



July 30, 2014

Dana Schuler
Weber County Engineering Division
2380 Washington Blvd. #240
Ogden, UT 84401

RE: Summit Eden Phase 1B

Mrs. Shuler,

The following are comments and responses pertaining to the civil engineering plans from your review and received on June 06, 2014.

Engineering review 6

1. Sheet 1.02 - Lot 30 - Should drainage easement extend down entirety of lot line?

Response: Owner is working with Weber County to secure necessary easements.

2. Sheet 1.02 - Why did the water main size change? Is this in the master plan approved by DDW?

Response: To avoid stagnation within the line

3. Sheet 1.02 - Consider running power down one side or other of the future private road rather than down the middle of it.

Response: The road is unlikely, and we prefer to splice into the power along the lot line at this time. If the road ends up being designed, the existing power will be revised accordingly.

4. Provide Lot 30 drainage easement.

Response: Owner is working with Weber County to secure necessary easements.

Regards,

Ryan Cathey, PE
Engineering Manager
NV5, Inc.

CC: Jared Andersen, PE- Weber County Engineer
Rick Everson, PE- Watts Enterprises, Inc.-Land Owner's Representative

OFFICES NATIONWIDE

5217 SOUTH STATE STREET, STE 300 | MURRAY, UT 84107 | WWW.NV5.COM | OFFICE 801.743.1300 | FAX 801.743.0300

CONSTRUCTION QUALITY ASSURANCE - INFRASTRUCTURE ENGINEERING - MUNICIPAL OUTSOURCING - ASSET MANAGEMENT - ENVIRONMENTAL SERVICES

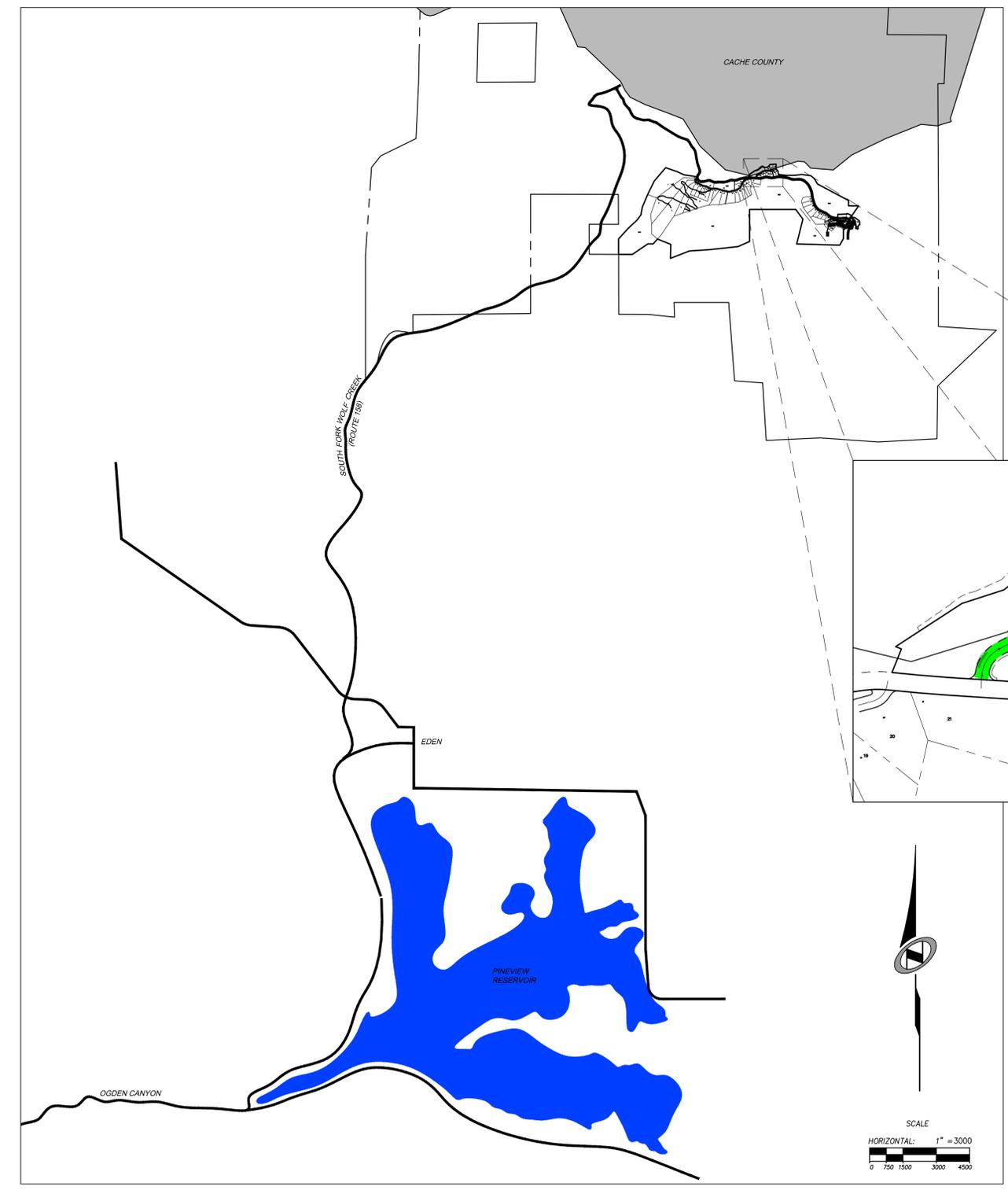
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BOWDEN
 XREFS:

