFORE STARTING ANY CONSTRUCTION.
- EROSION CONTROL MEASURES:**
 - TOPS OF ALL SLOPES TO BE DIKED OR TRENCHED TO PREVENT WATER FROM FLOWING OVER THE CREST OF SLOPES.
 - MANUFACTURED SLOPES AND PADS SHALL BE ROUNDED VERTICALLY AND HORIZONTALLY AS APPROPRIATE TO BLEND WITH THE SURROUNDING TOPOGRAPHY.
 - APPROVED SLOPE PROTECTION MEASURES SHALL PROCEED IMMEDIATELY BEHIND THE EXPOSURE OF CUT SLOPES AND/OR THE CREATION OF EMBANKMENT SLOPES.
 - CATCH BASINS, DE-SILTING BASINS AND STORM DRAIN SYSTEM SHALL BE INSTALLED TO THE SATISFACTION OF THE GOVERNING AGENCIES.
 - SAND BAG CHECK DAMS TO BE PLACED IN A MANNER APPROVED BY THE GOVERNING AGENCIES IN UNPAVED STREETS WITH GRADIENTS IN EXCESS OF 2% AND ON OR IN OTHER GRADED OR EXCAVATED AREAS AS REQUIRED BY THE GOVERNING AGENCIES.
- SILTATION AND SEDIMENT CONTROL MEASURES:**
 - SEDIMENT BASINS SHALL BE PROVIDED AT THE LOWER END OF EVERY DRAINAGE AREA PRODUCING SEDIMENT RUNOFF. THE BASINS SHALL BE MAINTAINED AND CLEANED AFTER EVERY RUNOFF PRODUCING STORM. THE BASINS SHOULD BE SEMI-PERMANENT STRUCTURES THAT WOULD REMAIN UNTIL SOIL STABILIZING VEGETATION HAS BECOME WELL ESTABLISHED ON ALL ERODIBLE SLOPES.
 - SEWER OR STORM DRAIN TRENCHES THAT ARE CUT THROUGH BASIN DIKES OR BASIN INLET DIKES SHALL BE PLUGGED WITH SANDBAGS FROM TOP OF PIPE TO TOP OF DIKE.
 - AFTER UTILITY TRENCHES ARE BACK-FILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTERLINE OF A CROWNED STREET.
 - PROVIDE A SANDBAG SILT BASIN OR TRAP BY EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING DRAINAGE SYSTEM.
 - ANY PROPOSED ALTERNATIVE CONTROL MEASURES MUST BE APPROVED IN ADVANCE BY ALL RESPONSIBLE AGENCIES, I.E., CITY ENGINEER, DEPARTMENT OF FLOOD CONTROL, ETC.
- OTHER CONTROLS:**
 - WASTE DISPOSAL:**
 - KEEP WASTE DISPOSAL CONTAINERS COVERED.
 - PROVIDE FOR A WEEKLY (OR MORE FREQUENT, IF NECESSARY) DISPOSAL OF WASTE CONTAINERS.
 - PROVIDE CONTAINERS AT CONVENIENT LOCATIONS AROUND THE SITE.
 - SWEEPING A SITE:**
 - PROVIDE WEEKLY SWEEPING BY HAND OR MECHANICAL MEANS TO KEEP THE PAVED AREAS OF THE SITE FREE OF DUST, DIRT AND DEBRIS.
 - DISPOSE OF ACCUMULATED DIRT IN THE WASTE CONTAINERS, OR HAUL IT OFF THE SITE TO A LANDFILL.
 - SANITARY/SEPTIC DISPOSAL:**
 - PORTABLE TOILETS AND OTHER SANITARY FACILITIES SHALL BE SERVICED WEEKLY AND PUMPED CLEAN BY A WASTE DISPOSAL COMPANY. NO TOXIC OR HAZARDOUS WASTE SHALL BE DISPOSED OF IN A PORTABLE TOILET OR IN THE ON-SITE SANITARY SEWER.
 - SPILLS:**
 - STORE ADEQUATE ABSORBENT MATERIALS, RAGS, BROOMS, SHOVELS, AND WASTE CONTAINERS ON THE SITE TO CLEAN UP SPILLS ON MATERIALS SUCH AS FUEL, PAINT, SOLVENTS OR CLEANERS. CLEAN UP MINOR SPILLS IMMEDIATELY.
 - FOR REPORTABLE QUANTITY OF HAZARDOUS OR TOXIC SUBSTANCE, SECURE THE SERVICES OF QUALIFIED PERSONNEL FOR CLEANUP AND DISPOSAL.
 - VEHICLES AND EQUIPMENT:**
 - FIX LEAKS OF FUEL, OIL AND OTHER SUBSTANCES IMMEDIATELY.
 - PERFORM REFUELING AND SERVICE OF VEHICLES OR EQUIPMENT OFF-SITE WHEN POSSIBLE. IF REFUELING OR SERVICE OF EQUIPMENT IS PERFORMED ON-SITE, THEN PROVIDE AN IMPERVIOUS, CONTAINED AREA WHERE ANY SPILLS CAN BE CONTAINED WITHOUT FALLING TO A STORM WATER INLET OR INTO THE GROUND.
 - USE DRIP PANS TO CATCH LEAKS AND SMALL SPILLS.
 - CONCRETE TRUCKS, MIXERS AND HANDLING EQUIPMENT:**
 - DO NOT DISPOSE OF WASHOUT FROM THE WASHING OF CONCRETE TRUCKS, MIXERS AND HANDLING EQUIPMENT WHERE IT WILL FLOW INTO THE STORM WATER OR INTO A PUBLIC STREET.
 - PROVIDE A HOLDING TANK TO RECEIVE THE WASHOUT FROM CONCRETE EQUIPMENT. DISPOSAL OF TANK CONTENTS SHOULD BE CONDUCTED BY A WASTE HANDLING FIRM.
 - PROVIDE A DESIGNATED AREA FOR WATCHING ANY VEHICLES OR EQUIPMENT. DRAINAGE FROM THIS AREA SHOULD FLOW TO THE HOLDING TANK.
 - LANDSCAPING:**
 - USE ONLY THE MINIMUM AMOUNT OF LANDSCAPING FERTILIZERS, NUTRIENTS AND OTHER CHEMICALS THAT ARE NEEDED.
 - DO NOT OVER WATER, FERTILIZE OR TREAT LANDSCAPED AREAS. MINIMIZE RUNOFF OF IRRIGATION WATER FROM LANDSCAPING.
 - STORM WATER INLETS:**
 - KEEP ALL ON-SITE STORM WATER INLETS CLEAN AND FREE OF DIRT AND DEBRIS. IN THE EVENT THAT SEDIMENT AND DEBRIS MAY FLOW TO AN INLET, PROVIDE AND 18-INCH (MINIMUM) STRAIN BARRIER AROUND THE INLET TO TRAP THE DIRT AND DEBRIS AND ALLOW ONLY CLEAN STORM WATER TO ENTER THE INLET.

SWPPP SCOPE OF WORK

- INSTALL STRAW BALE BARRIER OR SILT FENCE AT LOCATIONS SHOWN ON PLAN. SEE SHEET C4.02.
- INSTALL SILT SOCK AT OPEN DRAINAGE GRATES AND IN GUTTERS, ALL LOCATIONS IN AREA OF DISTURBANCE. SEE DETAIL A/C4.02.
- INSTALL TRUCK WASH-OFF AREA IN AREAS INDICATED ON PLANS. SEE SHEET C4.02.
- CONTRACTOR TO PROVIDE STAGING AREA CONTAINING BMP FACILITIES AS FOLLOWS:
 - CONCRETE WASTE MANAGEMENT - SEE SHEET C4.03.
 - PORTABLE TOILETS - SEE SHEET C4.02.
- PLACE TEMPORARY SIGNS AT NORTH WEST ENTRANCE INDICATING CONSTRUCTION ACCESS. INSTALL TEMPORARY SIGNS AT ALL OTHER ENTRANCES INDICATING NO CONSTRUCTION ACCESS.
- CONTRACTOR IS TO REMOVE INLET PROTECTION FROM CATCH BASINS AND CLEAN-OUT ALL CATCH BASINS BEFORE LEAVING THE SITE.

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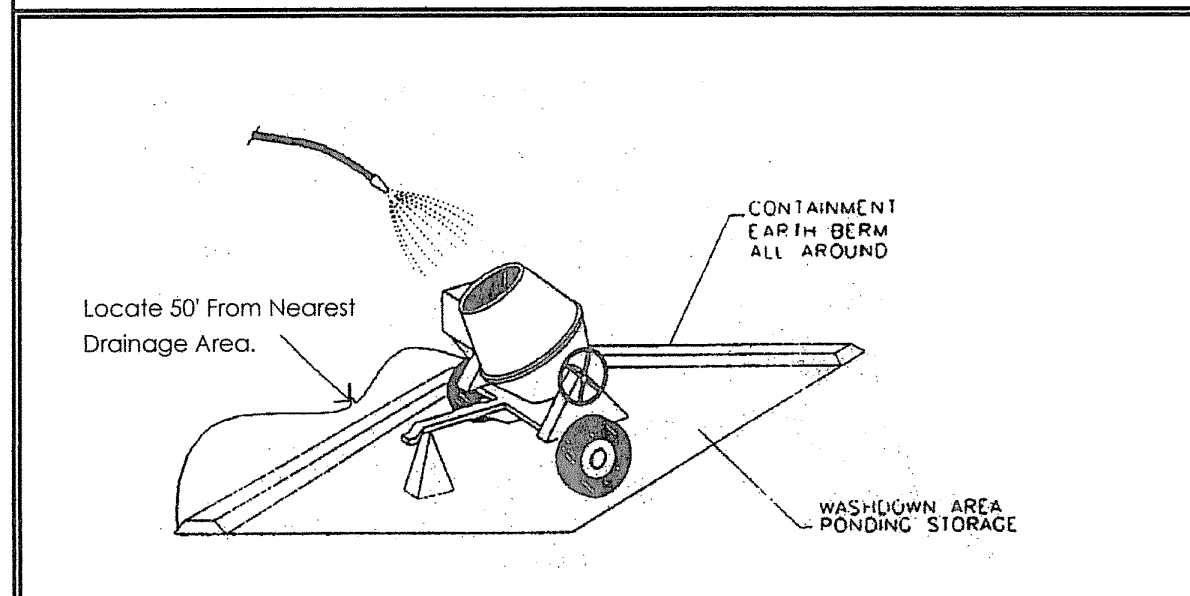
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SHEET TITLE
CONST. SITE STORM WATER MANAGEMENT
C4.01
 SHEET 8 OF 17

BMP: Concrete Waste Management

CWM



- OBJECTIVES**
- Housekeeping Practices
 - Contain Waste
 - Minimize Disturbed Areas
 - Stabilize Disturbed Areas
 - Protect Slopes/Channels
 - Control Site Perimeter
 - Control Internal Erosion

DESCRIPTION:
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:
This technique is applicable to all types of sites.

- INSTALLATION/APPLICATION CRITERIA:**
- Store dry and wet materials under cover, away from drainage areas.
 - Avoid mixing excess amounts of fresh concrete or cement on-site.
 - Perform washout of concrete trucks off-site or in designated areas only.
 - Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
 - Do not allow excess concrete to be dumped on-site, except in designated areas.
 - When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier Information sheet.)
 - Train employees and subcontractors in proper concrete waste management.

LIMITATIONS:

- Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:

- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

- TARGETED POLLUTANTS**
- Sediment
 - Nutrients
 - Toxic Materials
 - Oil & Grease
 - Floatable Materials
 - Other Waste

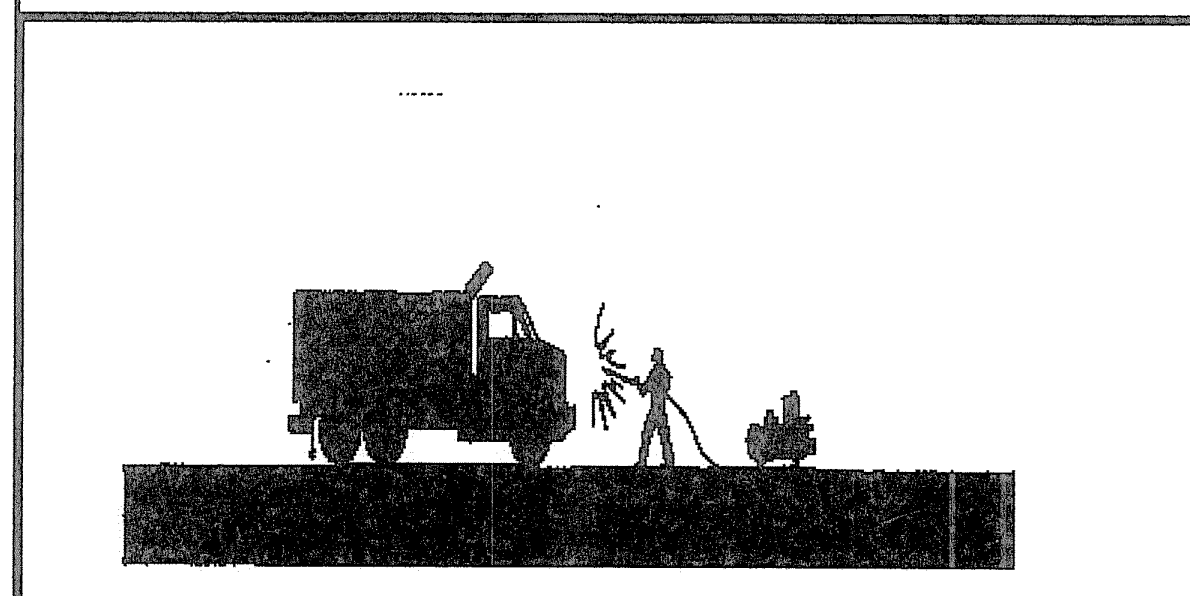
- High Impact
- Medium Impact
- Low or Unknown Impact

- IMPLEMENTATION REQUIREMENTS**
- Capital Costs
 - O&M Costs
 - Maintenance
 - Training

- High Medium Low

BMP: Vehicle And Equipment Cleaning

VEC



- APPLICATIONS**
- Manufacturing
 - Material Handling
 - Vehicle Maintenance
 - Construction
 - Commercial Activities
 - Roadways
 - Waste Containment
 - Housekeeping Practices

DESCRIPTION:
Prevent or reduce the discharge of pollutants to stormwater from vehicle and equipment washing and steam cleaning by using off-site facilities, washing in designated, contained areas only, eliminating discharges to the storm drain by infiltrating or recycling the wash water, and training employees and subcontractors.

- APPROACH:**
- Use off-site commercial washing and steam cleaning businesses as much as possible. Washing vehicles and equipment outdoors or in areas where wash water flows onto paved surfaces or into drainage pathways can pollute stormwater. If you wash a large number of vehicles or pieces of equipment, consider conducting this work at an off-site commercial business. These businesses are better equipped to handle and dispose of the wash waters properly. Performing this work off-site can also be economical by eliminating the need for a separate washing operation at your site.
 - If washing must occur on-site, use designated, bermed wash areas to prevent wash water contact with stormwater, creeks, rivers, and other water bodies. The wash area can be sloped for wash water collection and subsequent infiltration into the ground.
 - Use as little water as possible to avoid having to install erosion and sediment controls for the wash area. Use phosphate-free biodegradable soaps. Educate employees and subcontractors on pollution prevention measures. Do not permit steam cleaning on-site. Steam cleaning can generate significant pollutant concentrations.

- LIMITATIONS:**
- Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades.
 - Sending vehicles/equipment off-site should be done in conjunction with Stabilized Construction Entrance. (See BMP in the Construction Section).
 - The measures outlined in this fact sheet are insufficient to address all the environmental impacts and compliance issues related to steam cleaning.

MAINTENANCE:

- Minimal, some berm repair may be necessary.

- TARGETED POLLUTANTS**
- Sediment
 - Nutrients
 - Heavy Metals
 - Toxic Materials
 - Oxygen Demanding Substances
 - Oil & Grease
 - Floatable Materials
 - Bacteria & Viruses

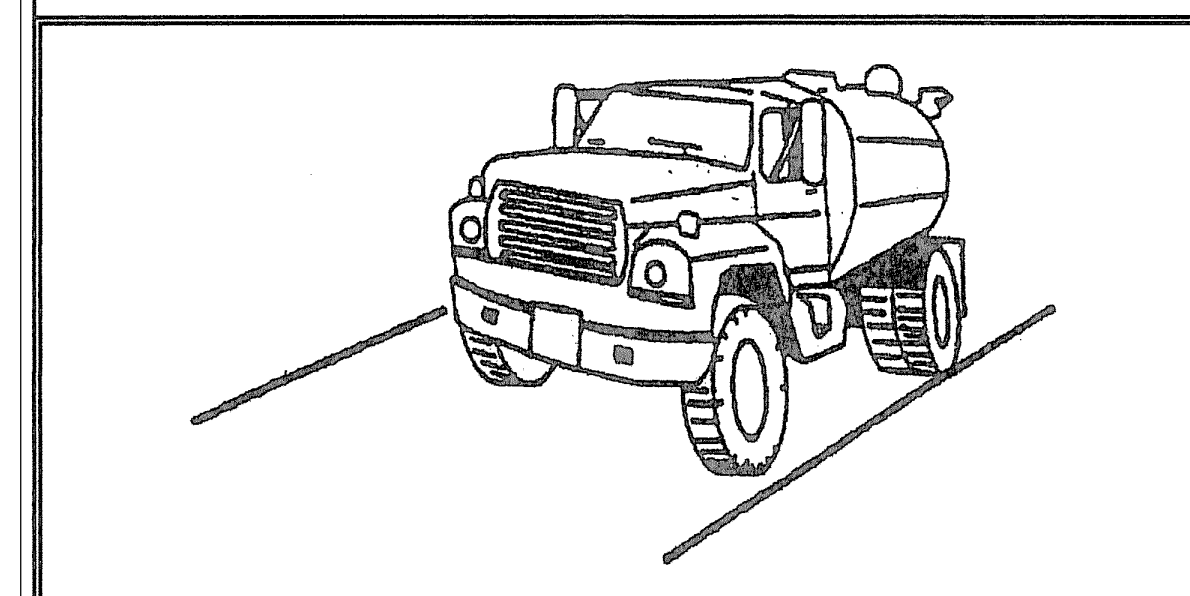
- High Impact
- Medium Impact
- Low or Unknown Impact

- IMPLEMENTATION REQUIREMENTS**
- Capital Costs
 - O&M Costs
 - Maintenance
 - Training

- High Medium Low

BMP: Dust Controls

DC



- OBJECTIVES**
- Housekeeping Practices
 - Contain Waste
 - Minimize Disturbed Areas
 - Stabilize Disturbed Areas
 - Protect Slopes/Channels
 - Control Site Perimeter
 - Control Internal Erosion

DESCRIPTION:
Dust control measures are used to stabilize soil from wind erosion, and reduce dust by construction activities.

APPLICATION:
Dust control is useful in any process area, loading and unloading area, material handling areas, and transfer areas where dust is generated. Street sweeping is limited to areas that are paved.

- INSTALLATION/APPLICATION CRITERIA:**
- Mechanical dust collection systems are designed according to the size of dust particles and the amount of air to be processed. Manufacturers' recommendations should be followed for installation (as well as the design of the equipment).
 - Two kinds of street sweepers are common: brush and vacuum. Vacuum sweepers are more efficient and work best when the area is dry.
 - Mechanical equipment should be operated according to the manufacturers' recommendations and should be inspected regularly.

- LIMITATIONS:**
- Is generally more expensive than manual systems.
 - May be impossible to maintain by plant personnel (the more elaborate equipment).
 - Is labor and equipment intensive and may not be effective for all pollutants (street sweepers).

MAINTENANCE:
If water sprayers are used, dust-contaminated waters should be collected and taken for treatment. Areas will probably need to be resprayed to keep dust from spreading.

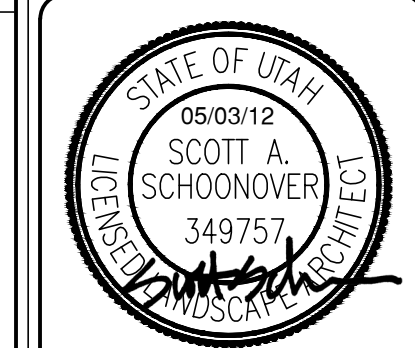
- TARGETED POLLUTANTS**
- Sediment
 - Nutrients
 - Toxic Materials
 - Oil & Grease
 - Floatable Materials
 - Other Waste

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- Low or Unknown Impact

- IMPLEMENTATION REQUIREMENTS**
- Capital Costs
 - O&M Costs
 - Maintenance
 - Training

- High Medium Low

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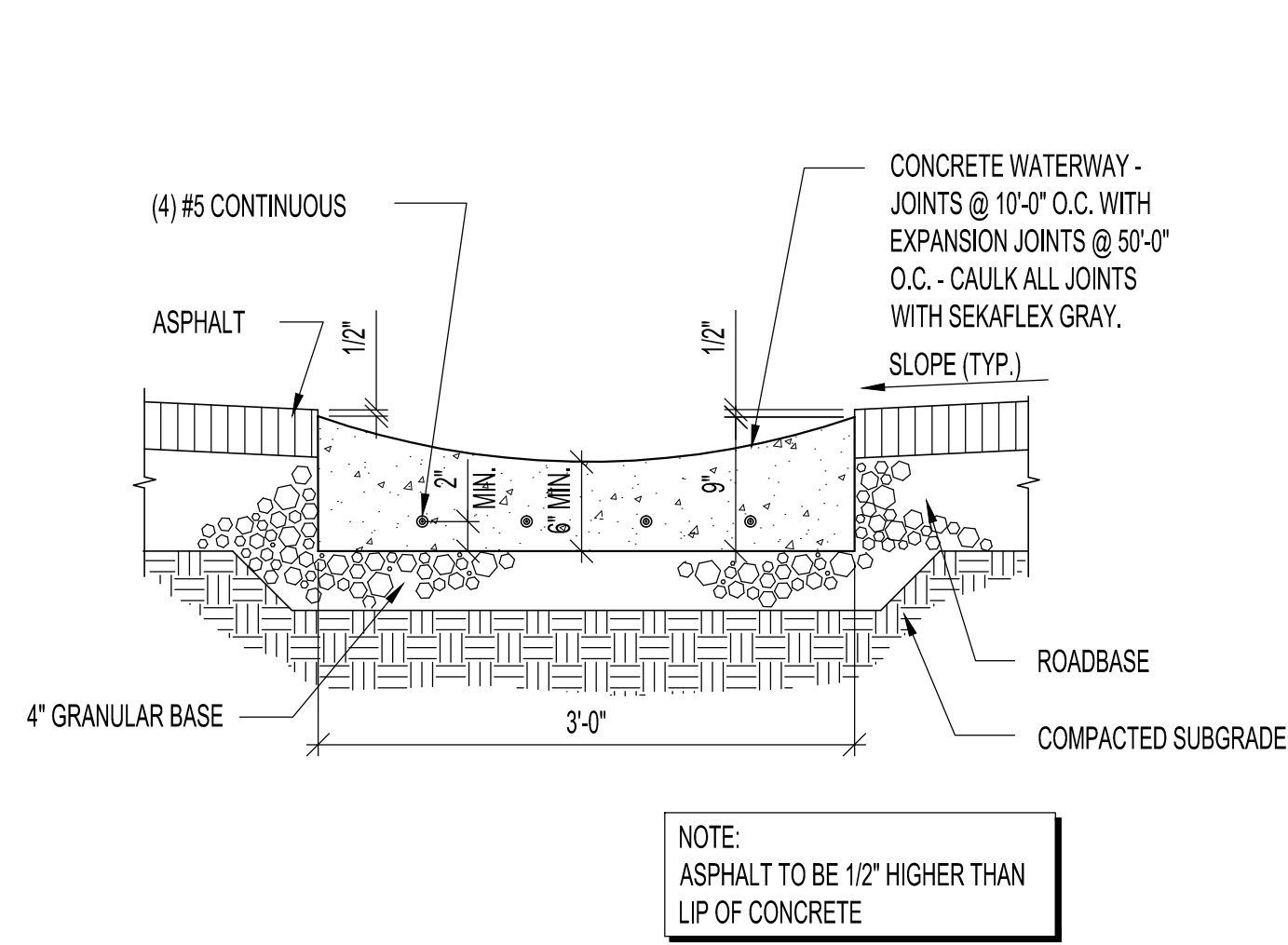
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SHEET TITLE
**SWPPP
 DETAILS**

C4.03
 SHEET 10 OF 17

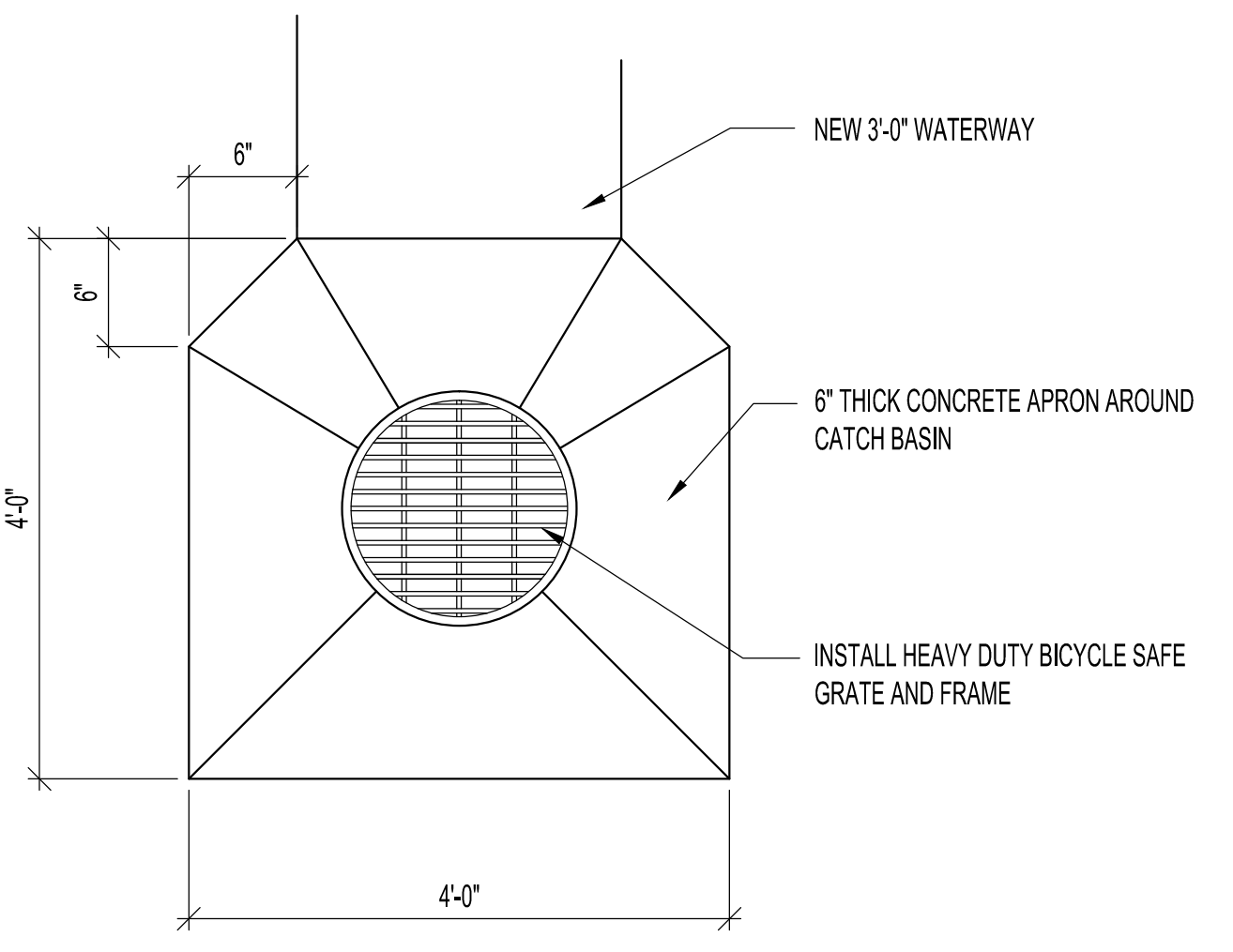
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CONCRETE WATERWAY

SCALE: 1" = 1'-0"

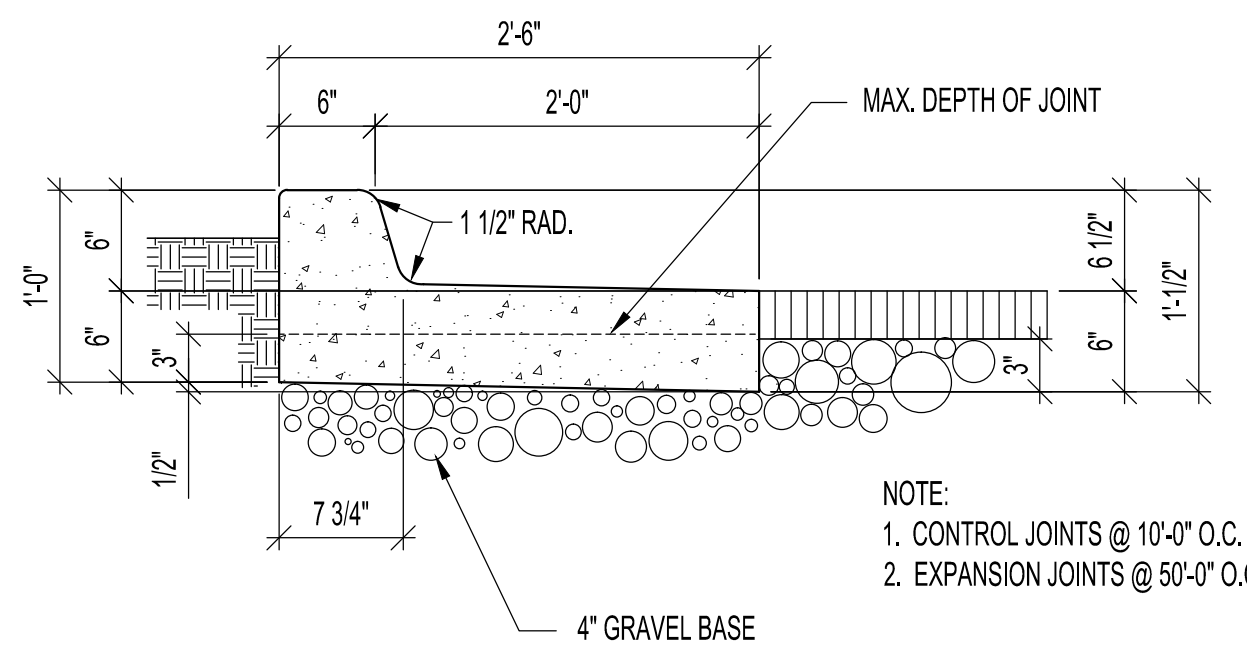
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CATCH BASIN APRON - AT WATERWAY

SCALE: 3/4" = 1'-0"

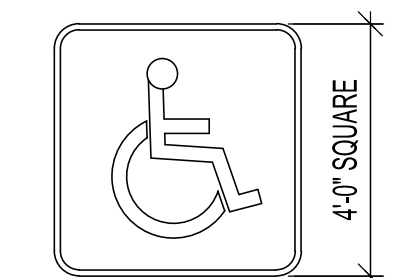
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RELEASE CURB & GUTTER

SCALE: 1" = 1'-0"

C



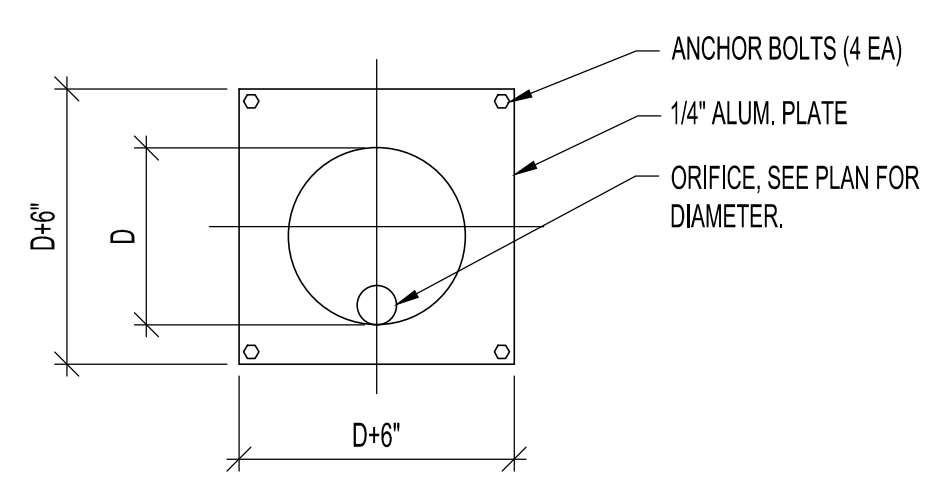
ADA STRIPING SYMBOL

SCALE: N.T.S

D

PAINTED EMBLEM ON ASPHALT PAVING TYP. AT ALL ADA PARKING STALLS PER CITY REQUIREMENTS. (2 COATS)

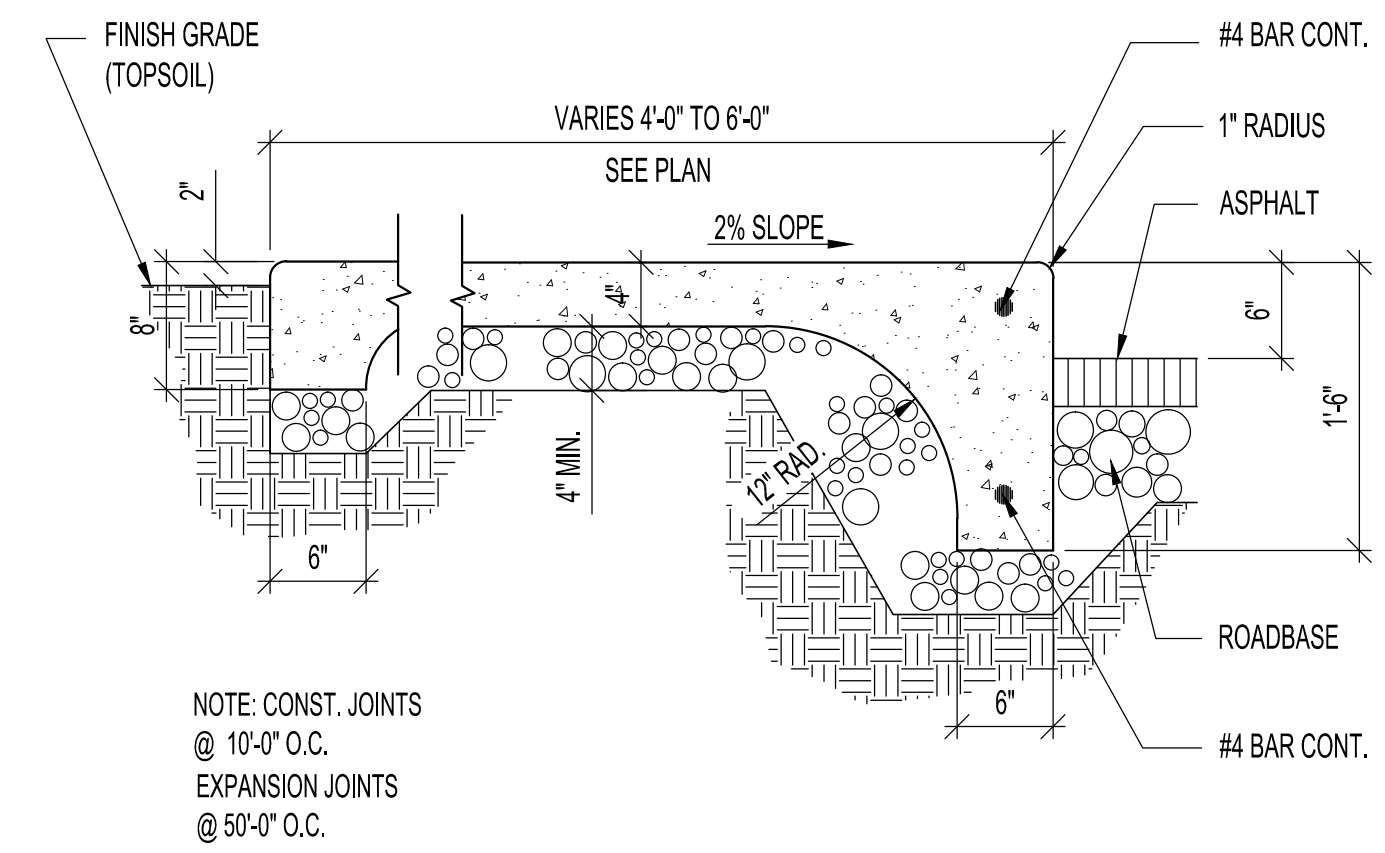
NOTE: SEE SPECIFICATION FOR PAINT TYPE AND COLOR. (2 COATS)



ORFICE RESTRICTOR

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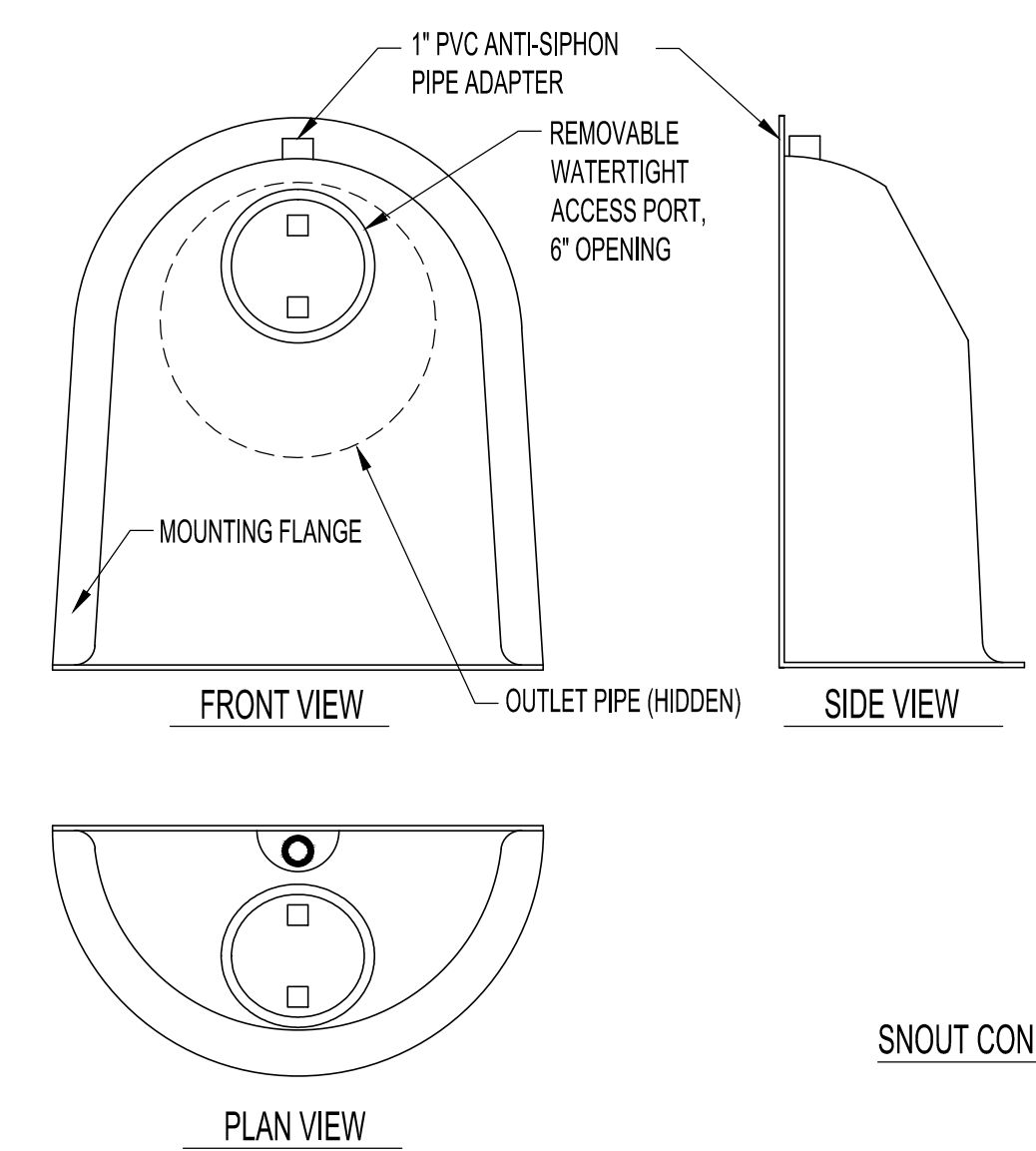
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INTEGRAL WALK & CURB

SCALE: 1" = 1'-0"

F



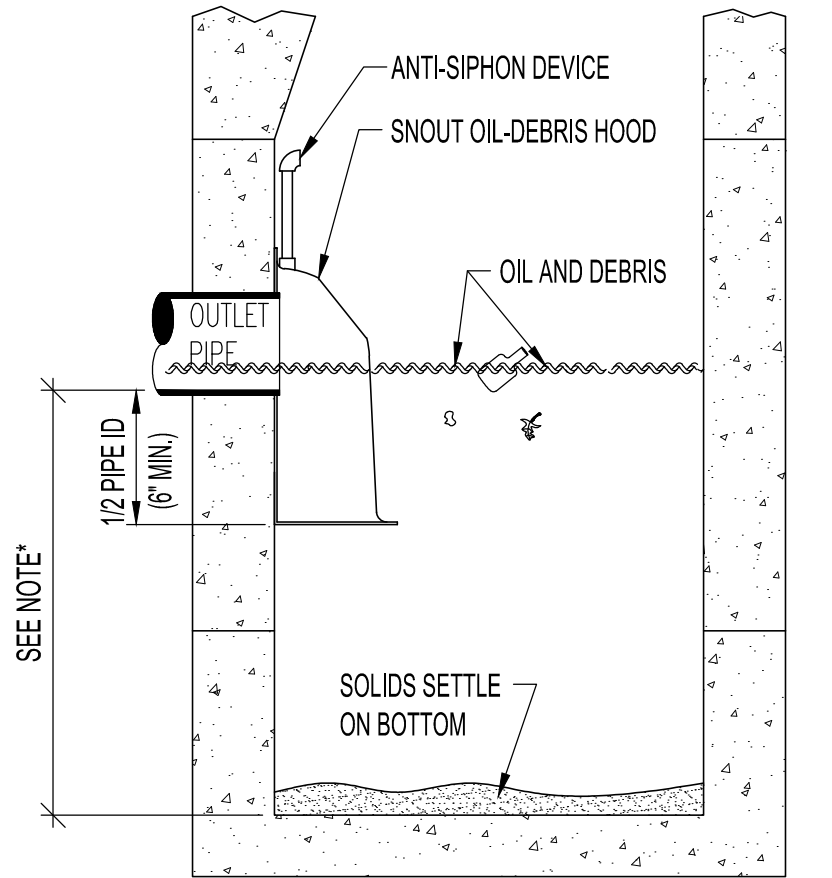
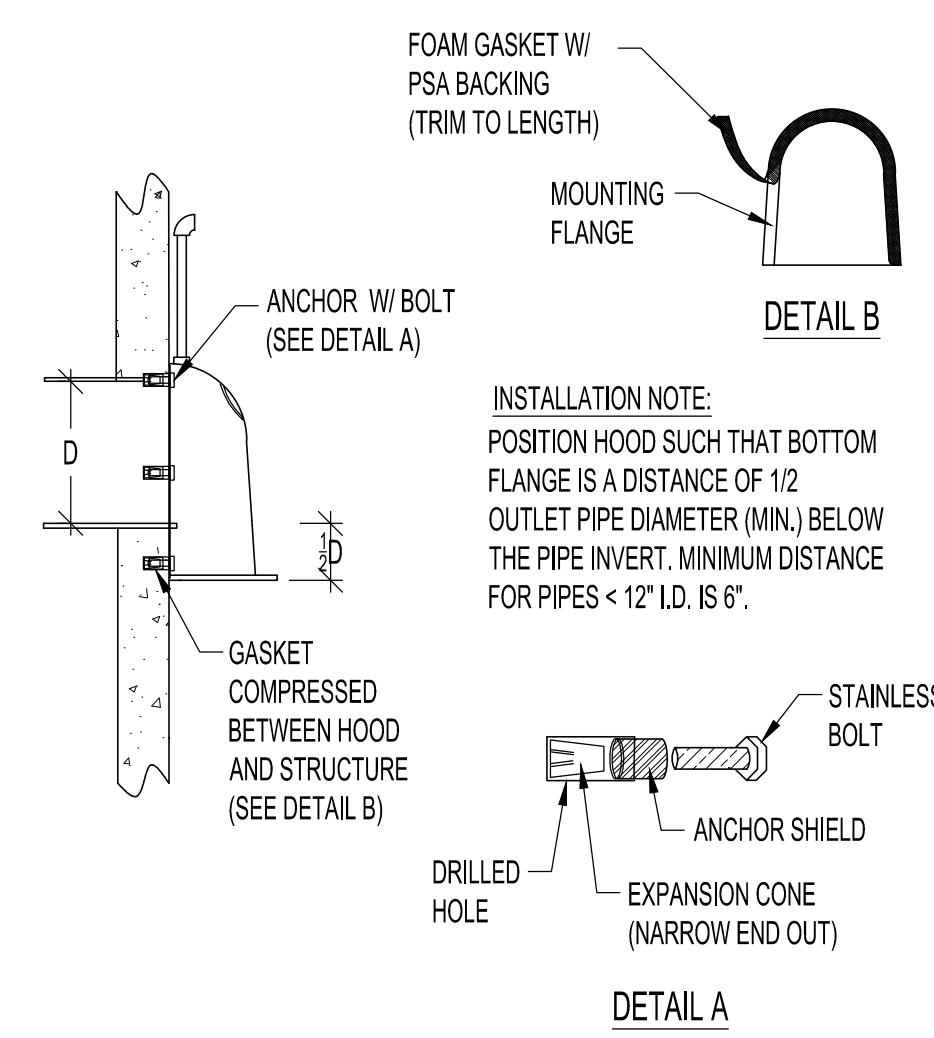
SPECIFICATIONS:

- ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY: BEST MANAGEMENT PRODUCTS, INC. 53 MT. ARCHER RD. LYME, CT 06371 (860) 434-0277, (860) 434-3195 FAX TOLL FREE: (800) 504-8008 OR (888) 354-7585 WEB SITE: www.bmpinc.com OR PRE-APPROVED EQUAL
- ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
- ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
- THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
- THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
- THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
- THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
- THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
- INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE: A. INSTALLATION INSTRUCTIONS B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING D. 3/8" STAINLESS STEEL BOLTS E. ANCHOR SHIELDS

SIZING EXAMPLES:

OUTLET HOLE SIZE	SNOUT SIZE	STRUCTURE SIZE
11.9" O.D. OR LESS	12 F or R	R FITS 36"-48" DIAM STRUCTURE
12.0"-17.9" O.D.	18 F or R	R FITS 48"-60" DIAM STRUCTURE
18.0"-23.9" O.D.	24 F or R	R FITS 48"-60" DIAM STRUCTURE
24.0"-29.9" O.D.	30 F or R	R FITS 60"-72" DIAM STRUCTURE
30.0"-47.9" O.D.	48 F	
30.0"-53.9" O.D.	54R/72	FITS 72" DIAM STRUCTURE ONLY
48.0"-95.9" O.D.	96 F	

NOTE: USE ONLY "F" SERIES SNOUTS FOR RECTANGULAR OR SQUARE STRUCTURES, AVAILABLE IN 12", 18", 24", 30", 48", AND 96" SIZES. USE ONLY "R" SERIES SNOUTS FOR ROUND STRUCTURES, AVAILABLE IN 12", 18", 24", 30", AND 54" SIZES.