SUMMIT EDEN PHASE 1B

ROADWAY AND UTILITY CONSTRUCTION DRAWINGS

Located in Sec 01 T7N R1E
Weber County, Utah



SHEET INDEX:

SHEET NO.	SHEET DESCRIPTION
1.00	CIVIL TITLE SHEET
1.01	GENERAL NOTES, LEGEND, AND KEYNOTES
1.02	OVERALL UTILITY
1.03	OVERALL GRADING & DRAINAGE - HEARTWOOD DRIVE
1.04	ROADWAY TYPICAL SECTION
2.00	PLAN & PROFILE - HEARTWOOD DRIVE
3.00	EARTHWORK & SECTIONS - HEARTWOOD DRIVE
4.00	EROSION CONTROL PLAN - HEARTWOOD DRIVE
5.00	STORM DRAIN DETAILS
5.01	WATER DETAILS
5.02	WATER DETAILS
5.10	GRINDER PUMP VAULT - SEWER DETAILS
5.11	SEWER DETAILS
5.12	MISCELLANEOUS DETAILS
5.20	ELECTRICAL DETAILS
5.30	MISCELLANEOUS DETAILS
6.00	DRY UTILITY PLAN
E1	ELECTRICAL NOTES AND DETAILS
E2	ELECTRICAL SITE PLAN SEWAGE LIFT STATION #5
E3	LIFT STATION #5 POWER ONE-LINE DIAGRAM
GE-1	ELECTRICAL DETAILS
GE-2	ELECTRICAL DETAILS



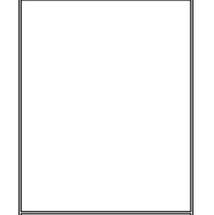
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2	RMC	8/27/2013	REVISE SEWER REVISIONS
3	RMC	5/27/2014	REVISE SEWER REVISIONS
4	RMC	7/25/2014	REVISE SEWER REVISIONS

COUNTY COMMENTS

SUMMIT EDEN PHASE 1B
CIVIL TITLE SHEET

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC DATE SUBMITTED: 01/07/2014

NV5
 BEYOND ENGINEERING
 5217 SOUTH STATE STREET, SUITE 200
 MURRAY, UT 84107
 801.743.0300 TEL. 801.743.0300 FAX
 WWW.NV5.COM