US Patent # 6129817

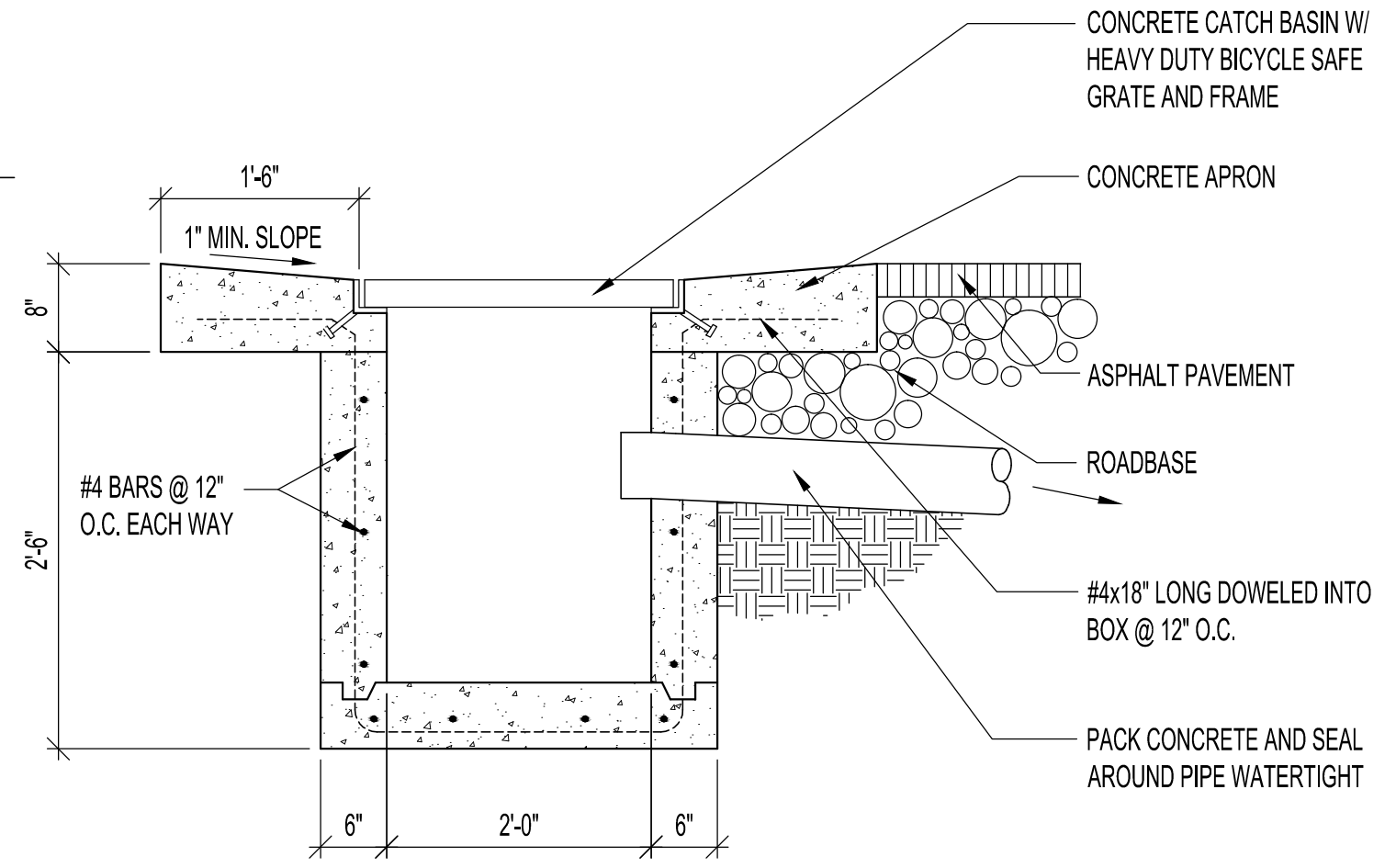
HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL-DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER	
	SP-SN	

SNOUT OIL-WATER-DEBRIS SEPARATOR

SCALE: N.T.S.

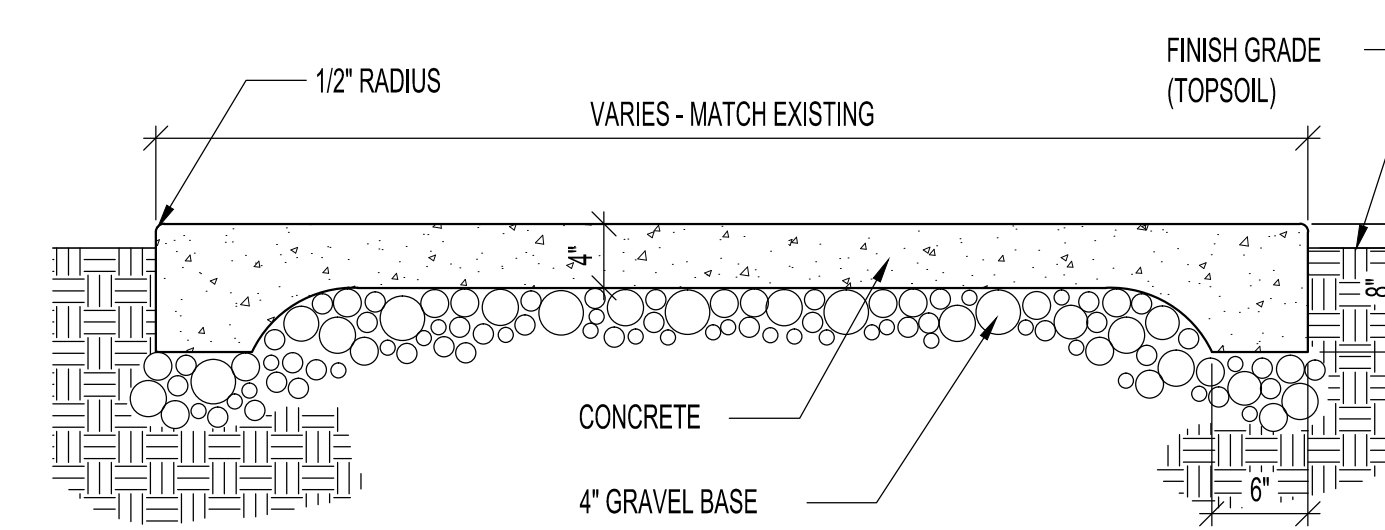
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CATCH BASIN DETAIL

SCALE: 3/4" = 1'-0"

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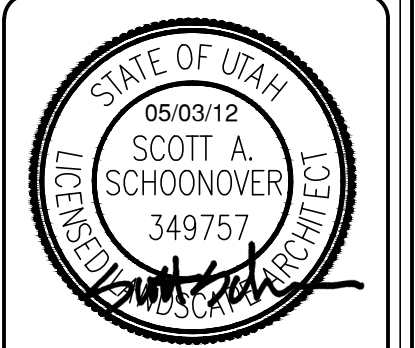


SIDEWALK DETAIL

SCALE: 1" = 1'-0"

H

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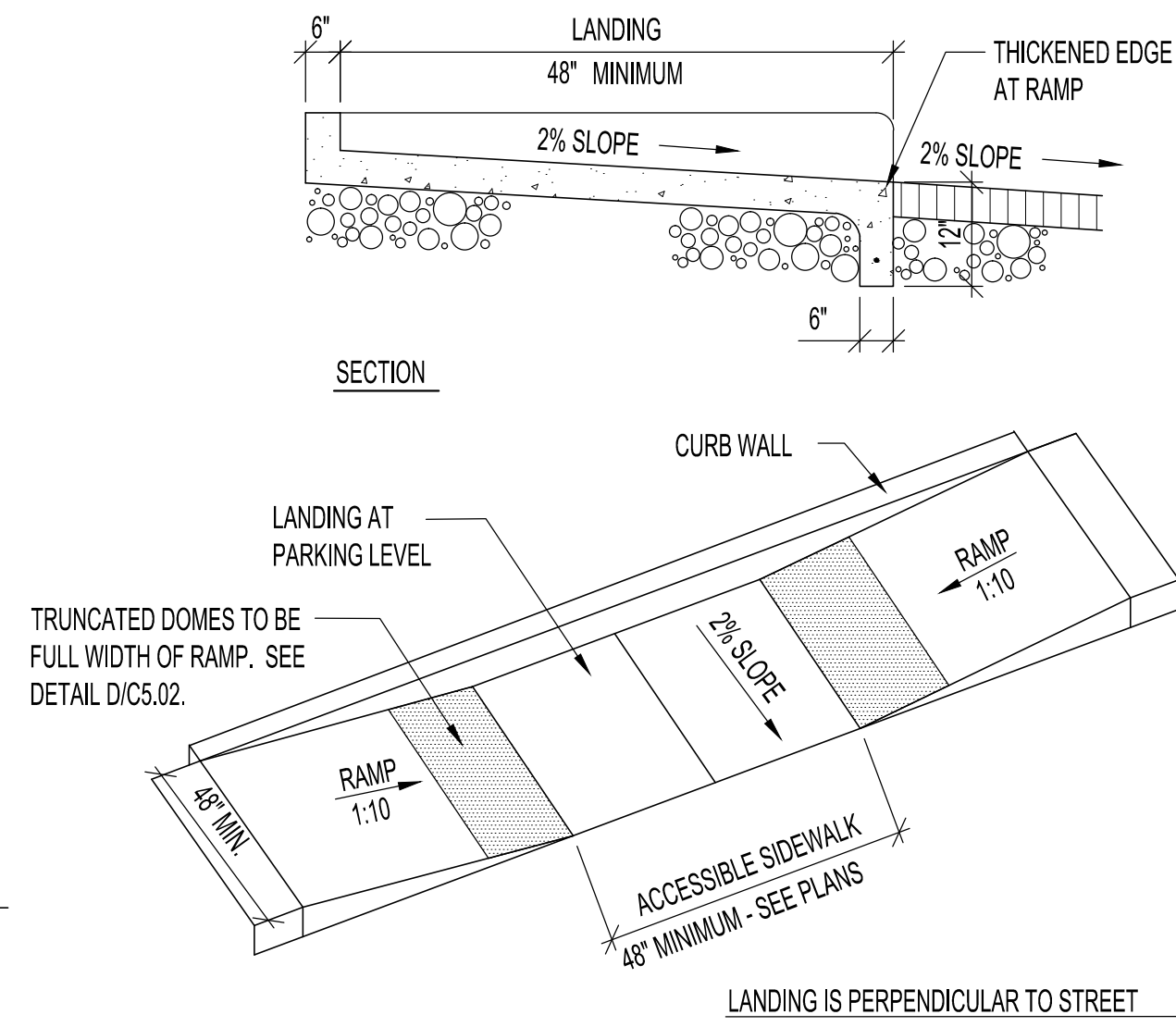
REVISIONS

REV	DATE	DESCRIPTION

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 PROPERTY NO: 502-2681
 DESIGNED BY: NMD
 FIELD CREW: NMD/MGS
 CHECKED BY: RJD
 DATE: MAY 2012

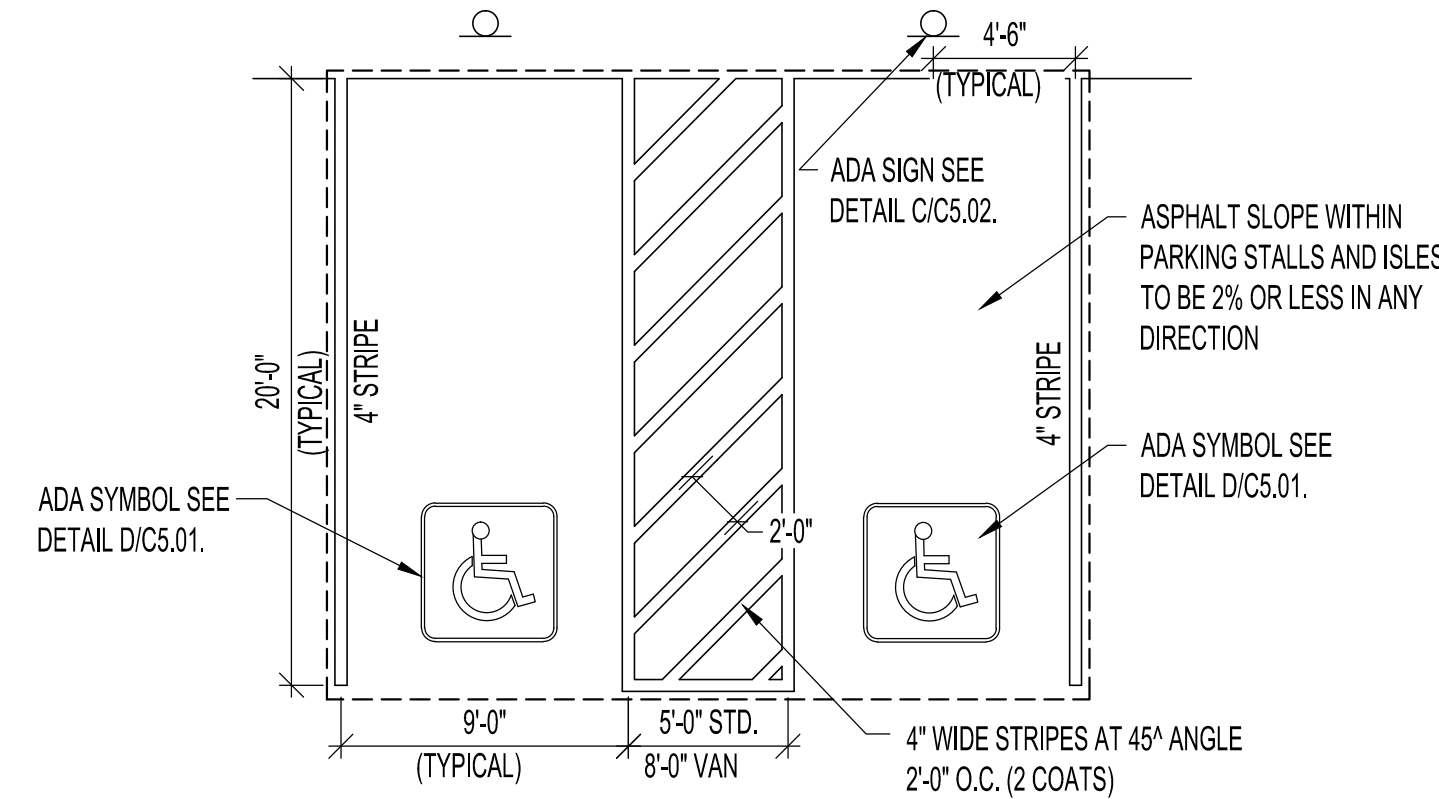
SHEET TITLE
DETAIL SHEET

C5.01
 SHEET 11 OF 17



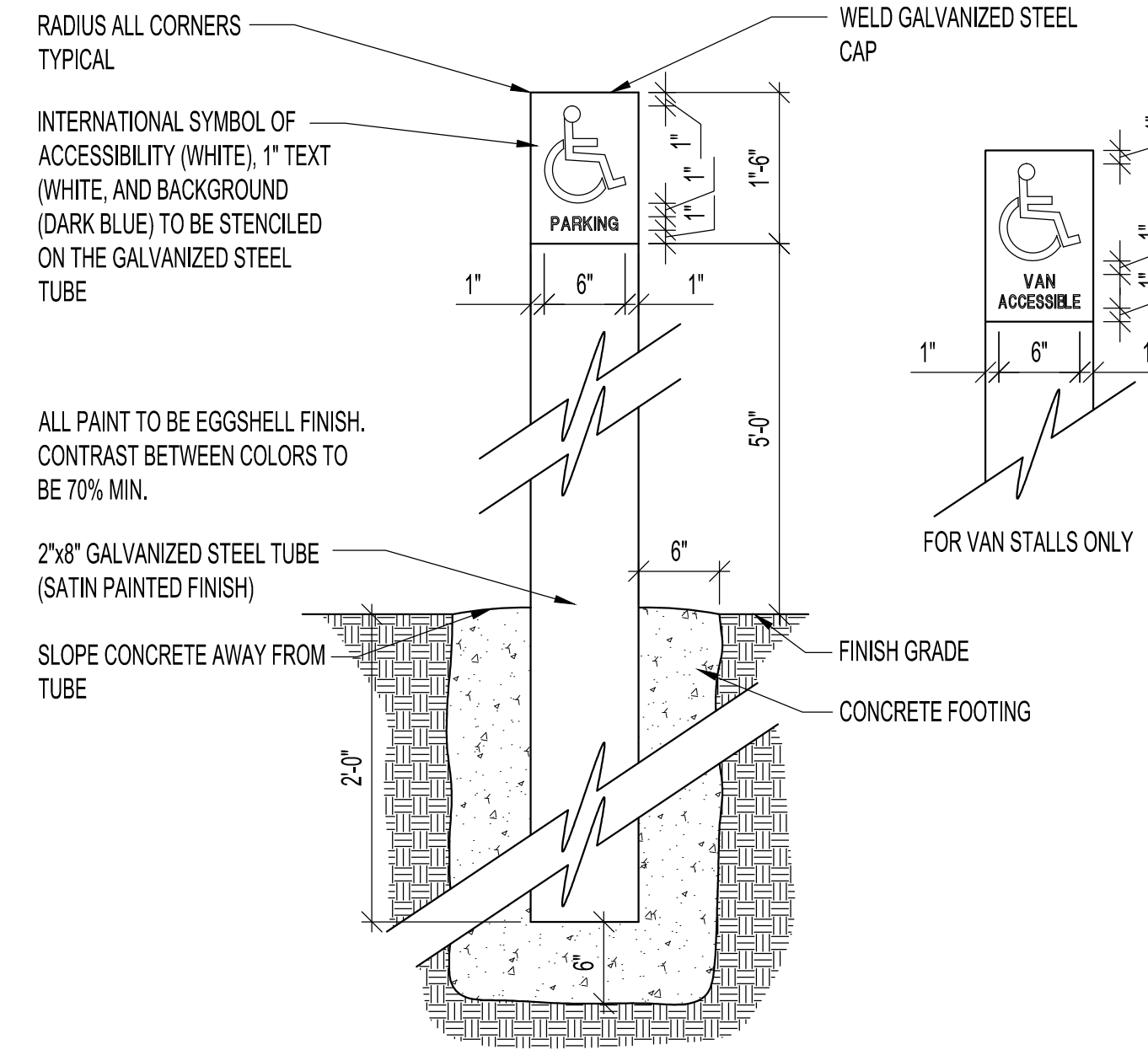
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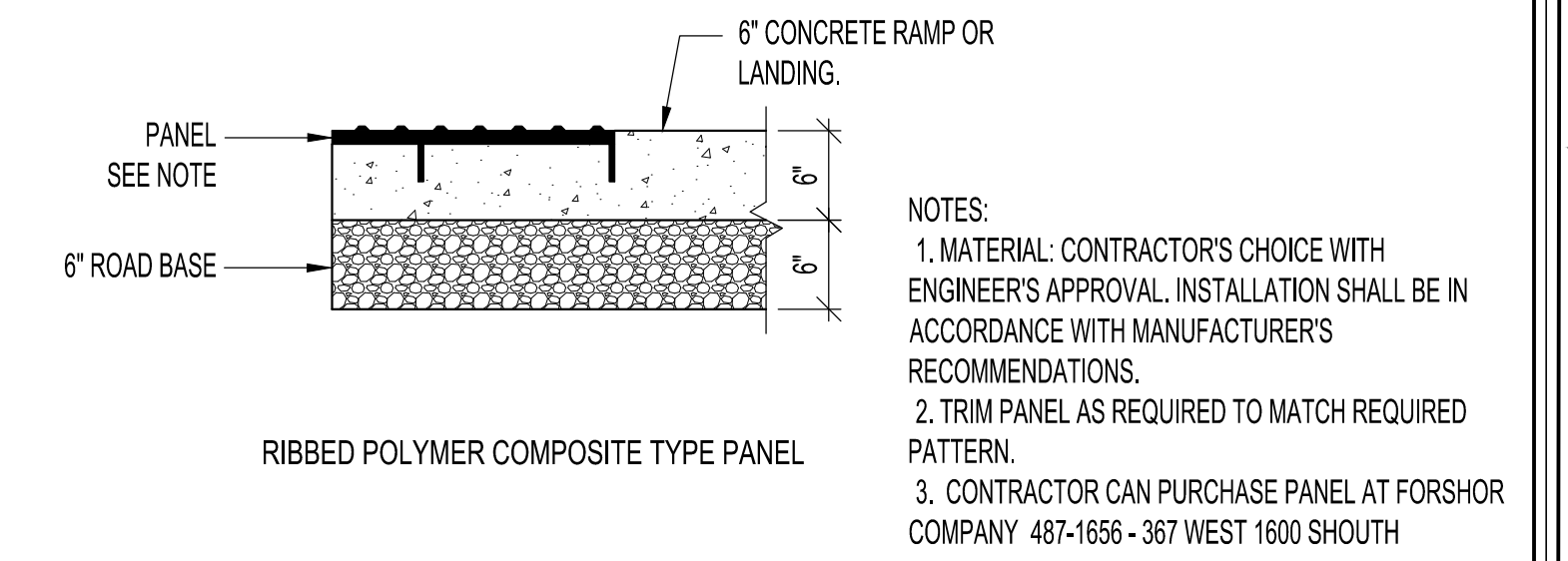
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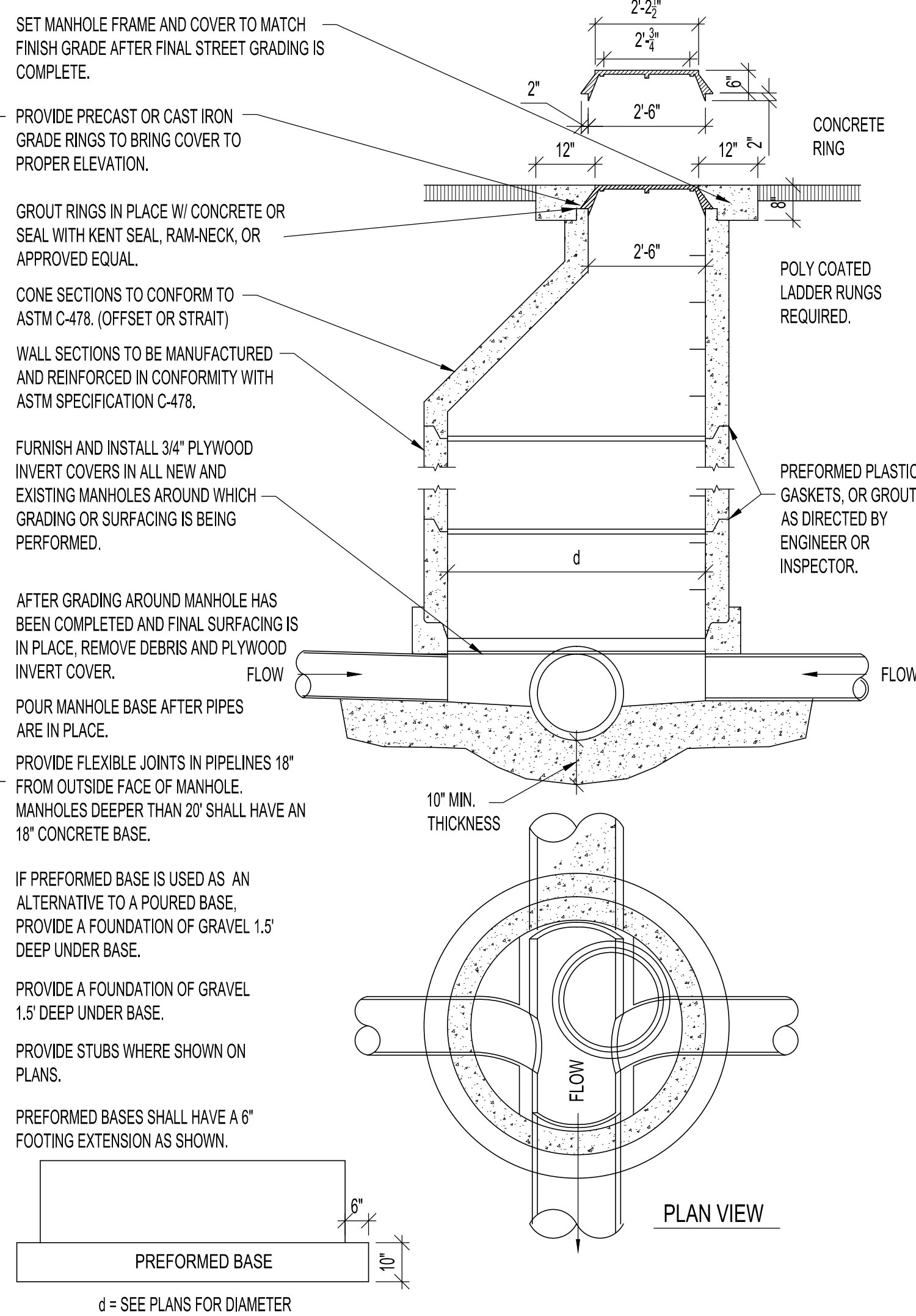
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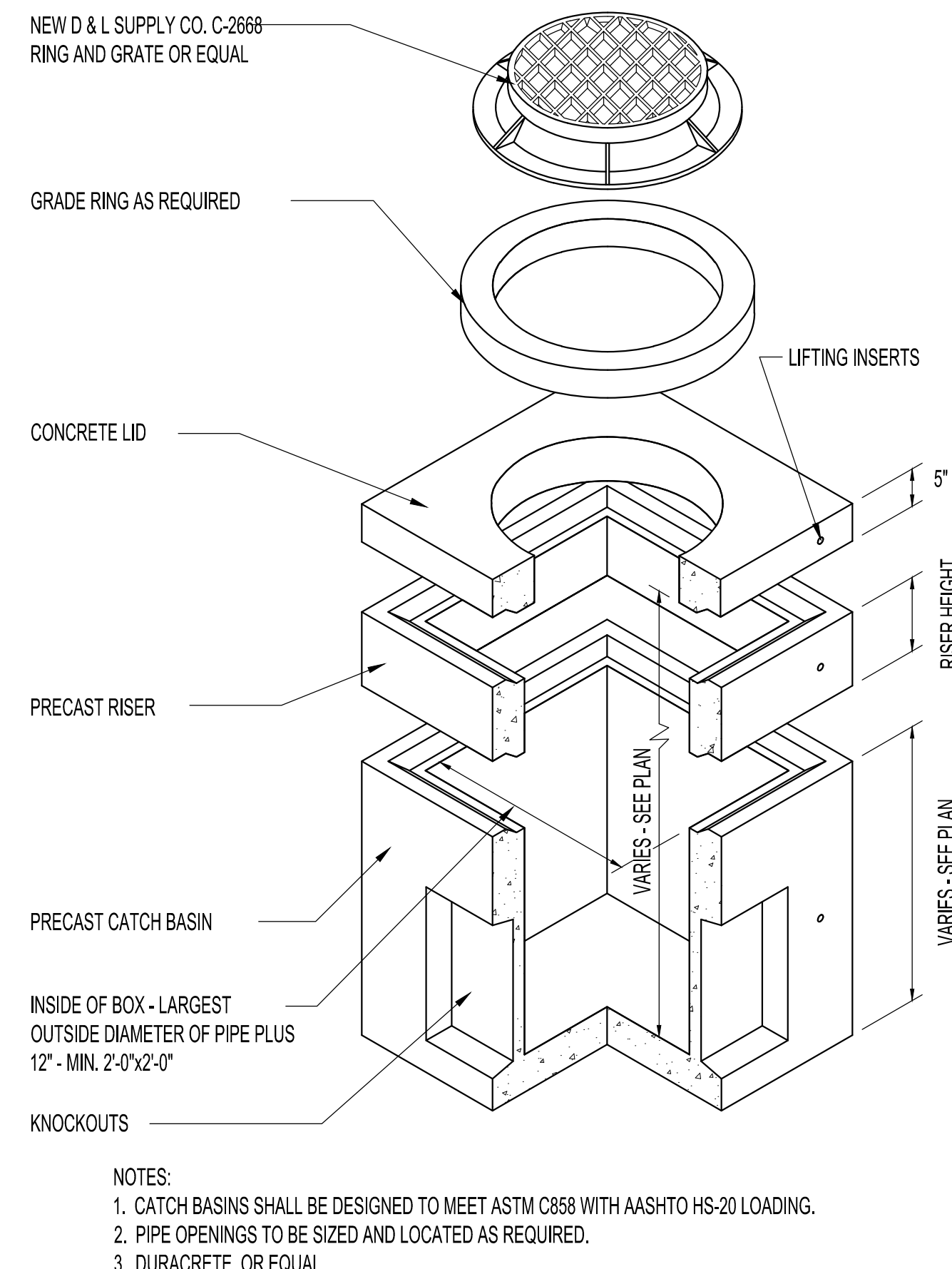
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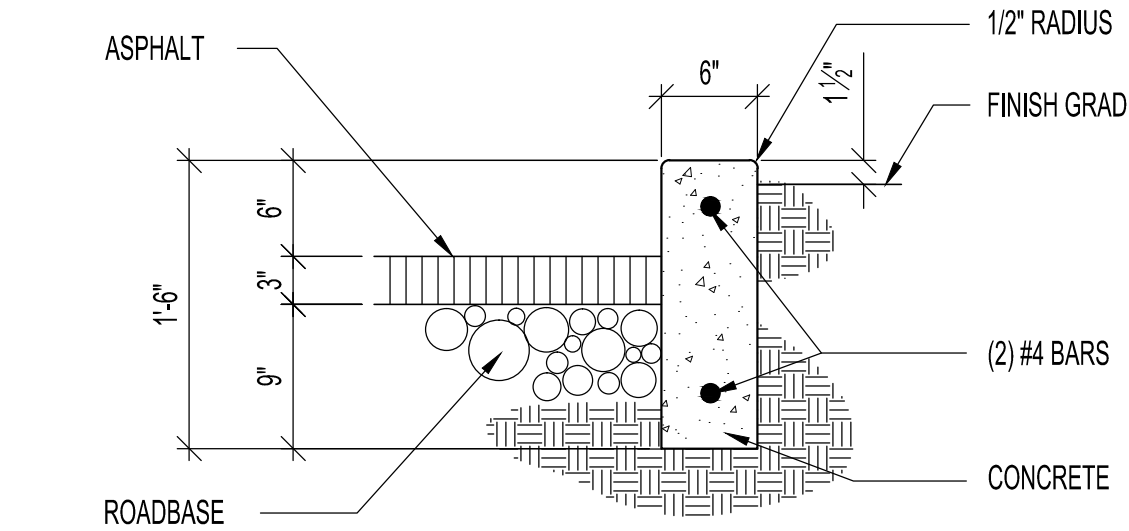
STANDARD MANHOLE DETAIL
SCALE: N.T.S.

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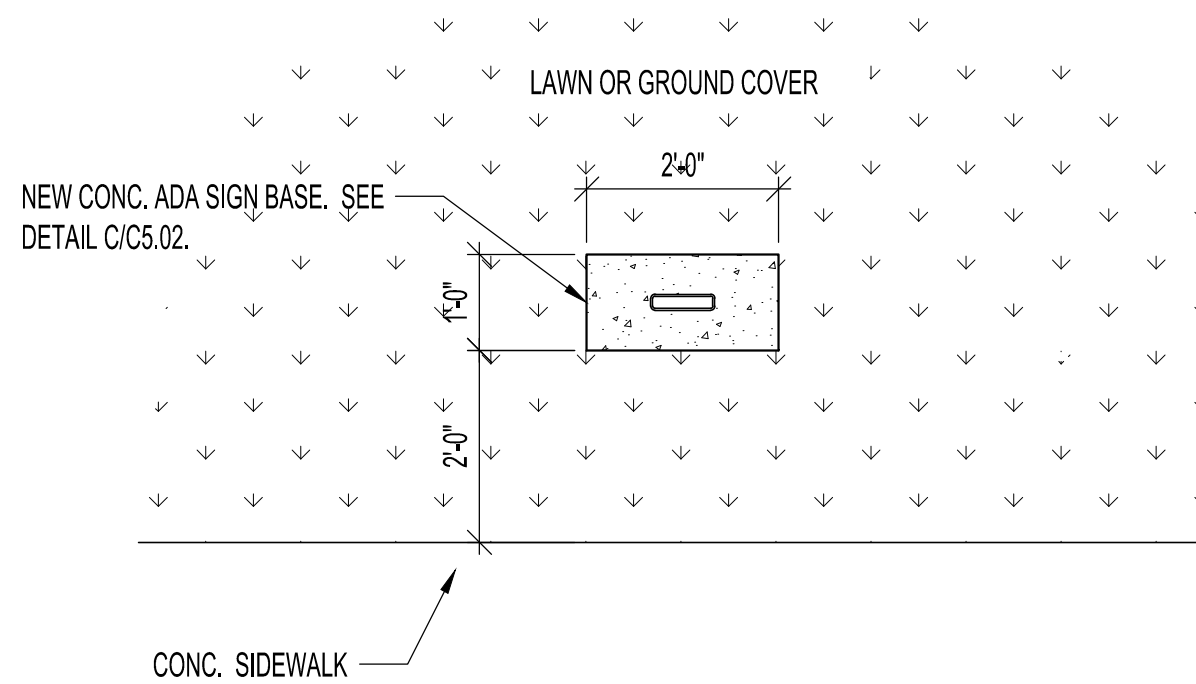
STD CATCH BASIN
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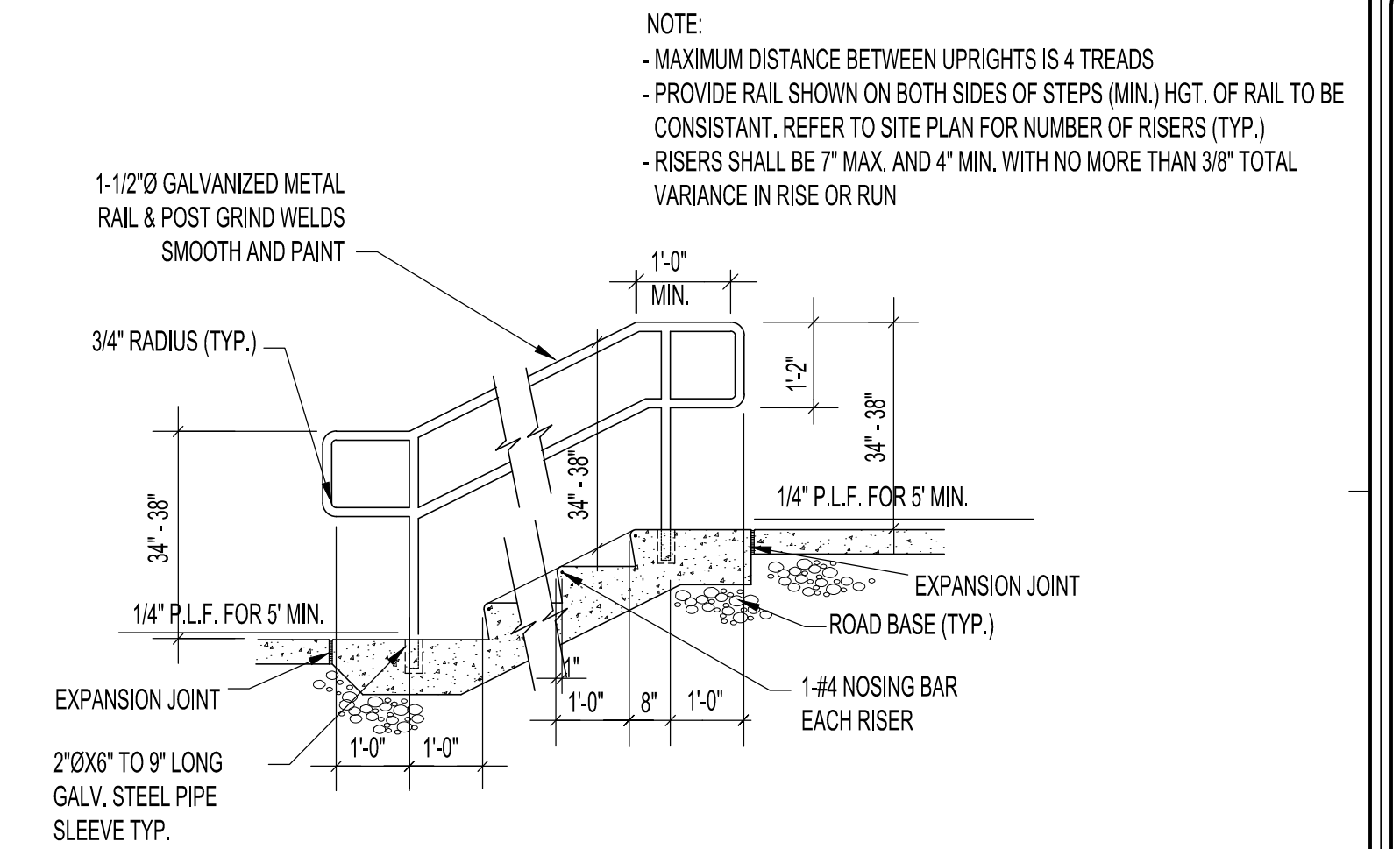
CURB WALL DETAIL
SCALE: 1" = 1'-0"

E



ADA SIGN BASE PLAN VIEW
SCALE: 1/2" = 1'-0"

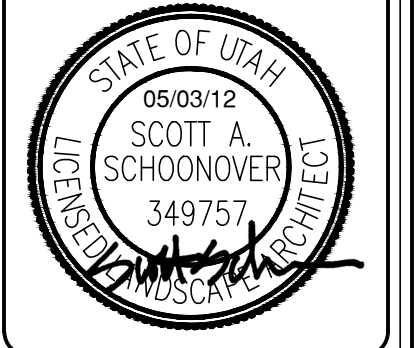
J



EXTERIOR STAIR DETAIL
SCALE: N.T.S.

F

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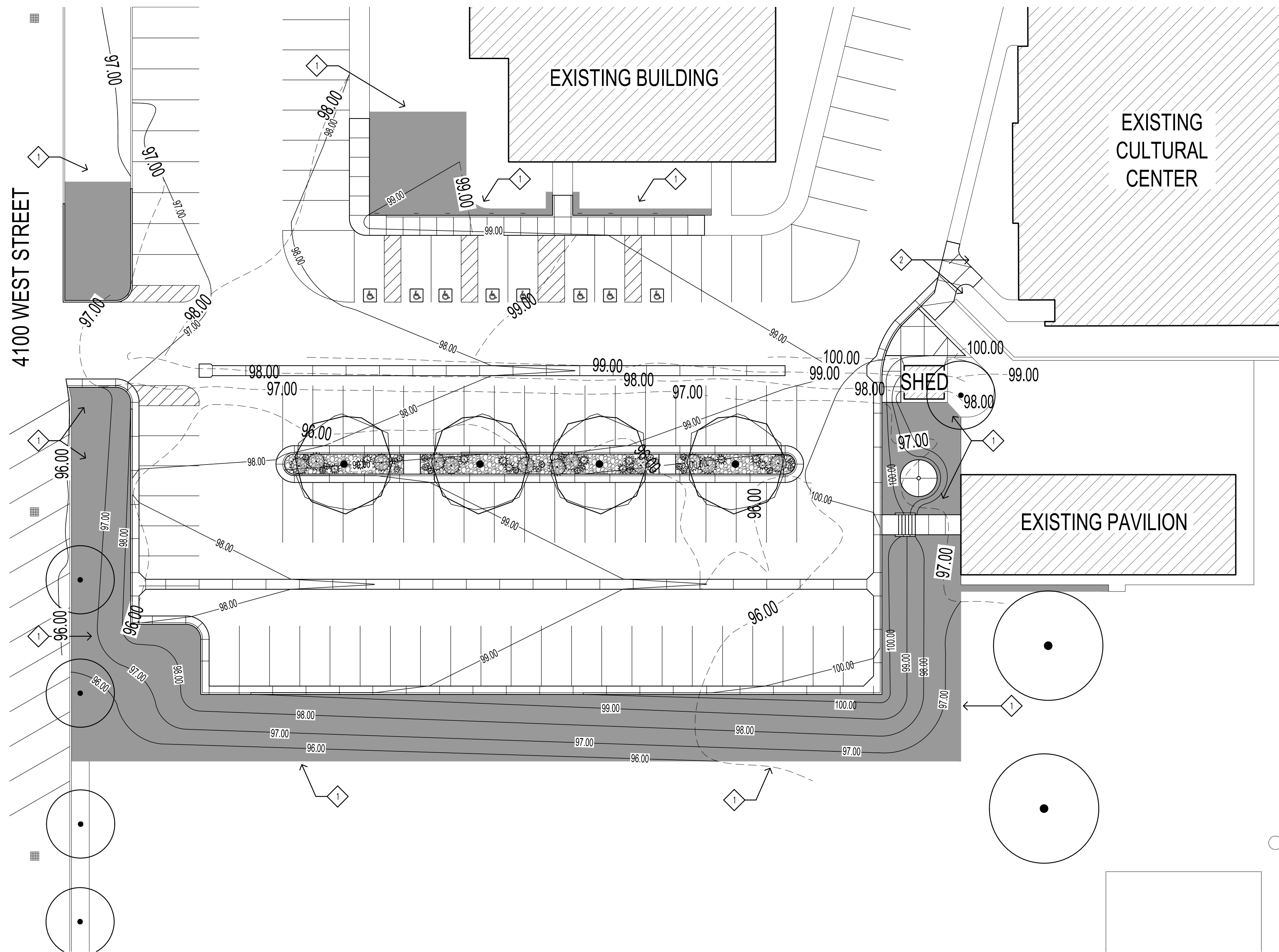
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 OGDEN UTAH WEBER NORTH STAKE**
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REVISIONS	DESCRIPTION
REV#	DATE

SHEET TITLE
DETAIL SHEET

C5.02
SHEET 12 OF 17

C:\Users\mdecker\OneDrive\Documents\Projects\11358\11358-std.dwg, May 03, 2012 - 5:00pm



PLANTING PLAN
SCALE: 1" = 20'-0"

PLANTING LEGEND

SYMBOL	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	NOTE
TREES					
		EXISTING TREE TO REMAIN			
	4	IMPERIAL HONEY LOCUST	Gleditsia triacanthos inermis 'Imperial'	2" Caliper	See Detail E/L5.01
SHRUBS					
	12	BLUE CHIP JUNIPER	Juniperus horizontalis 'Blue Chip'	5 Gallon	See Details B&C/L5.01
PERENNIALS & GRASSES					
	12	HAMELN FOUNTAIN GRASS	Pennisetum alopecuroides 'Hameln'	1 Gallon	See Detail D/L5.01
	24	STELLA D' ORO DAYLILY	Hemerocallis 'Stella d' Oro'	1 Gallon	See Detail D/L5.01
DECORATIVE STONE & BOULDERS					
	851 s.f.	STONE MULCH, 3/4"-8" DIAMETER "SOUTHTOWN" FROM NEPHI SANDSTONE (435) 623-2332 OR APPROVED EQUAL INSTALLED A MINIMUM 5" DEEP.	Install over Dewitts Pro 5 weed barrier fabric.		See Detail H/L5.01
LAWN					
	11,071 s.f.	LAWN SOD TO MATCH EXISTING			See Detail A/L5.01

PLANTING NOTES

1. ALL QUANTITIES ARE SHOWN AS AN AID ONLY. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR FOR ALL QUANTITY CALCULATIONS BASED ON THE PLANTING PLAN.
2. PLANT COMMON NAMES ARE SHOWN AS A REFERENCE ONLY. USE COMPLETE BOTANICAL NAMES WHEN PURCHASING ALL PLANT MATERIAL.

REFERENCE NOTES

1. RESTORE GRADE AND REPAIR SOD AT ALL AREAS DAMAGED BY WORK COMPLETED UNDER THIS CONTRACT. EXISTING TURF SHALL BE CUT WITH CLEAN AND STRAIGHT EDGES. NEW SOD TO MATCH EXISTING SOD'S GRADE CREATING A SMOOTH TRANSITION.
2. RESTORE AND REPAIR SHRUB BED AT ALL AREAS DAMAGED BY WORK COMPLETED UNDER THIS CONTRACT

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY.

Call DJ

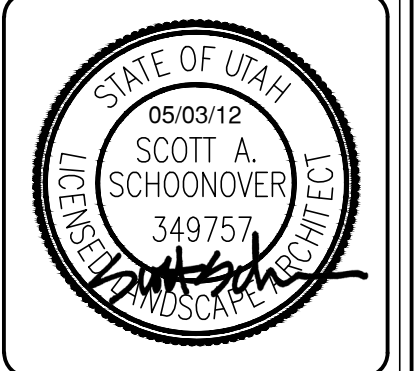
1-800-662-4111

NOTICE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION, AND RESTORATION OF ALL BURIED OR ABOVE GROUND UTILITIES, SHOWN OR NOT SHOWN ON THE PLANS.