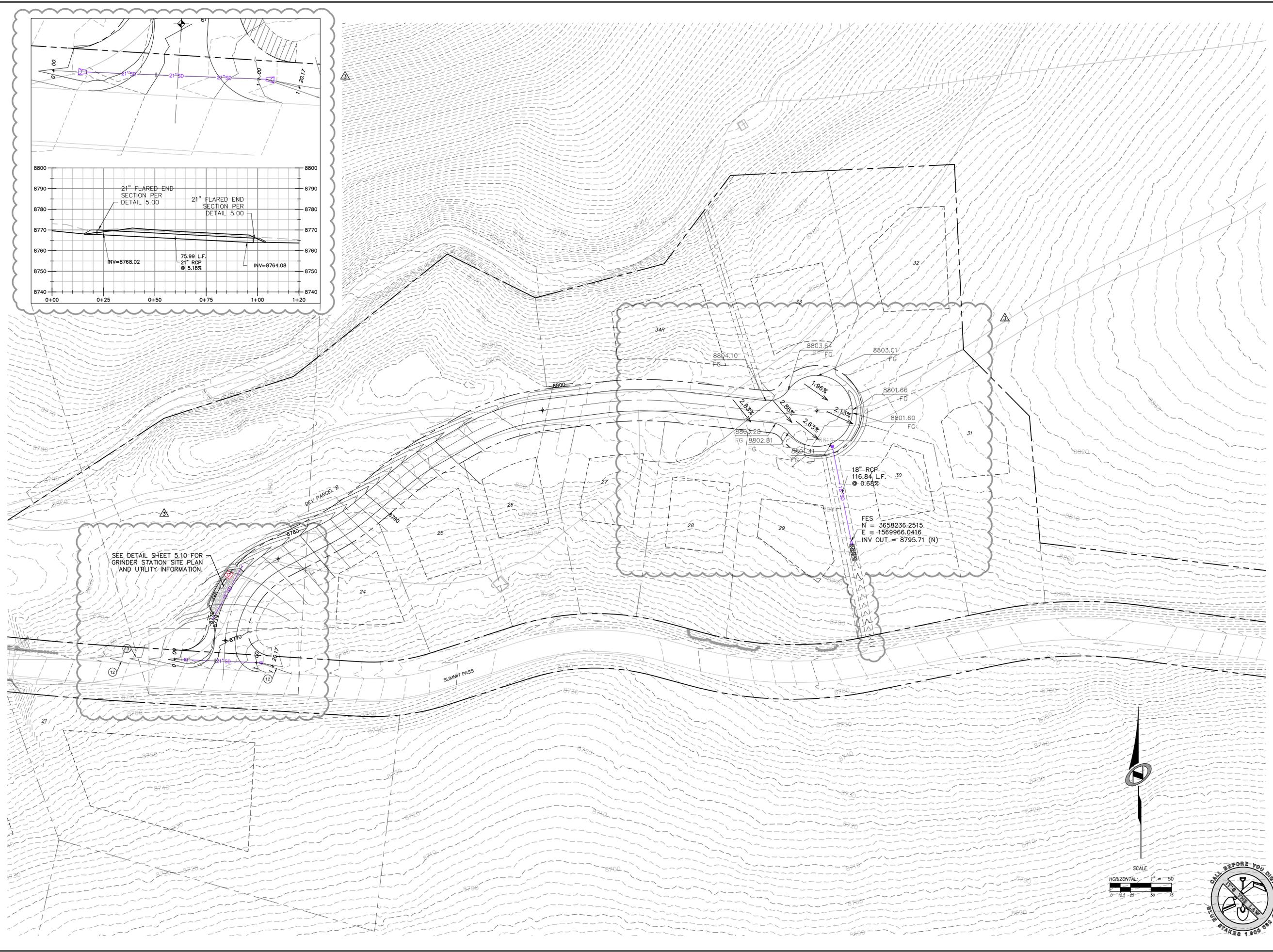
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SCALE	VERTICAL: 1" = 8' HORIZONTAL: 1" = 3000'
JOB NUMBER	SLB079306



The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. Any such changes or uses must be approved by the preparer of these plans.
 CAUTION

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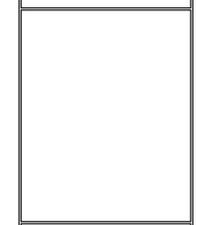


NO.	BY	DATE	REVISIONS
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2	RMC	5/27/2014	REVISE GRADE & SWER REVISIONS
3	RMC	5/27/2014	REVISE GRADE & SWER REVISIONS
4	RMC	7/25/2014	REVISE GRADE & SWER REVISIONS

SUMMIT EDÉN PHASE 1B
OVERALL GRADING AND DRAINAGE
HEARTWOOD DRIVE

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC DATE SUBMITTED: 01/07/2014