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WEST WEBER, UTAH

REV	DATE	DESCRIPTION

PROJECT NO: 11358
CAD DWG. FILE: 11358-PLN.dwg
DRAWN BY: NMD
PROPERTY NO: 502-2681
DESIGNED BY: BE
FIELD CREW: RJD
CHECKED BY: SS
DATE: MAY 2012

SHEET TITLE
PLANTING PLAN

L1.01
SHEET 13 OF 17

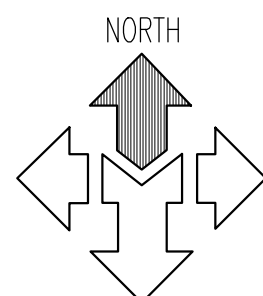
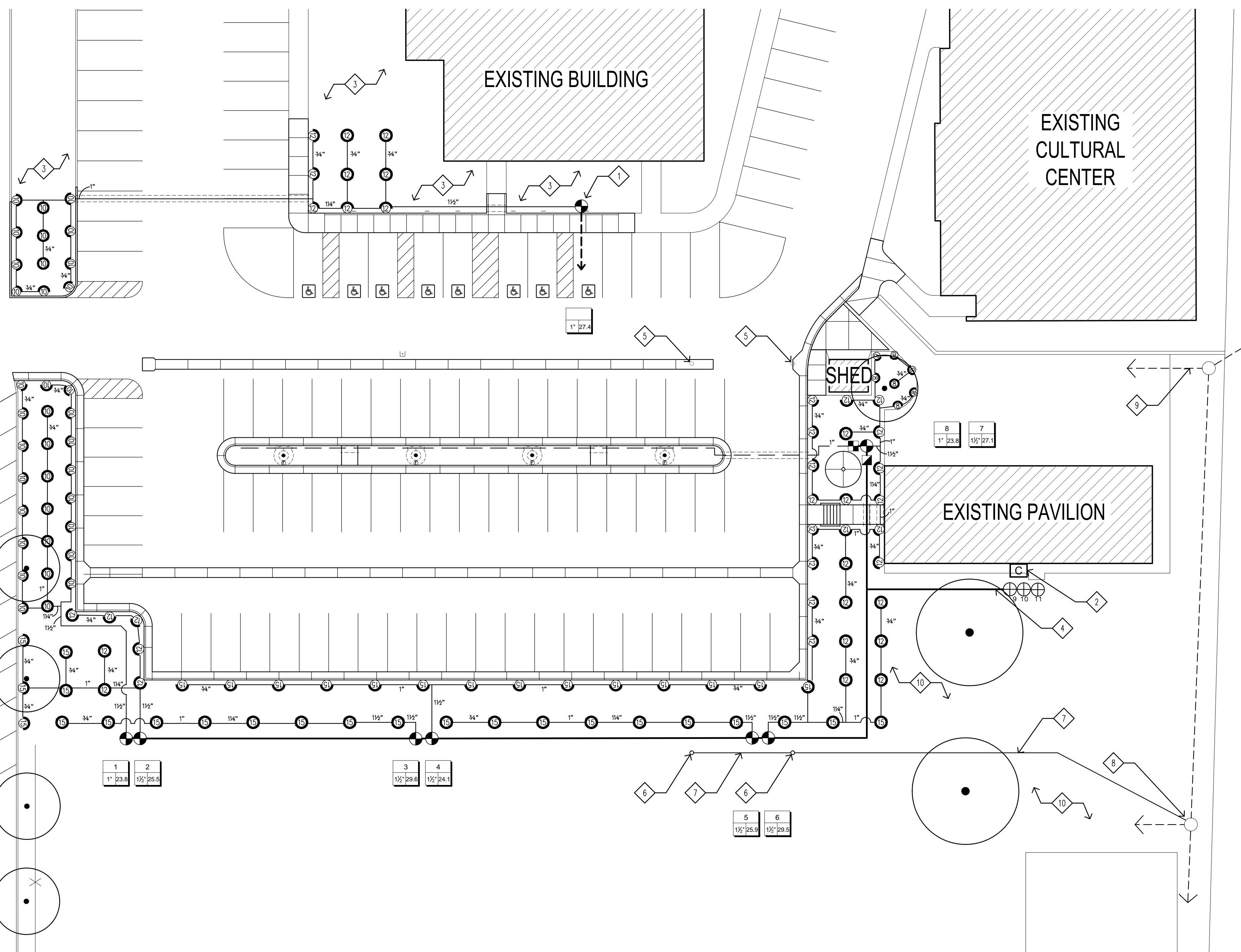
MCNEIL ENGINEERING - CIVIL, L.C.

MCNEIL ASPEN CONSULTANTS, L.C.

MCNEIL ENGINEERING STRUCTURAL, L.C.

MCNEIL ENGINEERING - SURVEYING, L.C.

4100 WEST STREET



IRRIGATION PLAN

SCALE: 1" = 20'-0"

IRRIGATION NOTES

- INSTALL VARIABLE ARC NOZZLES (OF THE SAME SERIES SHOWN ON THE PLAN) ALONG ARCS AND OTHER AREAS WHERE FIXED ARC NOZZLES WON'T WORK PROPERLY AS REQUIRED FOR COMPLETE AND EFFICIENT COVERAGE.
- REMOVE EXISTING CONTROLLER AND RETURN TO OWNER. INSTALL THE NEW CONTROLLER IN THE SAME LOCATION AS EXISTING CONTROLLER. IF NEEDED COORDINATE WITH OWNER AND ELECTRICAL CONTRACTOR FOR POWER SUPPLY AT CONTROLLER LOCATION. ALSO, INSTALL WIRELESS RAIN SENSOR AND ASSOCIATED COMPONENTS COMPLETE WITH PROPER LINK TO CONTROLLER. COORDINATE ACTUAL LOCATION OF RAIN SENSOR WITH OWNER AND OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- MAINTAIN AND PROTECT AS MUCH OF THE EXISTING IRRIGATION SYSTEM AS POSSIBLE AND FEASIBLE THROUGHOUT THE DURATION OF THE CONSTRUCTION PERIOD TO PRESERVE ALL EXISTING PLANT MATERIAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR TO ENSURE THAT ALL EXISTING PLANT MATERIAL REMAIN IN HEALTHY CONDITION AND TO MAKE ALL THE NECESSARY ACCOMMODATIONS TO ACCOMPLISH THIS. ALL PLANT MATERIAL DEEMED BY THE LANDSCAPE ARCHITECT TO BE DAMAGED SHALL BE REPLACED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- REMOVE AND PROPERLY DISPOSE OF ALL EXISTING IRRIGATION EQUIPMENT THAT IS NOT A PART OF THE NEW SYSTEM. THIS SHALL INCLUDE BUT NOT BE LIMITED TO CONTROL VALVES, VALVE BOXES, HEADS, AND OTHER IRRIGATION COMPONENTS AT GRADE. ALL BELOW GRADE ITEMS SUCH AS PIPE AND FITTINGS SHALL REMAIN UNLESS ENCOUNTERED DURING CONSTRUCTION OPERATIONS. DO NOT SALVAGE ANY OF THE EXISTING EQUIPMENT FOR THE NEW IRRIGATION SYSTEM.
- WHERE POSSIBLE, EXISTING TURF SHALL BE CUT WITH CLEAN AND STRAIGHT EDGES AND PRESERVED PROPERLY DURING TRENCHING OPERATIONS. IF MAY BE NECESSARY TO IMPORT SOD AT AREAS WHERE EXISTING TURF IS UNHEALTHY OR WHEN EXISTING TURF THAT HAS BEEN CUT HAS NOT SURVIVED. ALL SOD SHALL BE LAID TIGHTLY TOGETHER SO AS TO PREVENT GAPS AND SHALL BE INSTALLED AT THE PROPER ELEVATION TO BLEND SMOOTHLY WITH ADJACENT GRADES.
- SOME OF THE IRRIGATION EQUIPMENT IS SHOWN WITHIN HARDSCAPE AREAS FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN THE LANDSCAPED AREA.

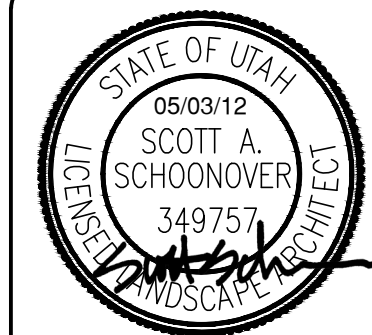
REFERENCE NOTES

- CONNECT NEW CONTROL VALVE TO EXISTING MAINLINE AT THIS POINT (FIELD VERIFY SIZE AND LOCATION). INSTALL EXISTING WIRE TO NEW CONTROL VALVE AS REQUIRED.
- LOCATION OF EXISTING CONTROLLER - SEE IRRIGATION NOTE 2. INSTALL NEW WIRES THROUGH EXISTING CONDUIT AND CONNECT EXISTING WIRES TO NEW CONTROLLER.
- REPAIR ALL EXISTING IRRIGATION COMPONENTS DAMAGED UNDER THIS CONTRACT. ADJUST AND REPLACE SPRAY HEADS AS NEEDED TO ACHIEVE HEAD TO HEAD COVERAGE.
- CONNECT NEW MAINLINE INTO EXISTING MAINLINE (FIELD VERIFY LOCATION AND SIZE).
- EXISTING FLOOD IRRIGATION RISERS TO BE REUSED AND RELOCATED (FIELD VERIFY LOCATION). SEE REFERENCE NOTE 6.
- NEW LOCATION OF EXISTING RISERS. INSTALL AS PER LOCAL IRRIGATION COMPANY'S STANDARDS AND DETAILS.
- NEW PIPE TO MATCH EXISTING SIZE, TYPE AND DEPTH. INSTALL PIPE AS PER LOCAL IRRIGATION COMPANY'S STANDARDS AND DETAILS.
- INSTALL NEW PIPE INTO DIVERSION CULVERT AT THE SAME ELEVATION AS THE EXISTING PIPES. INSTALL PIPE AS PER LOCAL IRRIGATION COMPANY'S STANDARDS AND DETAILS.
- INSTALL A NEW CAP OVER THE EXISTING PIPE ON THE INSIDE OF DIVERSION CULVERT (FIELD VERIFY SIZE).
- REPAIR ALL DAMAGE TO LANDSCAPE AND IRRIGATION SYSTEM BACK TO ORIGINAL CONDITION.

IRRIGATION LEGEND

- RAINBIRD 1804-SAM-PRS POP-UP WITH 15 SERIES PLASTIC NOZZLE @ 30 PSI - SEE DETAILS A&B/L5.02 AND IRRIGATION NOTE 1
 - FULL CIRCLE
 - THREE QUARTER CIRCLE
 - TWO THIRDS CIRCLE
 - HALF CIRCLE
 - THIRD CIRCLE
 - QUARTER CIRCLE
- RAINBIRD 1804-SAM-PRS POP-UP WITH 12 SERIES PLASTIC NOZZLE @ 30 PSI - SEE DETAILS A&B/L5.02 AND IRRIGATION NOTE 1
 - FULL CIRCLE
 - THREE QUARTER CIRCLE
 - TWO THIRDS CIRCLE
 - HALF CIRCLE
 - THIRD CIRCLE
 - QUARTER CIRCLE
- RAINBIRD 1804-SAM-PRS POP-UP WITH 10 SERIES PLASTIC NOZZLE @ 30 PSI - SEE DETAILS A&B/L5.02 AND IRRIGATION NOTE 1
 - FULL CIRCLE
 - HALF CIRCLE
 - THIRD CIRCLE
 - QUARTER CIRCLE
- RAINBIRD 1804-SAM-PRS POP-UP WITH 8 SERIES PLASTIC NOZZLE @ 30 PSI - SEE DETAILS A&B/L5.02 AND IRRIGATION NOTE 1
 - FULL CIRCLE
 - HALF CIRCLE
 - THIRD CIRCLE
 - QUARTER CIRCLE
- RAINBIRD PEB SERIES PLASTIC REMOTE CONTROL VALVE - SEE DETAIL F/L5.02
 - SIZE AS SHOWN
- RAINBIRD XC2-100-B-COM DRIP SYSTEM CONTROL VALVE - SEE DETAIL H/L5.02
 - 1"
- RAINBIRD 33DRG TWO PIECE QUICK COUPLING VALVE - SEE DETAIL E/L5.02
 - 3/4"
- RAINBIRD ESP MODULAR IRRIGATION CONTROLLER COMPLETE WITH WIRELESS RAIN SENSOR - SEE IRRIGATION NOTE 2
 - 24 STATION
- SCHEDULE 40 PVC MAINLINE - SEE DETAIL C/L5.02
 - 1-1/2"
- SCHEDULE 40 PVC LATERAL LINE - SEE DETAIL C/L5.02
 - SIZE AS SHOWN
- SCHEDULE 40 PVC DRIP SYSTEM SUPPLY LINE (1/2" RIGID POLYPIPE (SALCO) AND EMITTERS NOT SHOWN ON PLAN FOR GRAPHIC CLARITY) - SEE DETAILS E&F/L5.03
 - 1"
- PVC PIPE/WIRE SLEEVE - SEE DETAIL D/L5.02
 - SIZE AS REQUIRED
- EXISTING VALVES TO REMAIN
 - ⊕ TREE DRIP RING, NETA-FIM TECHLINE TLCV9-12 PRESSURE COMPENSATING INLINE EMITTER TUBING - SEE DETAIL A/L5.03
 - 0.9 GPH @ 12" O.C.
- CONTROL VALVE DESIGNATION
 - ## VALVE NUMBER
 - VALVE FLOW
 - VALVE SIZE

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REV	DATE	DESCRIPTION

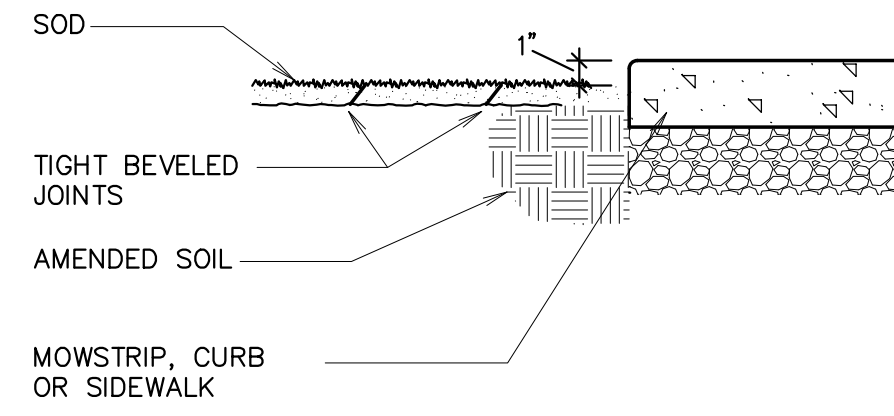
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CHECKED BY:	SS
DATE:	MAY 2012

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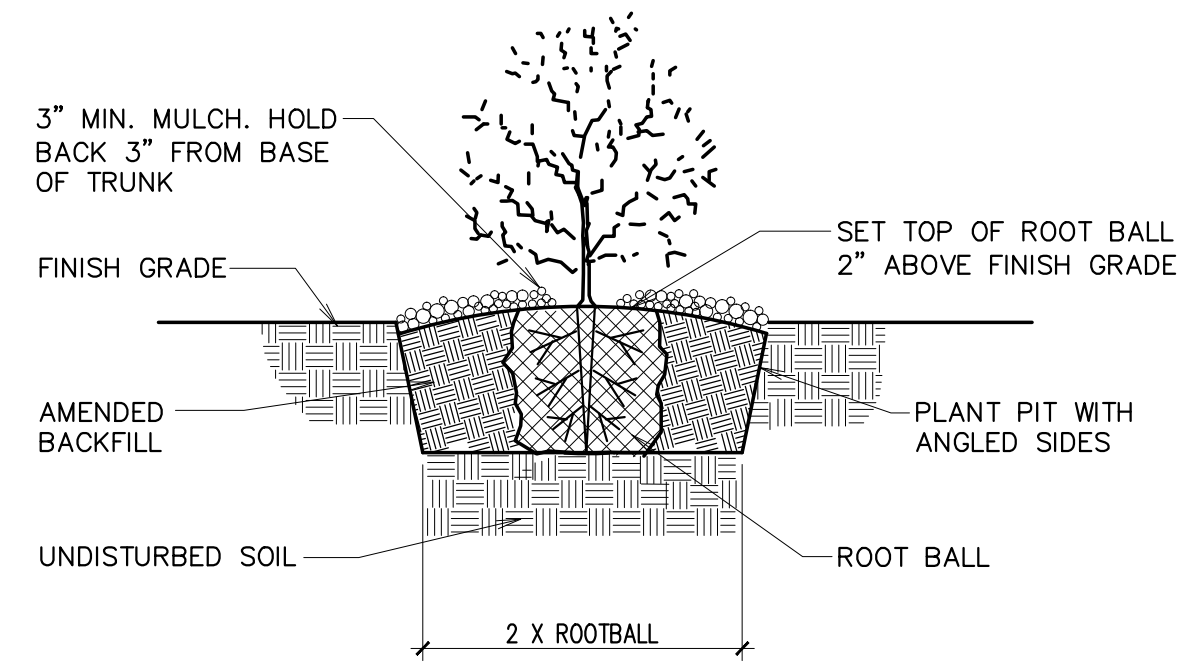
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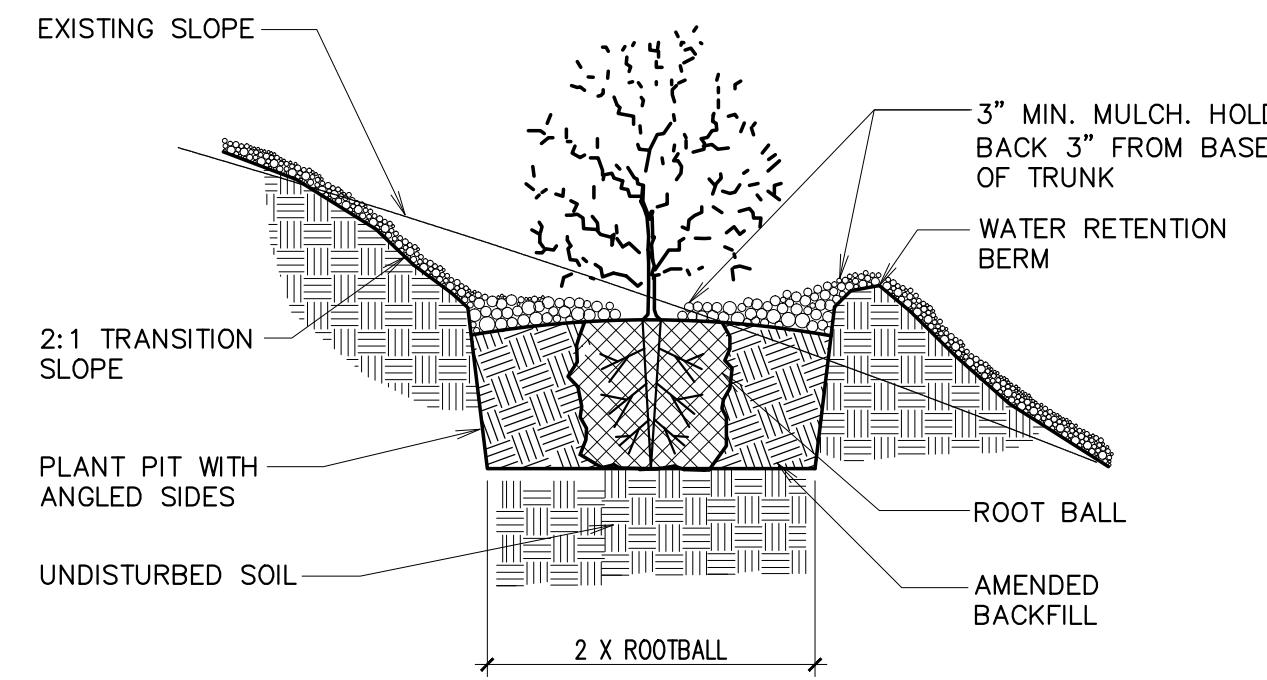
NOTICE:
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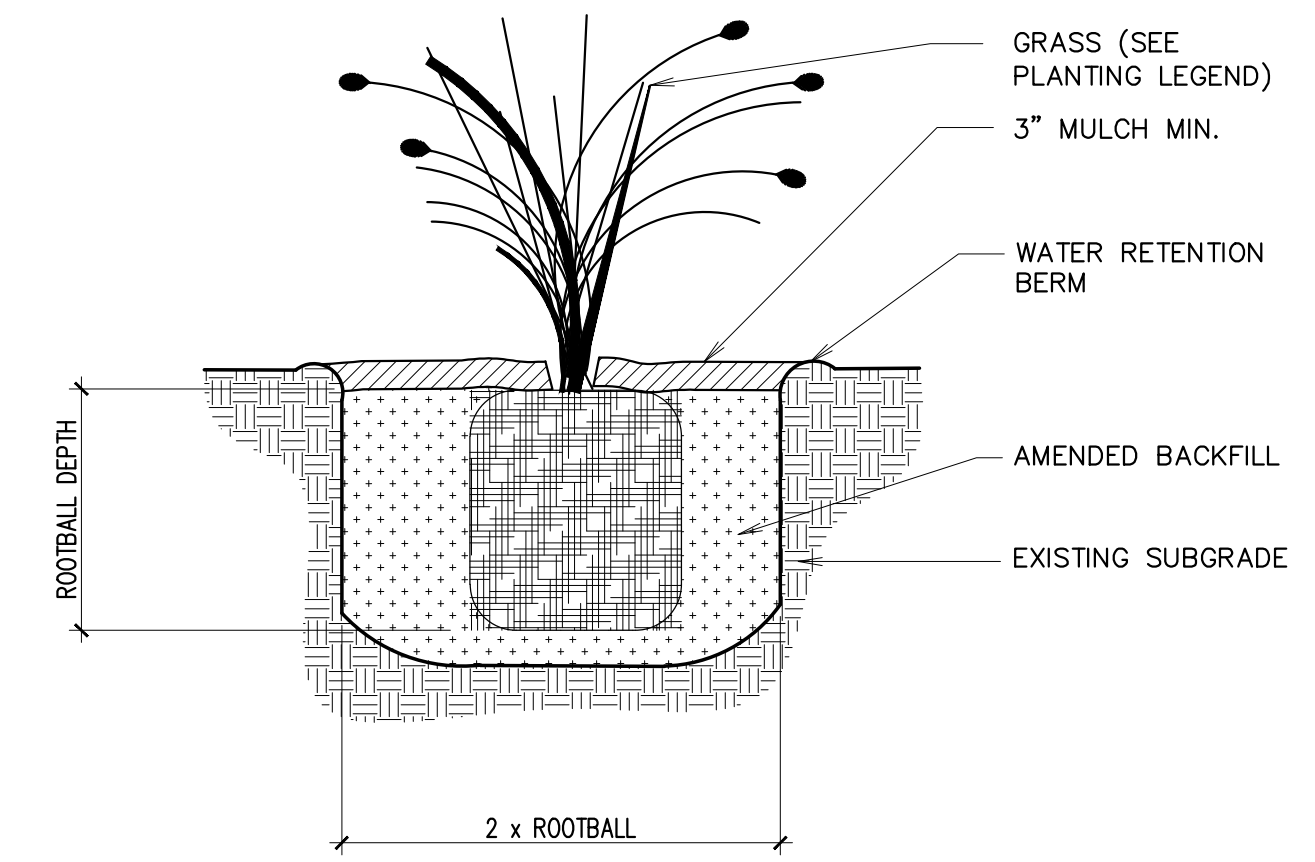
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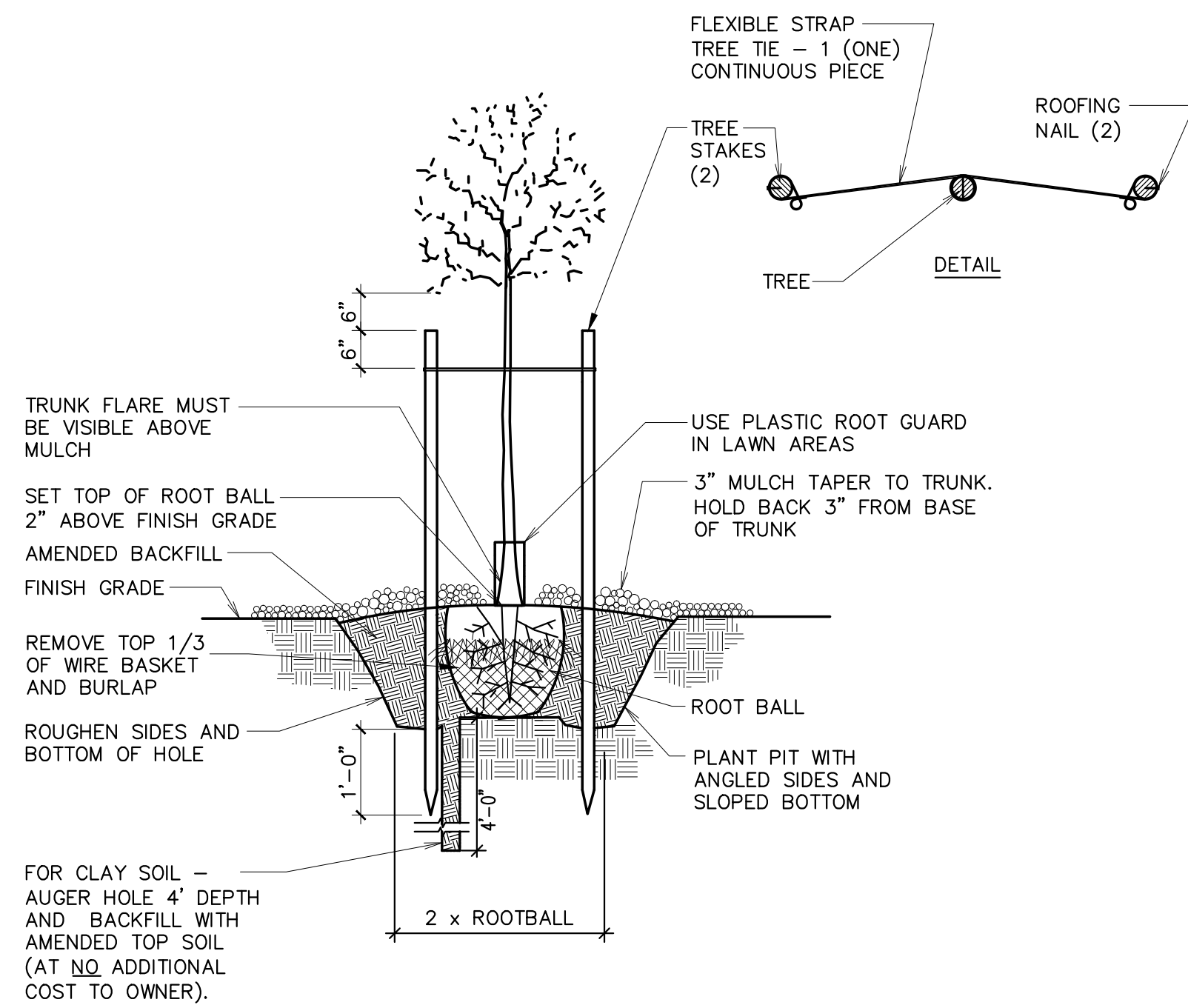
B SHRUB PLANTING
NOT TO SCALE



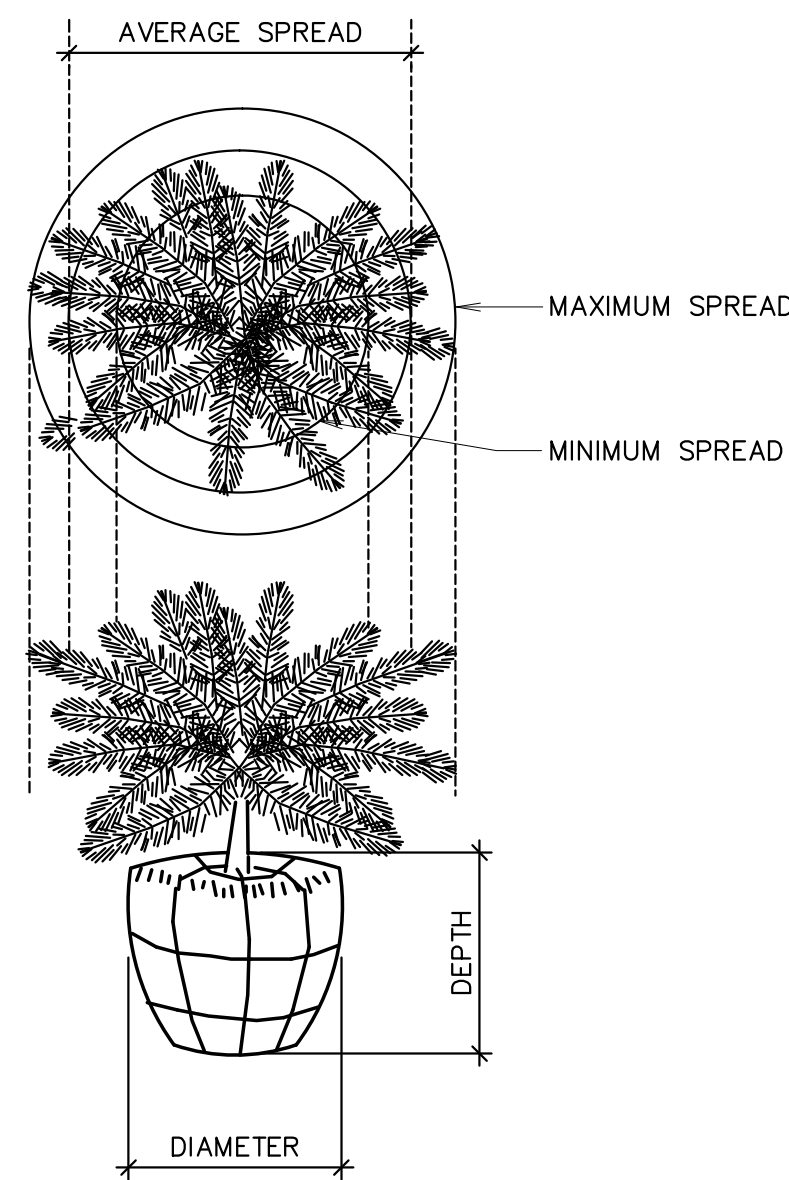
C SHRUB PLANTING ON SLOPE
NOT TO SCALE



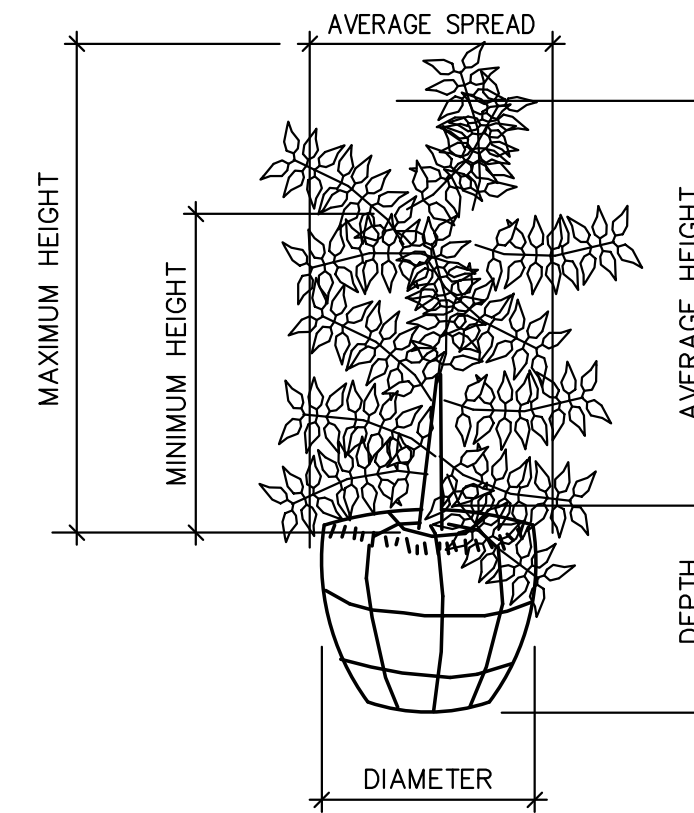
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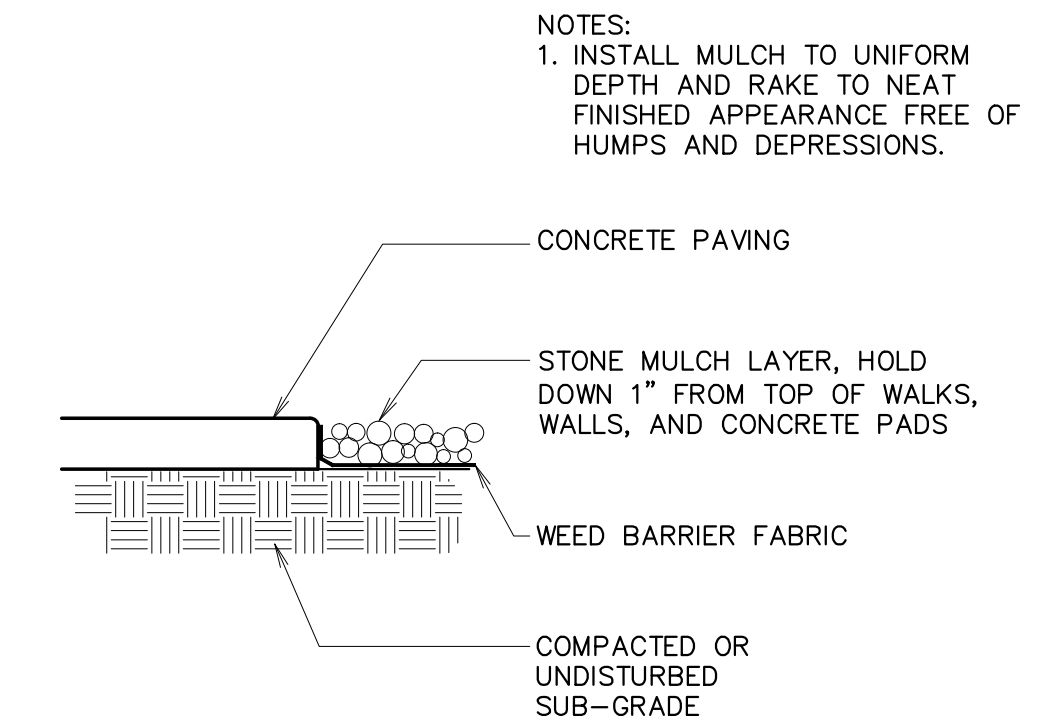
E TREE PLANTING AND STAKING
NOT TO SCALE



F TYPICAL MEASUREMENT FOR PROSTRATE TYPE PLANTS
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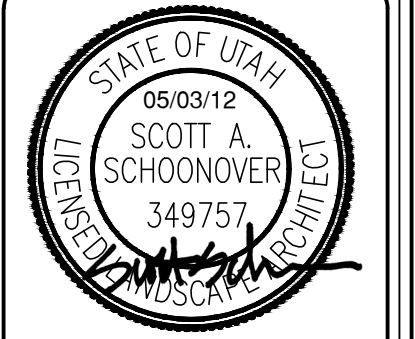


G TYPICAL MEASUREMENT FOR BROAD UPRIGHT TYPE
NOT TO SCALE



H MULCH
NOT TO SCALE

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 WEST WEBER, UTAH

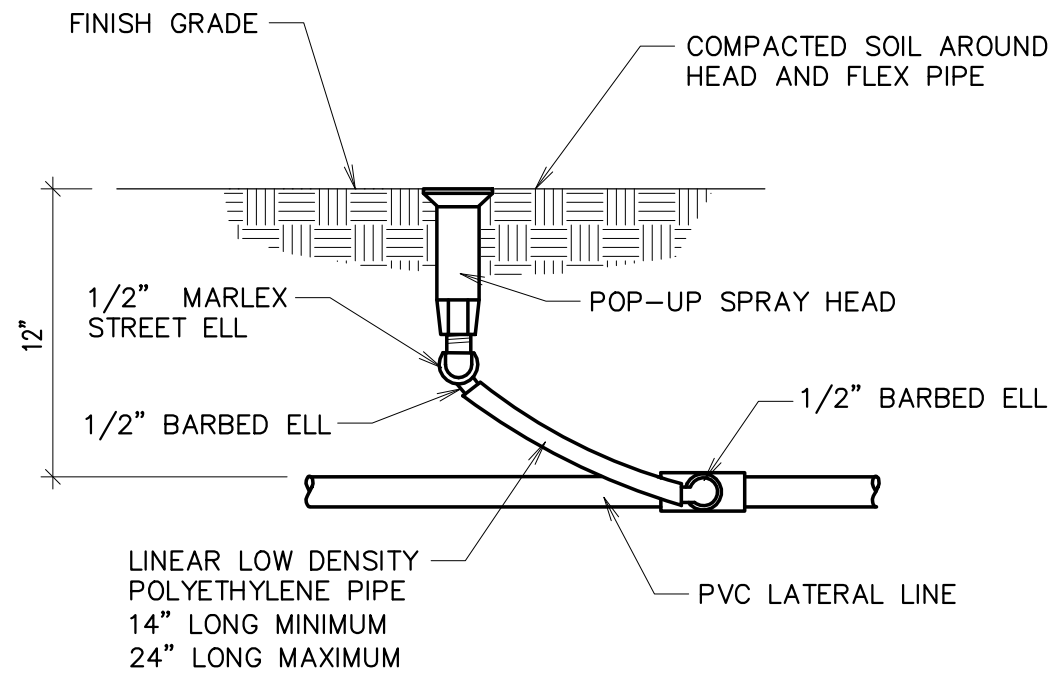
REV	DATE	DESCRIPTION

PROJECT NO:	11358
CAD DWG. FILE:	11358-0ETLS.dwg
DRAWN BY:	NMD
PROPERTY NO:	502-2681
DESIGNED BY:	BE
FIELD CREW:	NMD
CHECKED BY:	SS
DATE:	MAY 2012

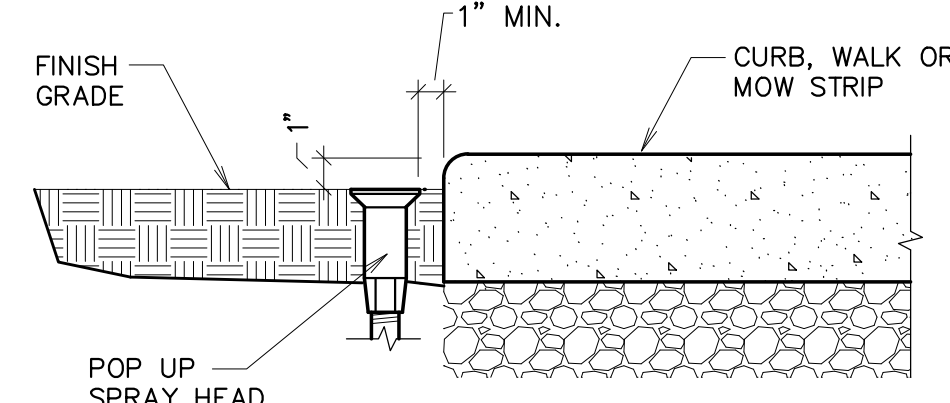
SHEET TITLE
PLANTING DETAILS

L5.01
 SHEET 15 OF 17

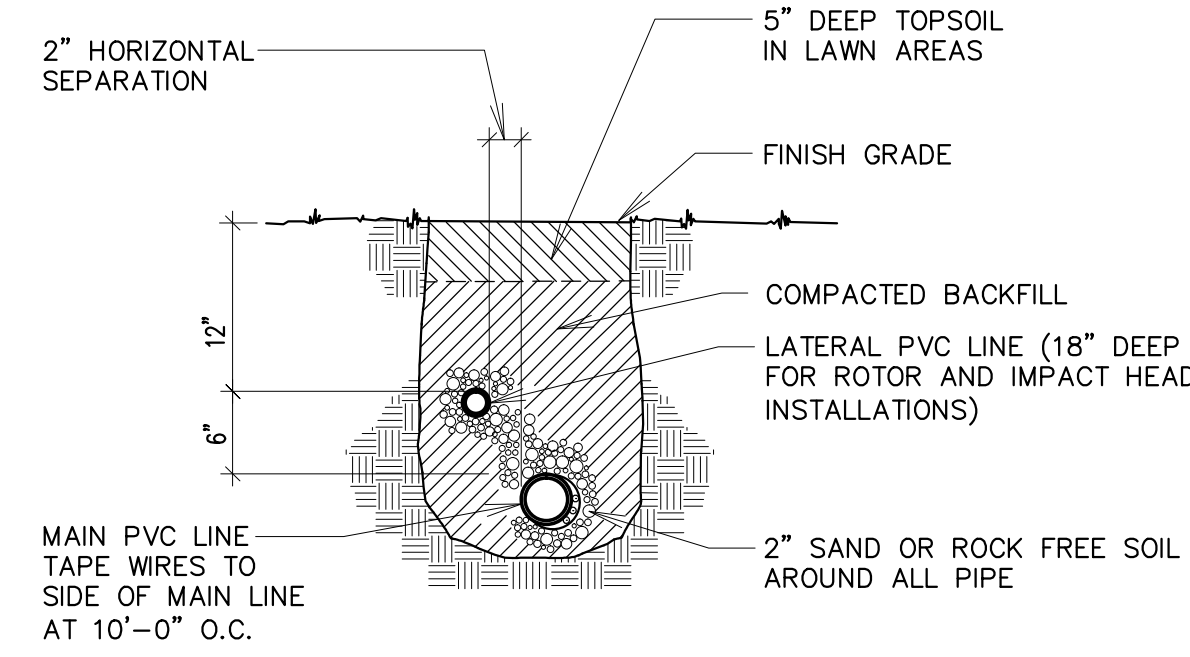
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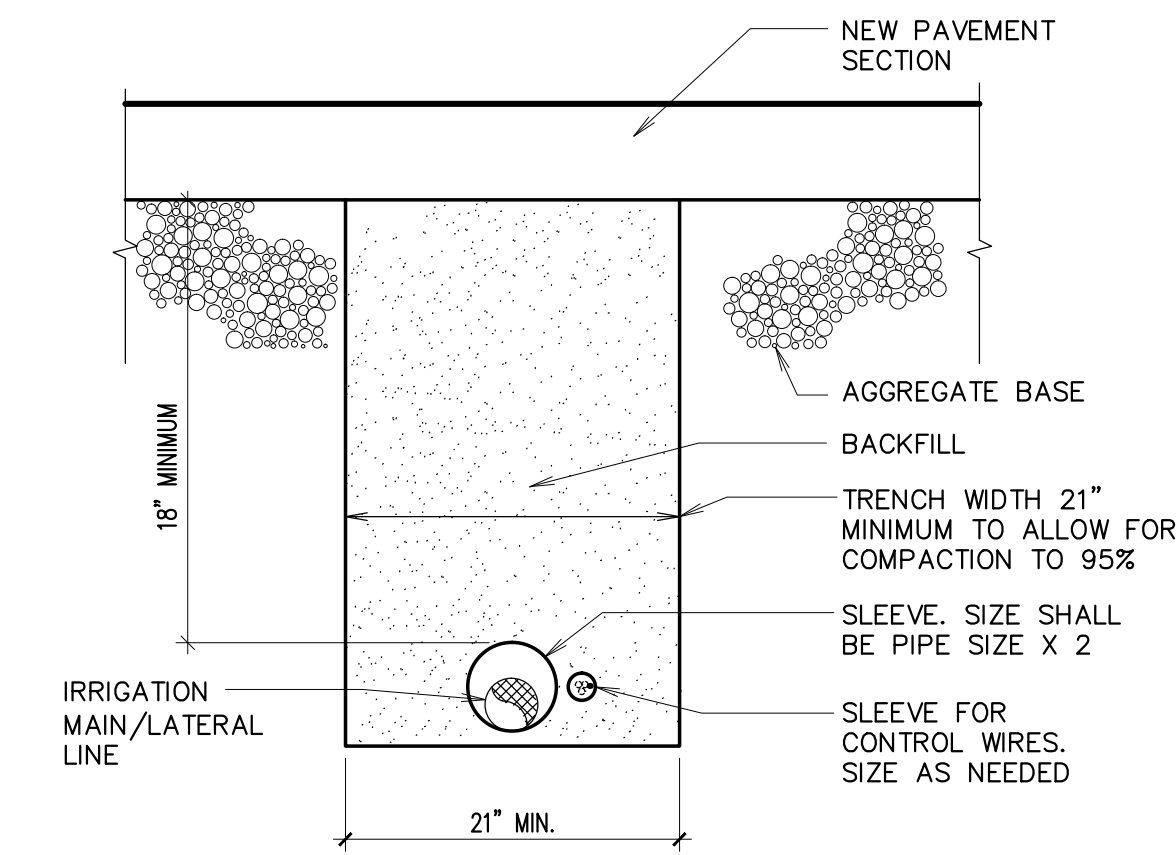
A SPRAY HEAD ASSEMBLY
NO SCALE