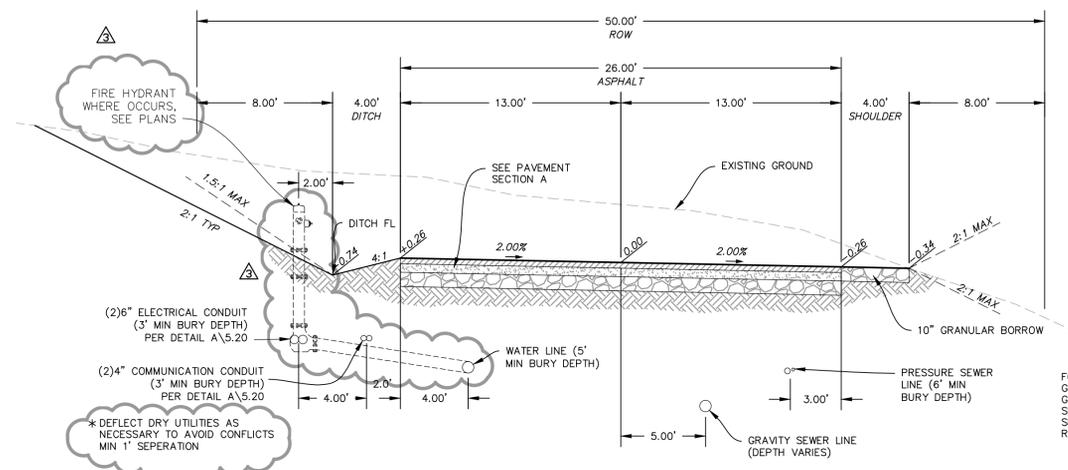
NV5
 BEYOND ENGINEERING
 6217 SOUTH STATE STREET, SUITE 200
 MURRAY, UT 84107
 801.743.0300 TEL. 801.743.0300 FAX
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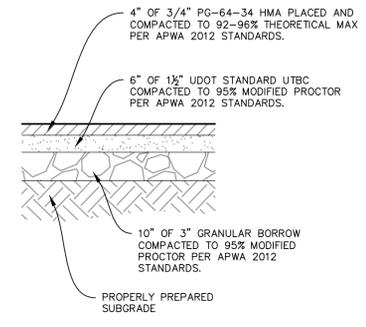
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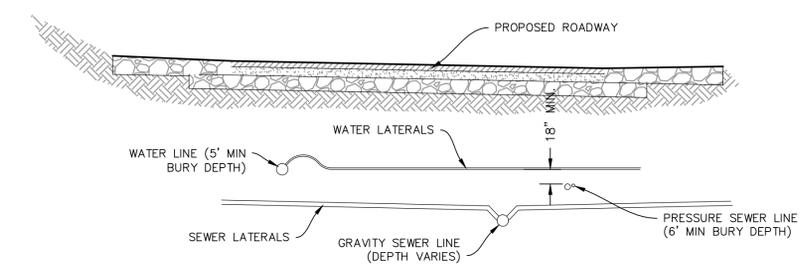
CAUTION



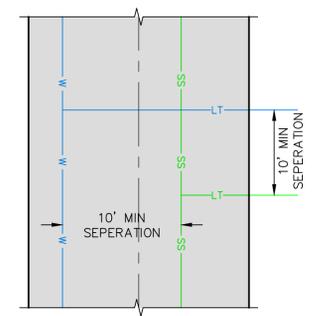
TYPICAL ROADWAY SECTION A-A
 (50' RIGHT OF WAY SECTION)
 STA: 10+00.00 TO 18+14.86



PAVEMENT SECTION A



SECTION



PLAN

WATER AND SEWER SEPARATION DETAIL

NO.	BY	DATE	REVISIONS
1	RHC	8/27/2013	ADDITIONAL 1
2	RHC	5/27/2014	REVISIONS TO SEWER REVISIONS
3	RHC	5/27/2014	REVISIONS TO SEWER REVISIONS
4	RHC	7/25/2014	REVISIONS TO SEWER REVISIONS

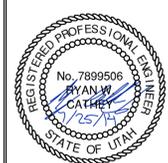
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. Any such changes or uses must be approved by the preparer of these plans.