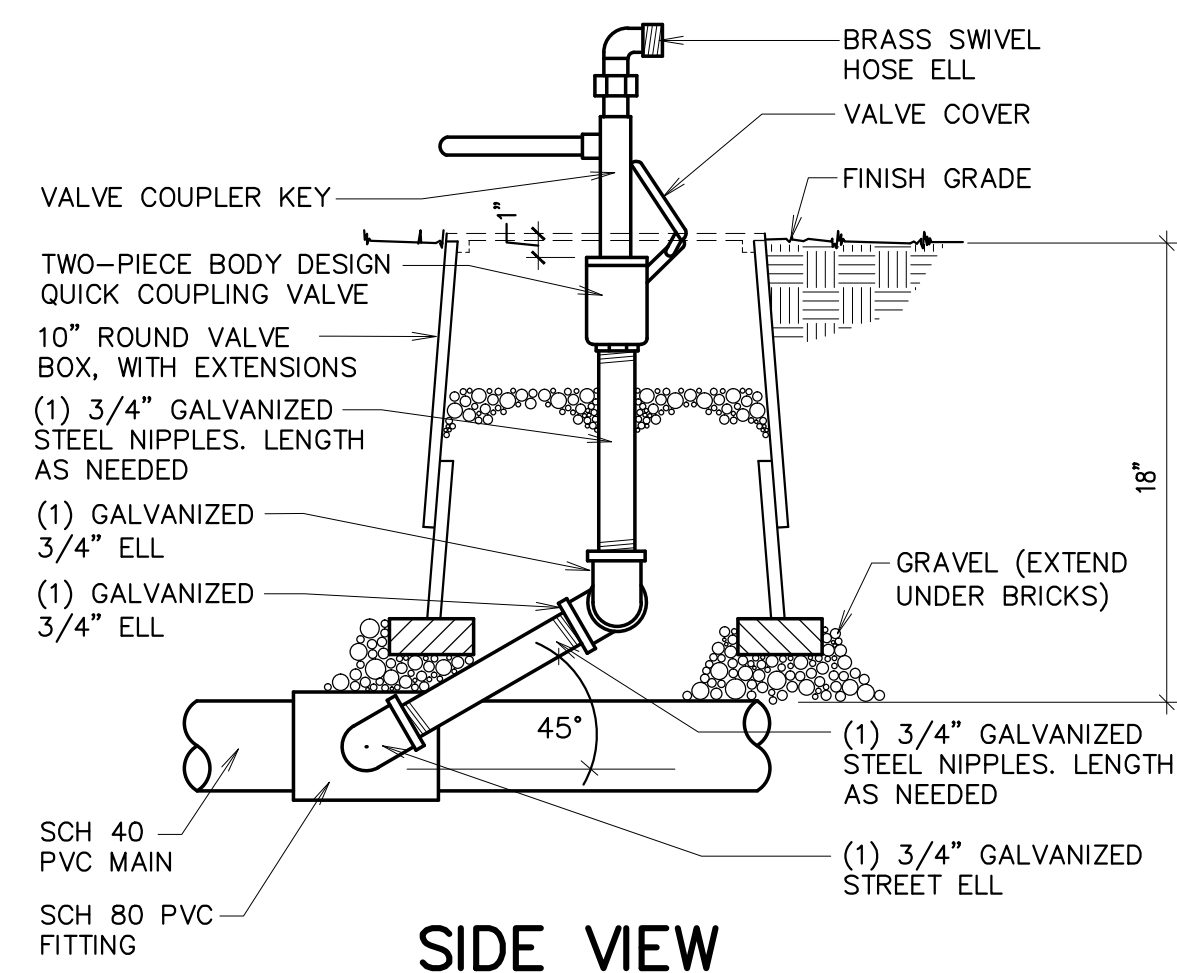
B SPRINKLER HEAD
NEXT TO CURB OR WALK
NO SCALE



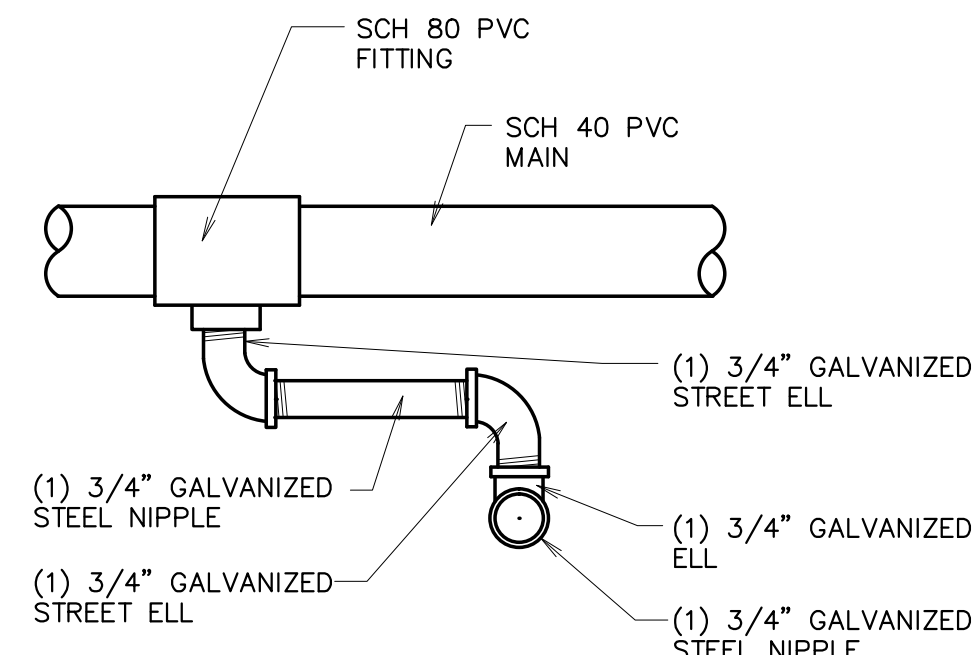
C TRENCH SECTION
NO SCALE



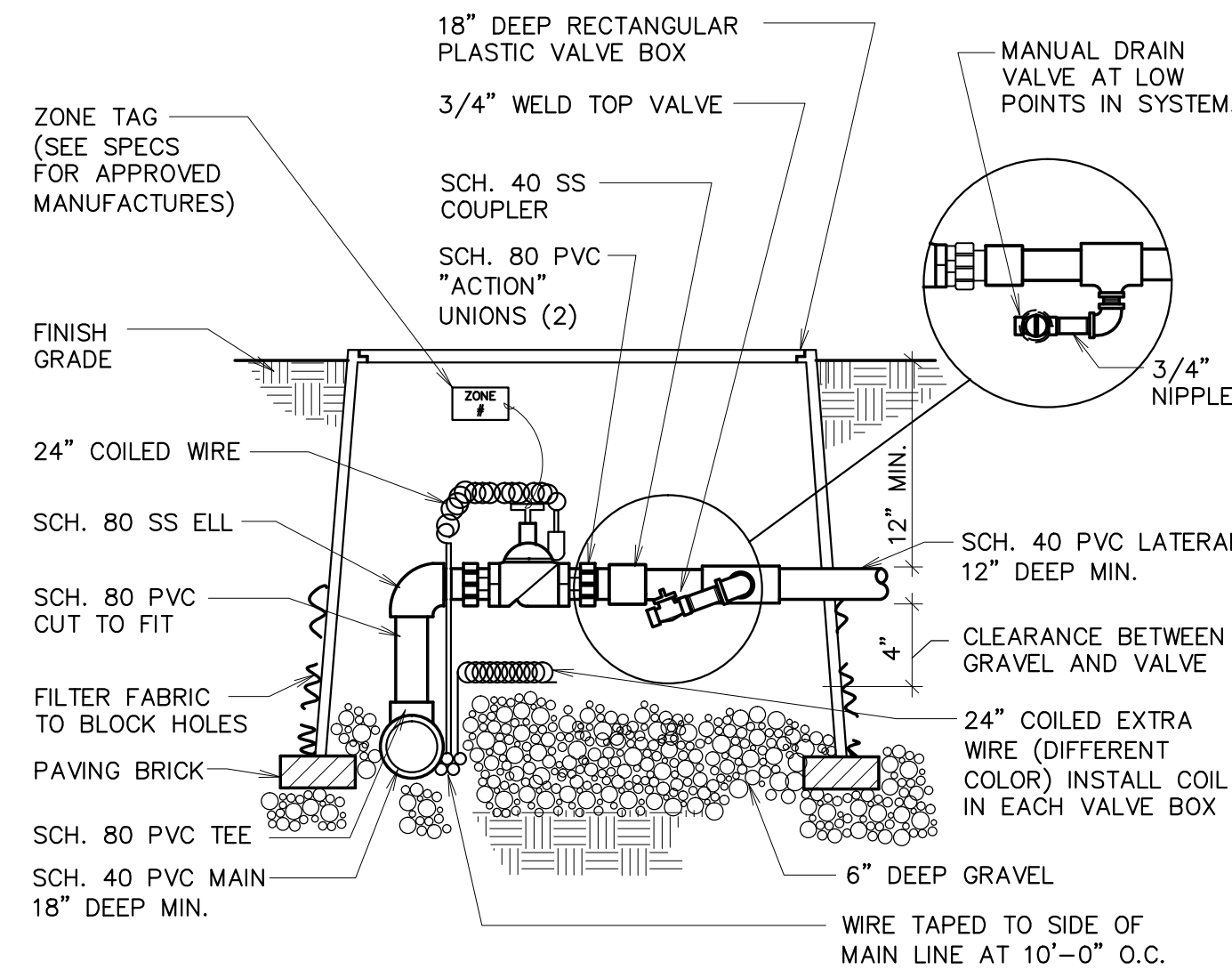
D PIPE TRENCH DETAIL
UNDER PAVEMENT AREAS
NO SCALE



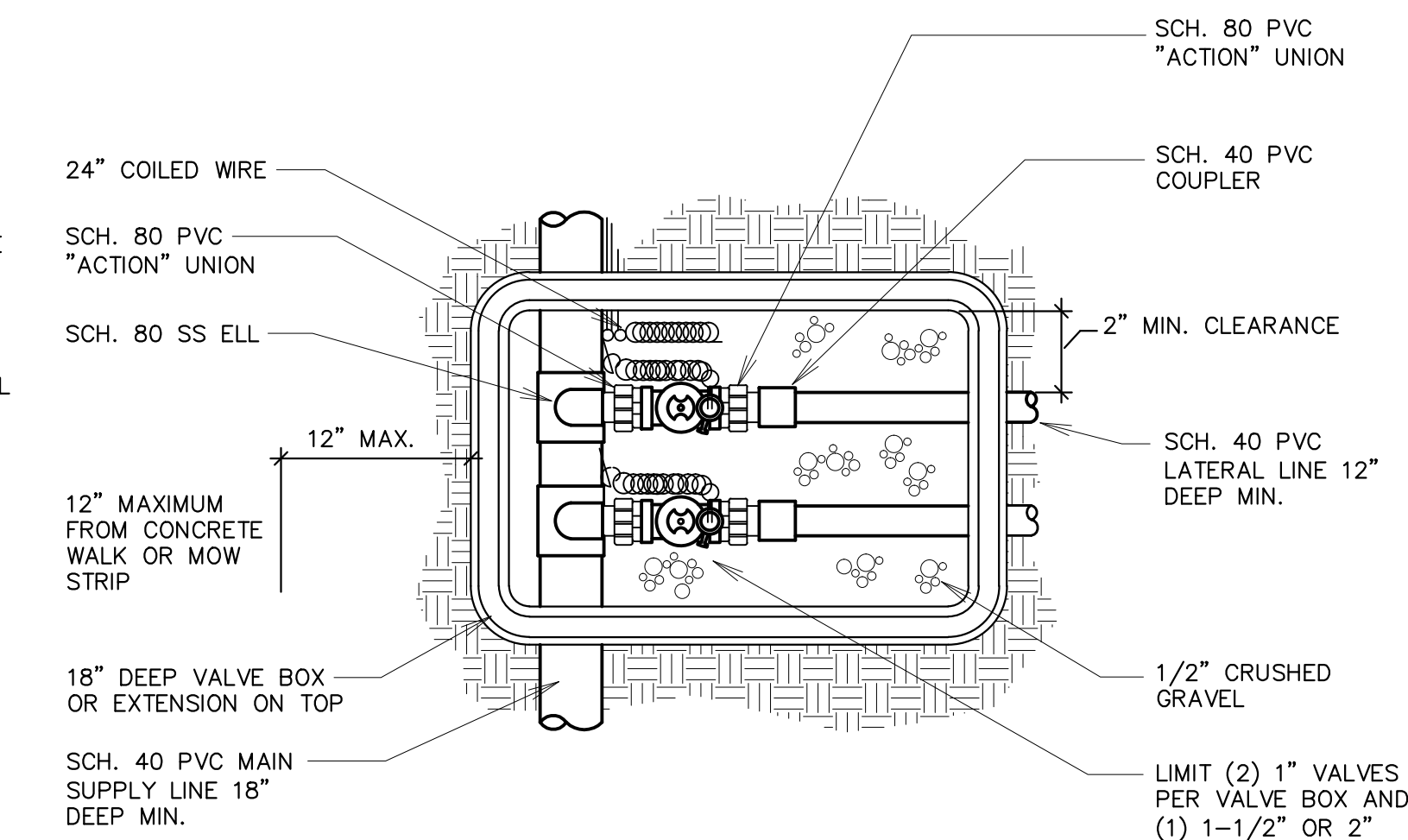
SIDE VIEW



TOP VIEW



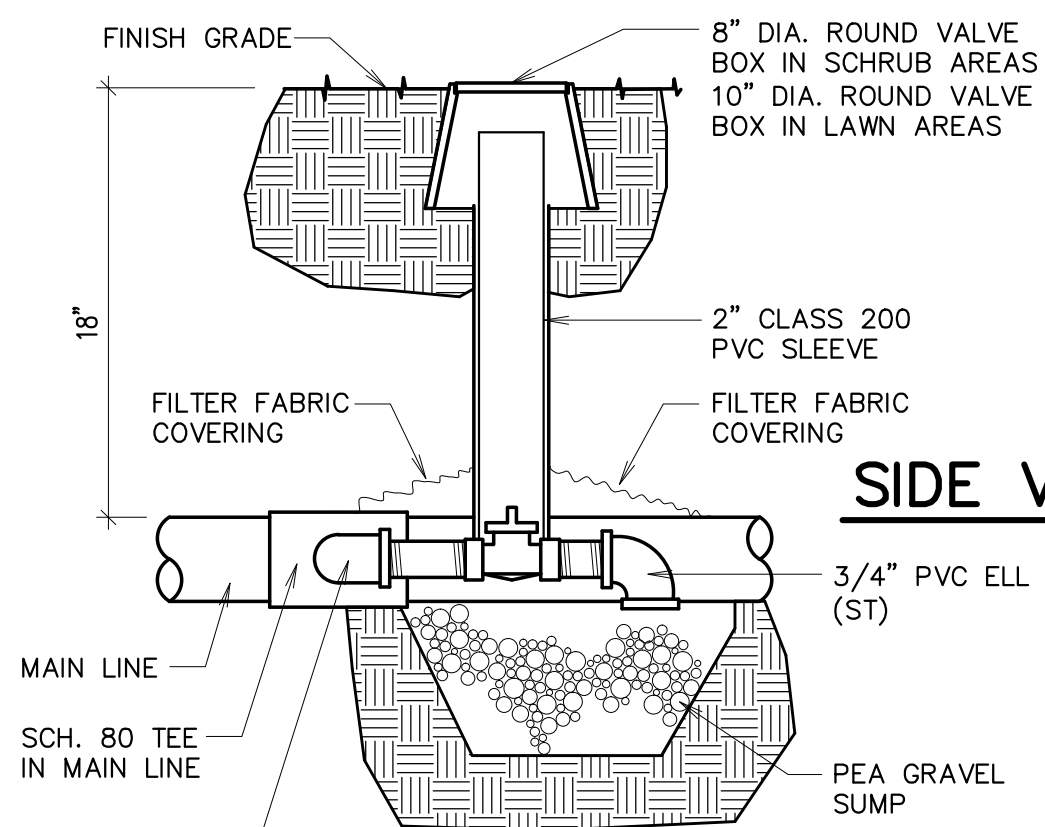
SIDE VIEW



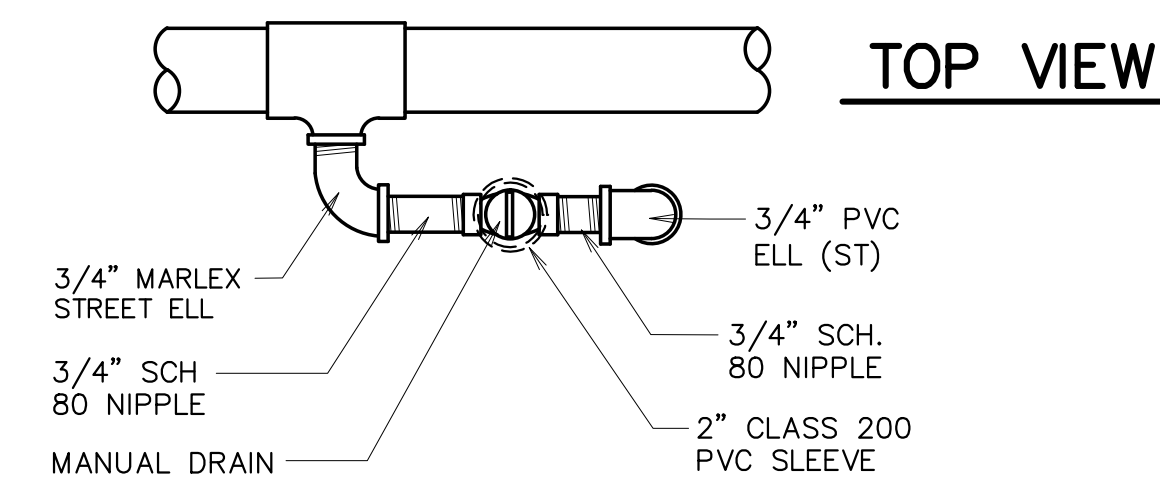
TOP VIEW

E QUICK COUPLING VALVE
NO SCALE

F AUTOMATIC VALVE WITH DRAIN
NO SCALE

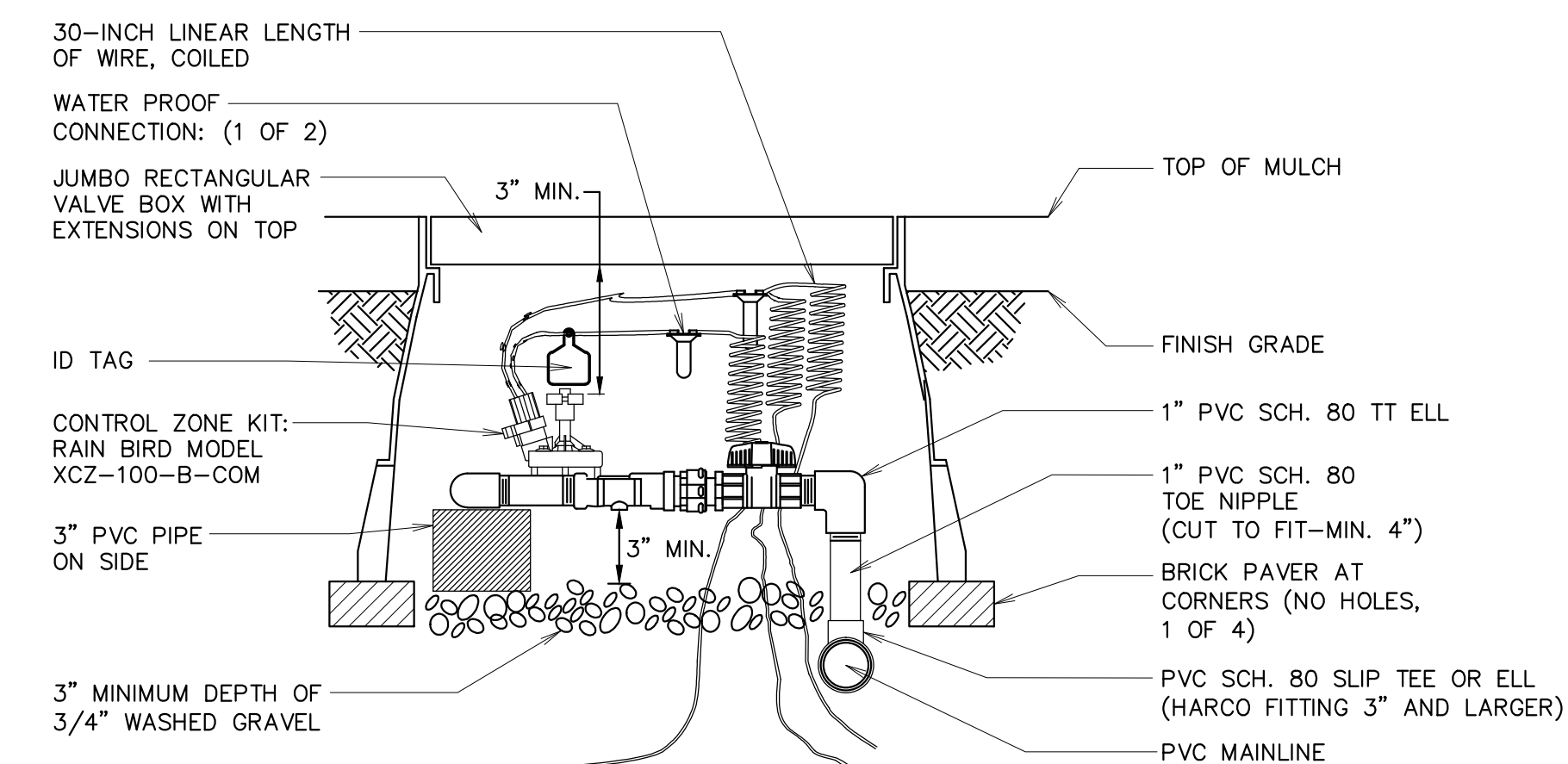


SIDE VIEW



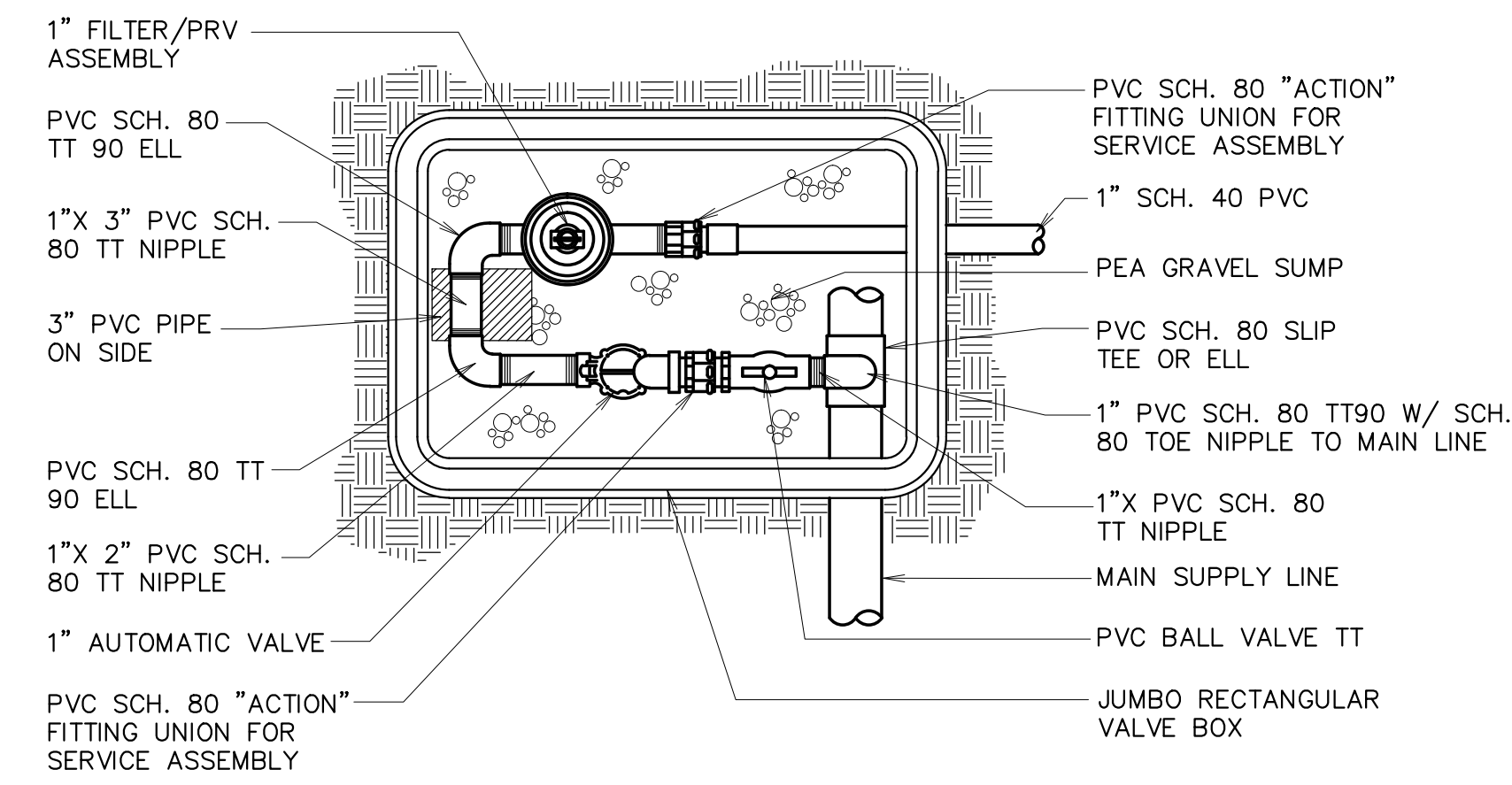
TOP VIEW

G MAINLINE MANUAL DRAIN VALVE
NO SCALE

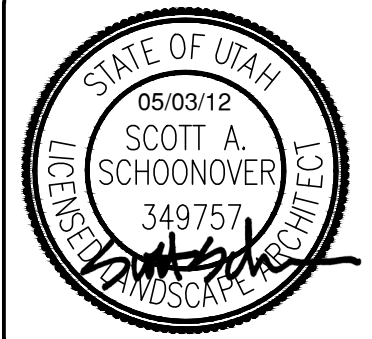


SIDE VIEW

H DRIP CONTROL ZONE KIT
NO SCALE



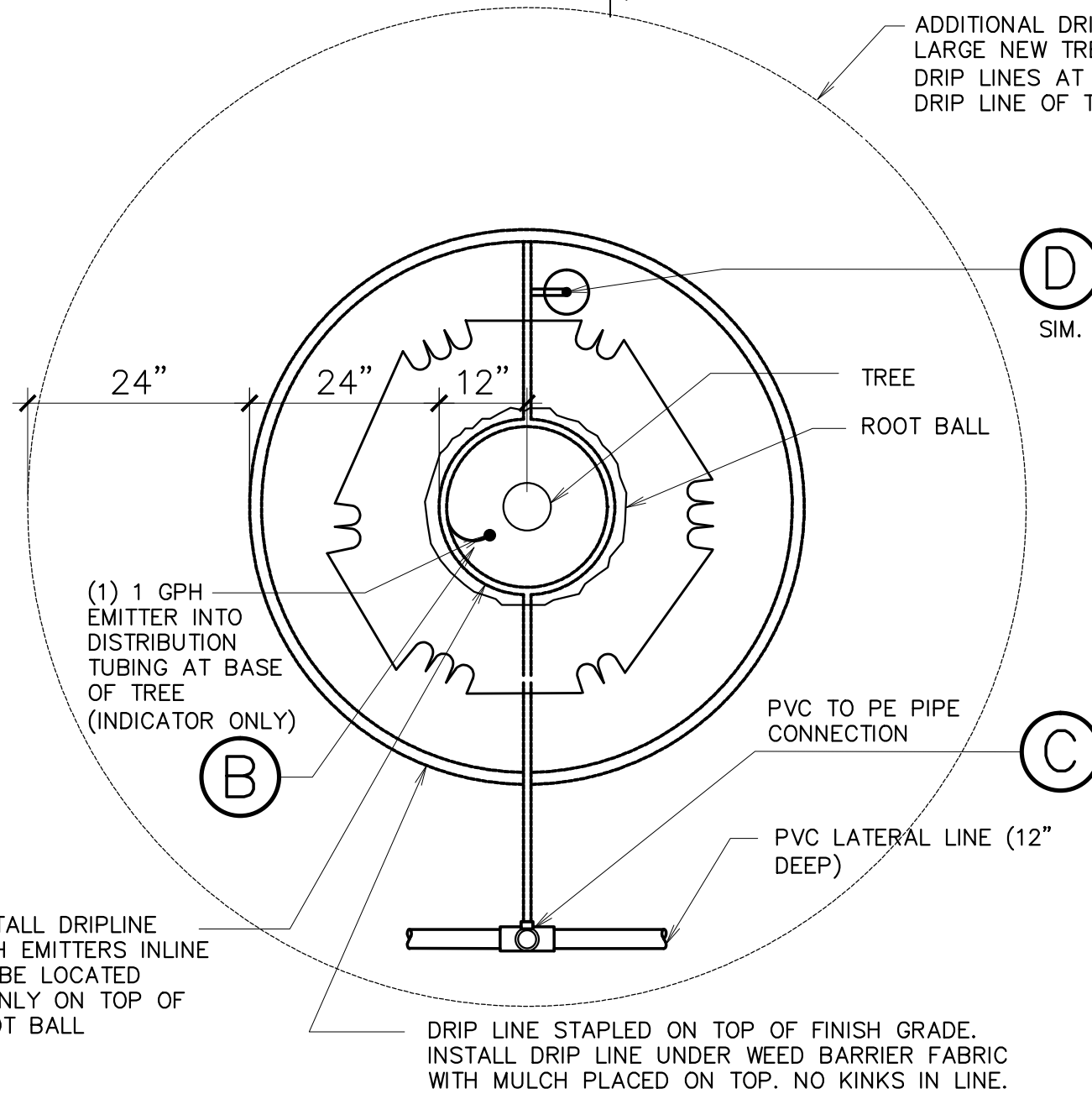
TOP VIEW



REVISIONS	DESCRIPTION
REV	DATE

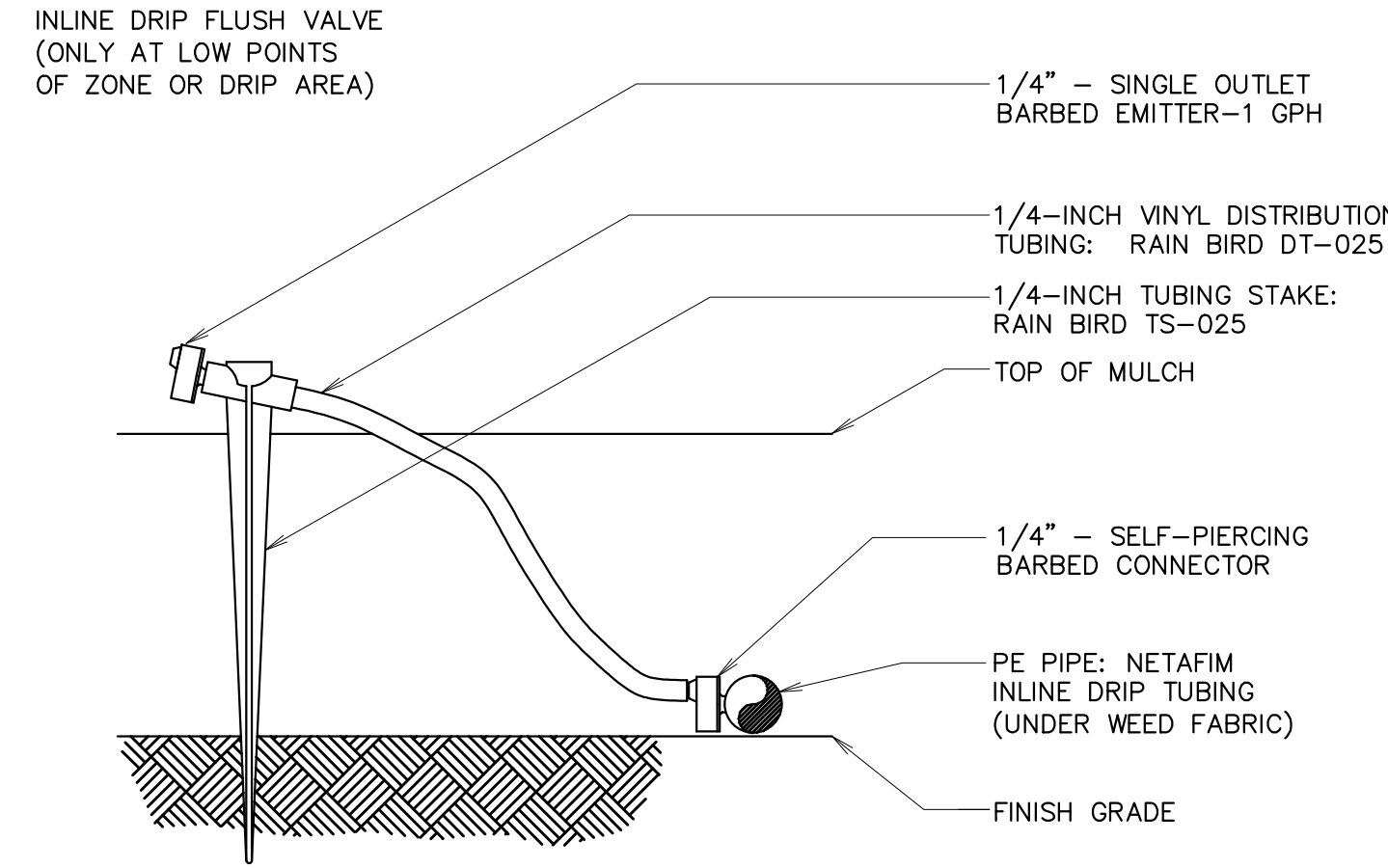
PROJECT NO:	11358
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SHEET TITLE
**IRRIGATION
 DETAILS**



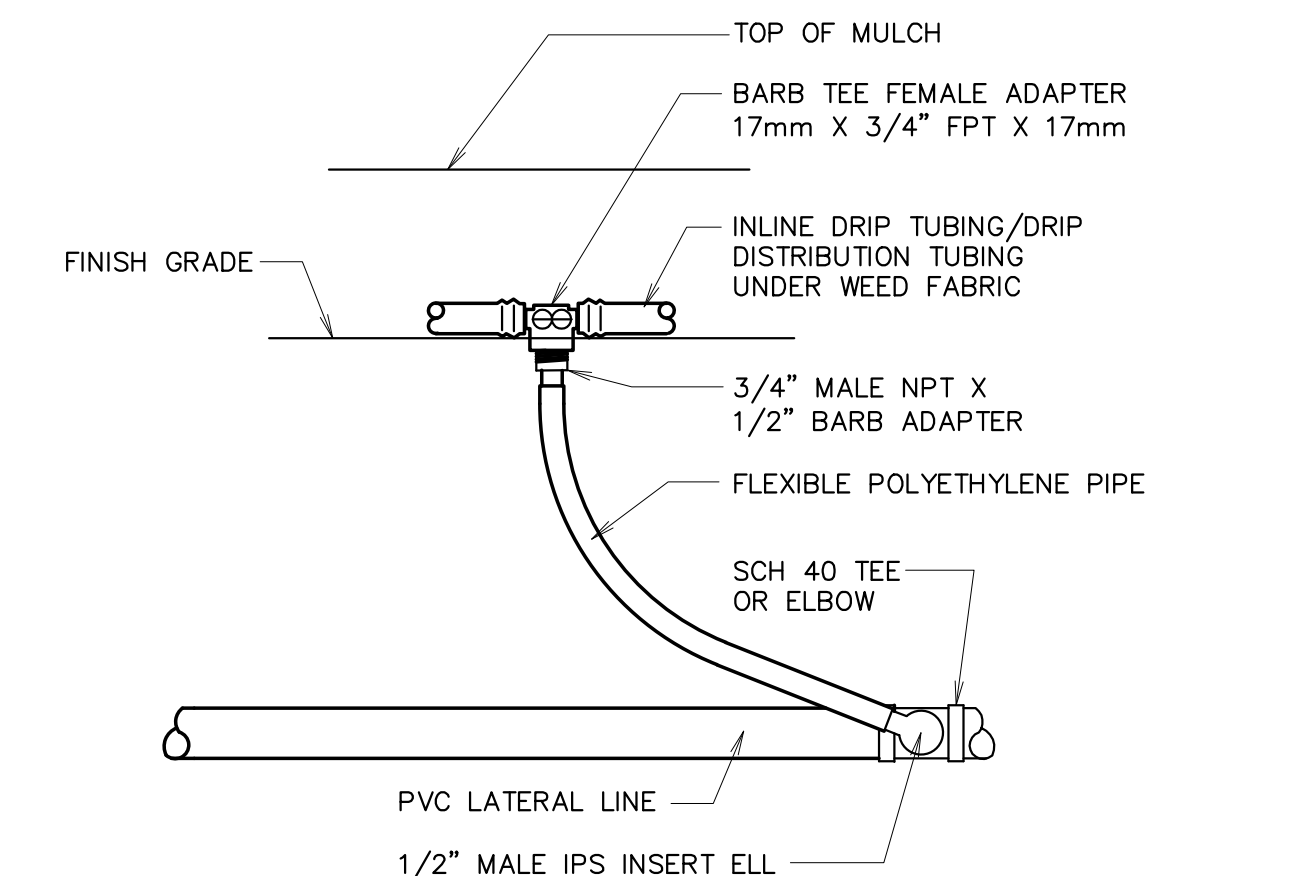
A TREE DRIP-PLAN VIEW
NO SCALE

NOTE: ALL FITTINGS TO INLINE DRIP TUBING TO BE COMPRESSION FITTINGS. IF MALE INSERTS ARE NEEDED, INSTALL WITH OETICKER CLAMPS.



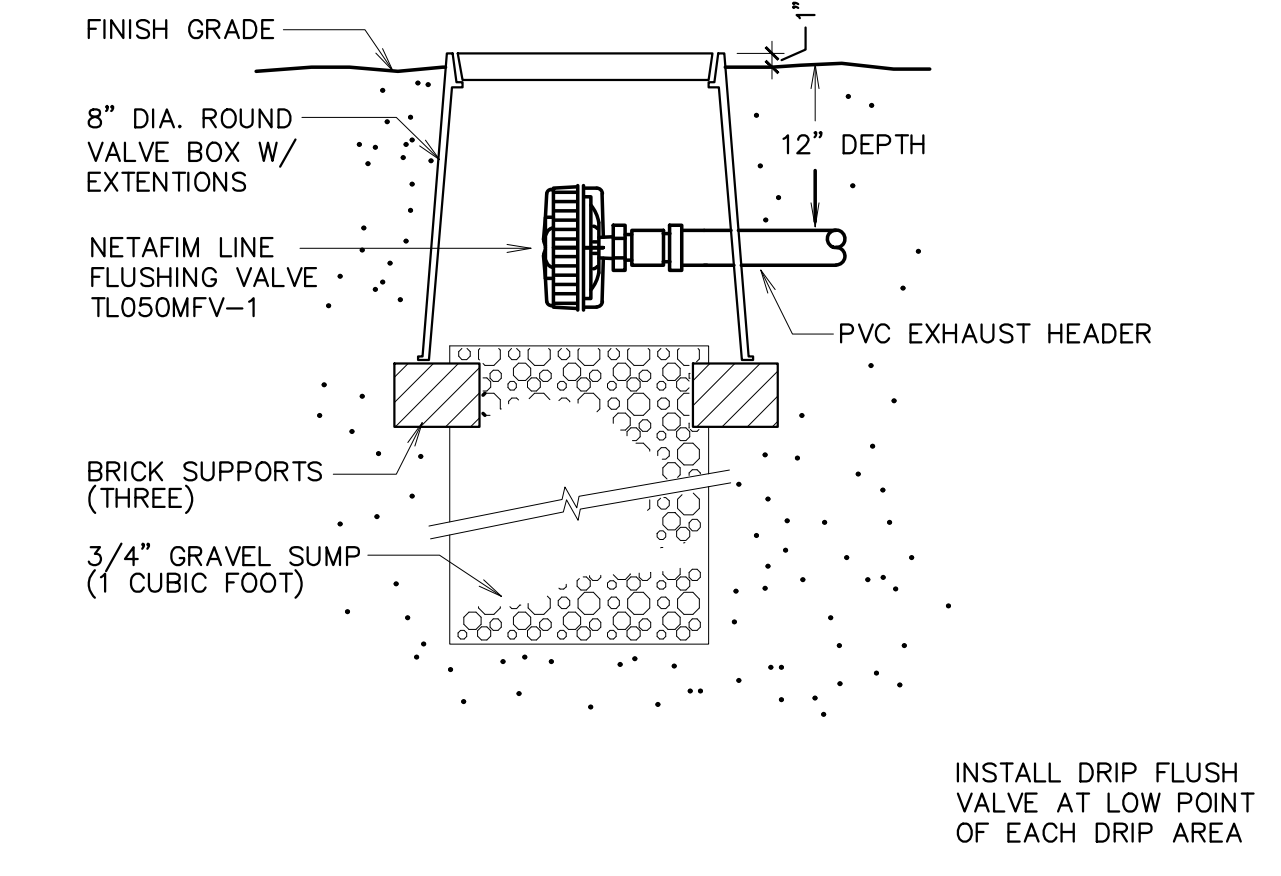
B EMITTER AT BASE OF TREE
NO SCALE

NOTE:
1. USE RAIN BIRD BUG GUN MODEL EMA-BG TO INSERT EMITTER DIRECTLY INTO INLINE DRIP TUBING.
2. THIS IS AN INDICATOR ONLY EMITTER TO BE USED AT TREE RINGS ONLY.



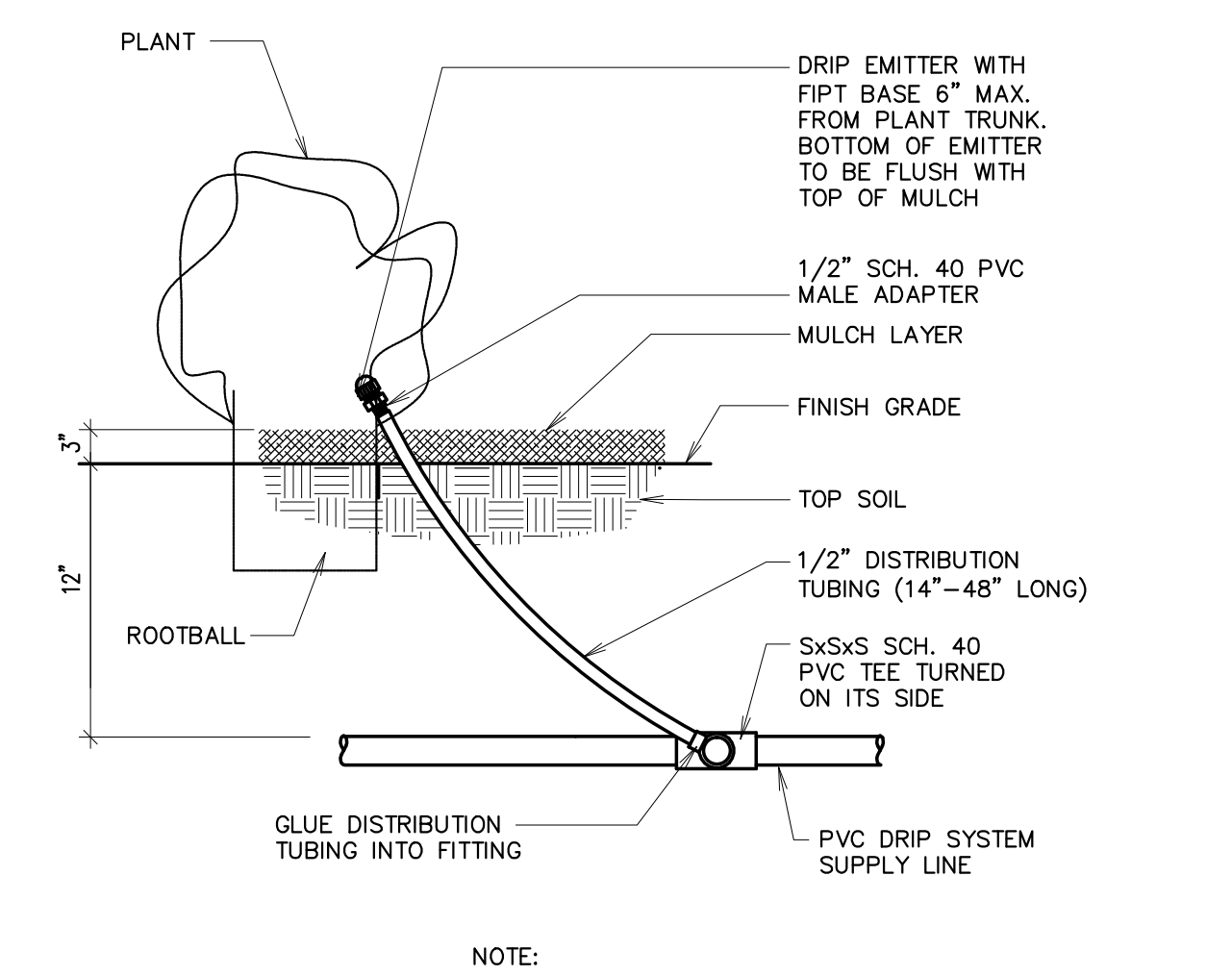
C PVC TO PE PIPE CONNECTION
NO SCALE

NOTE:
1. USE AT TREE RINGS ONLY.



D INLINE DRIP FLUSH VALVE
NO SCALE

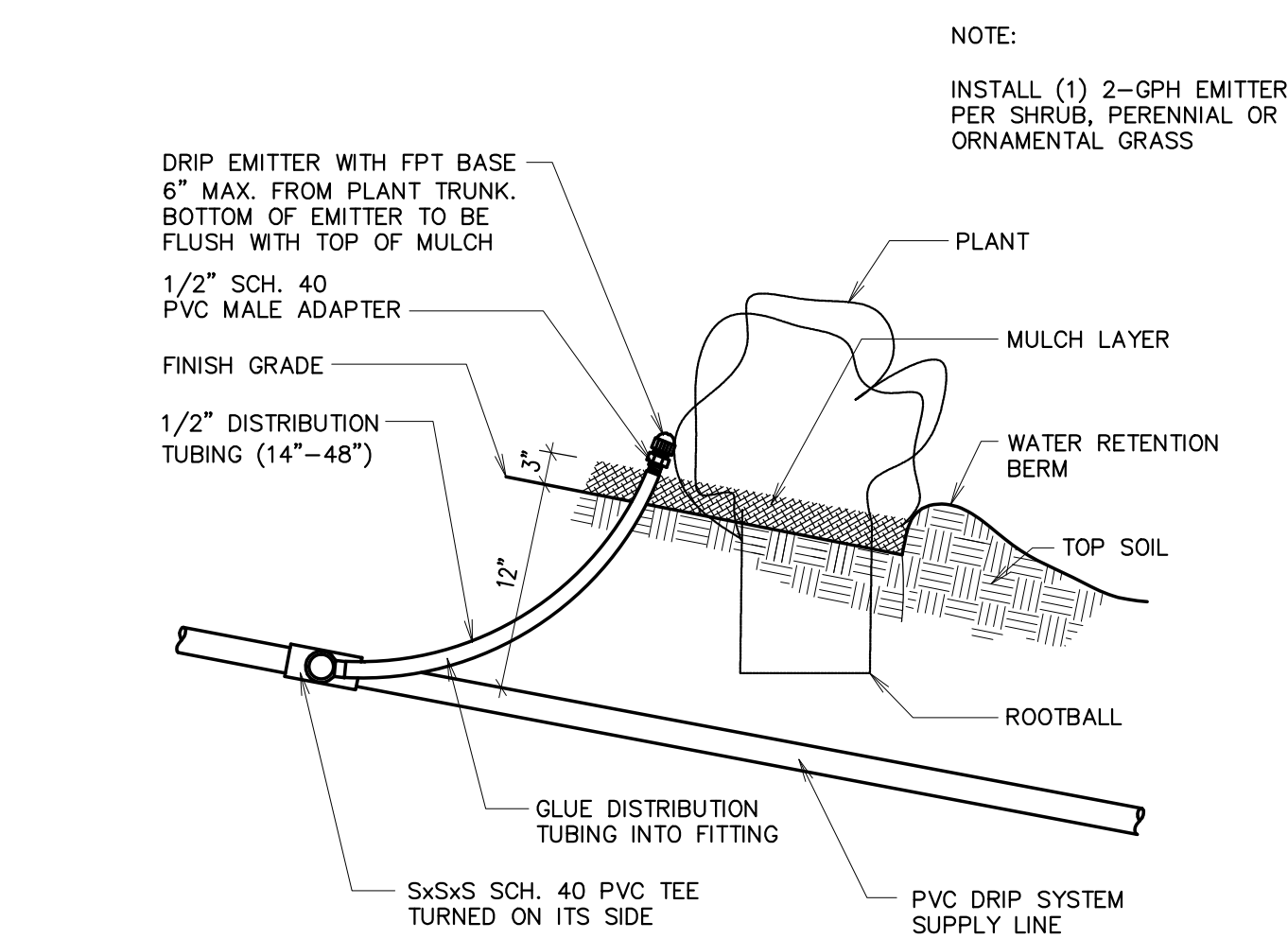
INSTALL DRIP FLUSH VALVE AT LOW POINT OF EACH DRIP AREA



E DRIP EMITTER
NO SCALE

NOTE:
INSTALL (1) 2-GPH EMITTER PER SHRUB, PERENNIAL OR ORNAMENTAL GRASS

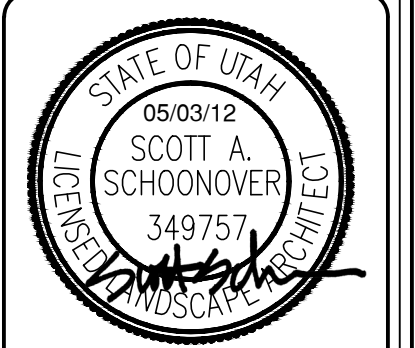
NOTE: LOCATE EMITTER ON BLDG OR FENCE SIDE OF PLANT.



F DRIP EMITTER
NO SCALE

NOTE: ON SLOPES, LOCATE EMITTER ON THE UPHILL SIDE OF PLANT OR TREE.

McNEIL GROUP
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E-MAIL: info@mcneileng.com WEB SITE: AT www.mcneil-group.com



WEST WEBER 1, 2
The Church of Jesus Christ of Latter-Day Saints
4080 WEST 900 SOUTH
WEST WEBER, UTAH

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SHEET TITLE
IRRIGATION DETAILS

L5.03
SHEET 17 OF 17