DATE SUBMITTED: 01/07/2014

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC

SUMMIT EDEN PHASE 1B
ROADWAY TYPICAL SECTIONS

NV5
 BEYOND ENGINEERING
 627 SOUTH STATE STREET, SUITE 200
 801743.000 TEL 801743.000 FAX
 MURRAY, UT 84107
 WWW.NV5.COM

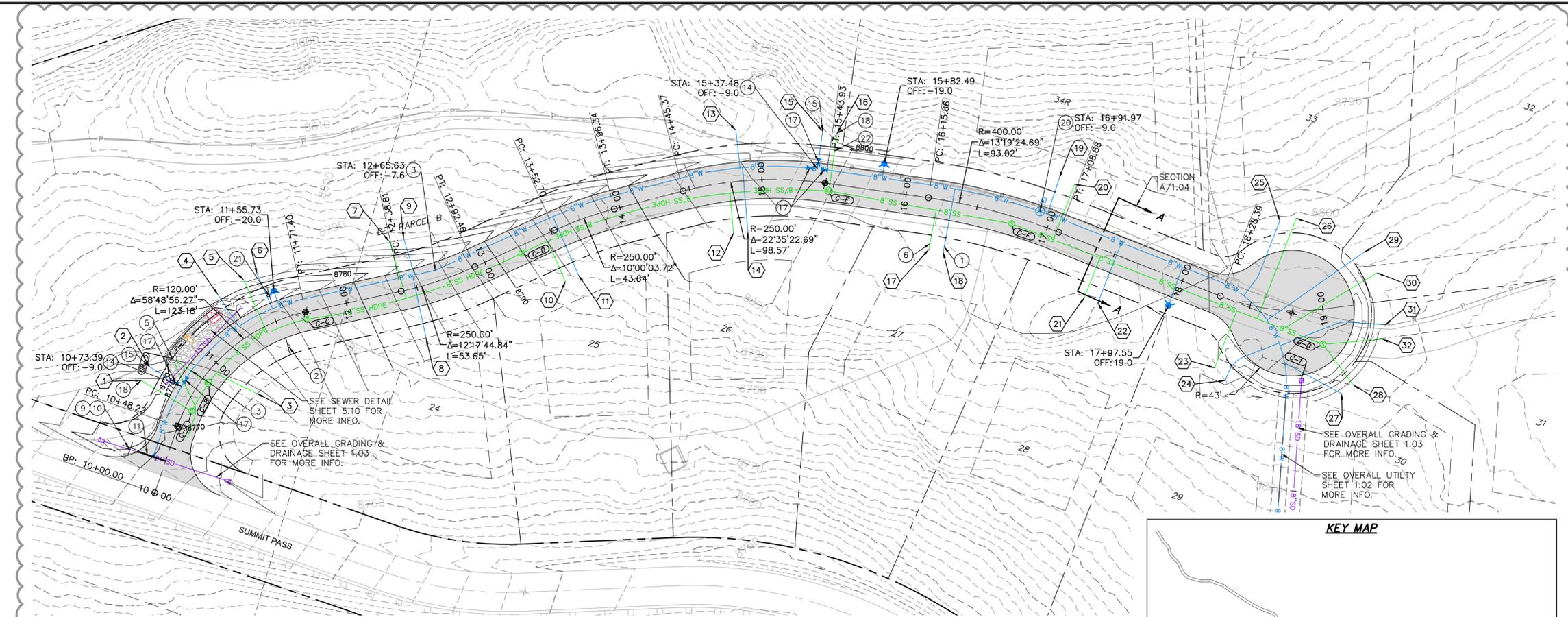


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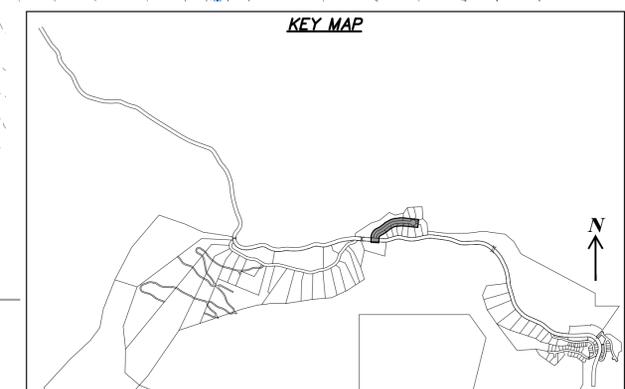
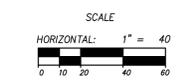
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JOB NUMBER
SLB079306

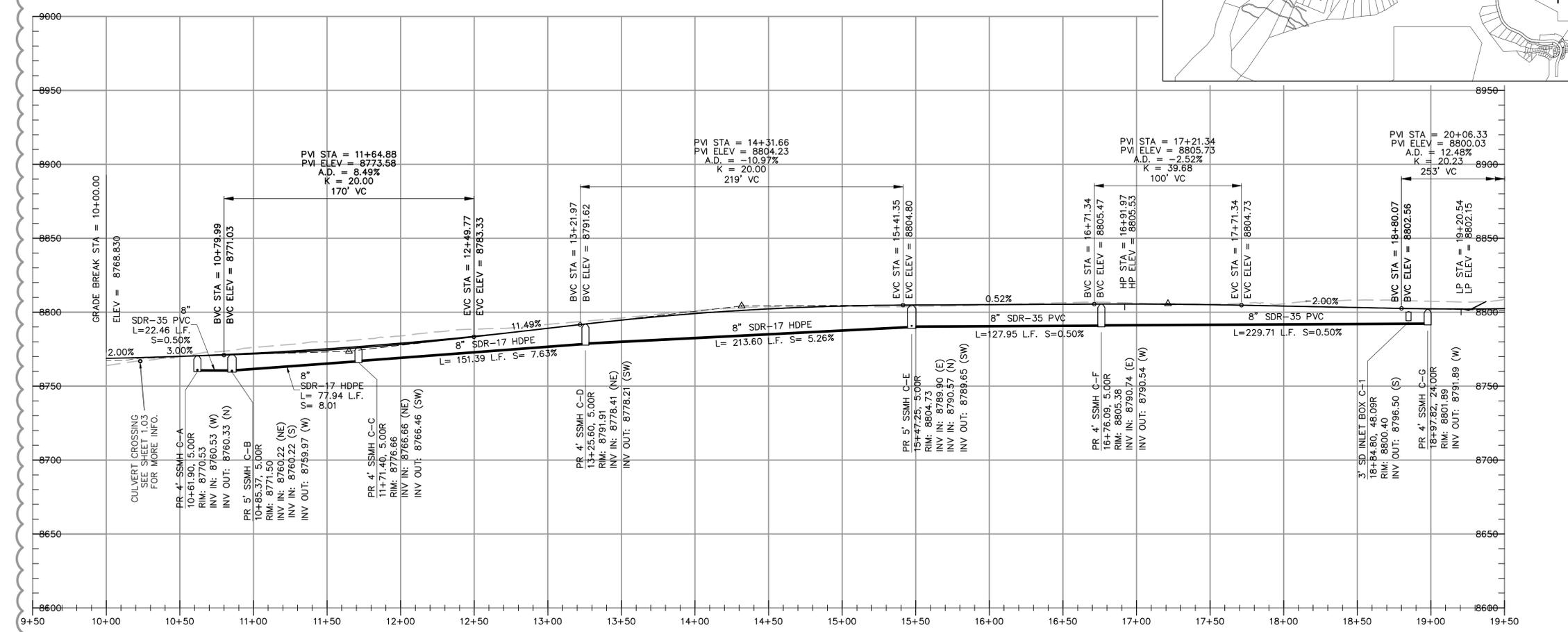




HEARTWOOD DRIVE
 STA: 10+00.00 TO 19+25.00

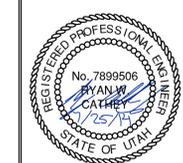
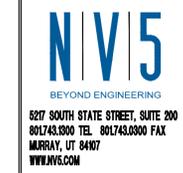


LATERAL TABLE		
NO.	STATION	OFFSET
1	10+64.89	-35
2	10+73.39	-35
3	11+05.46	35
4	11+26.68	-35
5	11+42.55	-35
6	11+50.29	-35
7	12+38.11	-35
8	12+47.58	35
9	12+49.64	-35
10	13+44.96	35
11	13+55.33	35
12	14+76.00	35
13	14+85.53	-35
14	14+87.63	35
15	15+38.07	-35
16	15+47.25	-35
17	16+21.56	35
18	16+32.56	35
19	16+96.66	-35
20	17+07.21	-35
21	17+41.58	35
22	17+51.58	35
23	18+39.15	48
24	18+46.12	54
25	18+61.80	-61
26	18+81.50	-63
27	19+05.83	59
28	19+14.52	54
29	19+33.36	-35
30	19+40.56	-20
31	19+41.63	16
32	19+38.38	-26



NO.	BY	DATE	REVISIONS
1	RMC	8/7/2013	ADD ROW 1
2	RMC	8/7/2014	REVISIONS
3	RMC	8/7/2014	REVISIONS
4	RMC	7/25/2014	REVISIONS

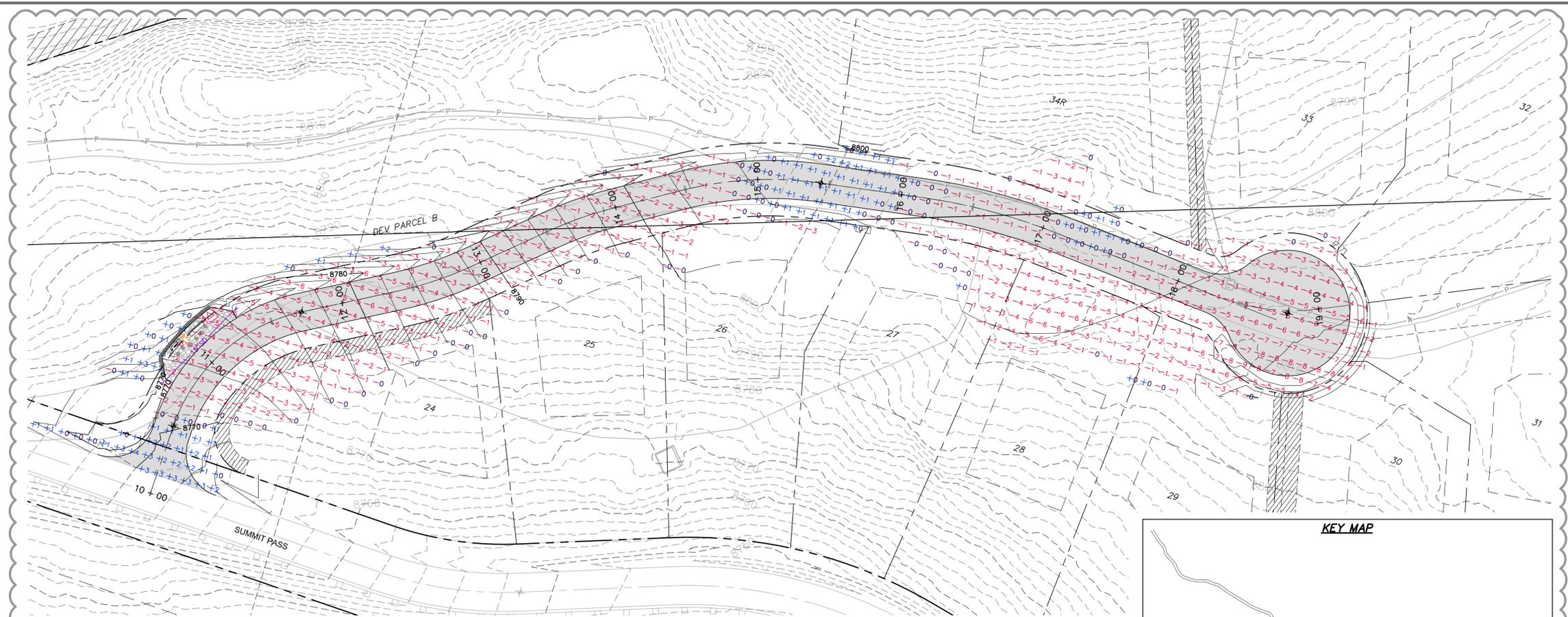
SUMMIT EDEN PHASE 1B
 PLAN AND PROFILE
 HEARTWOOD DRIVE



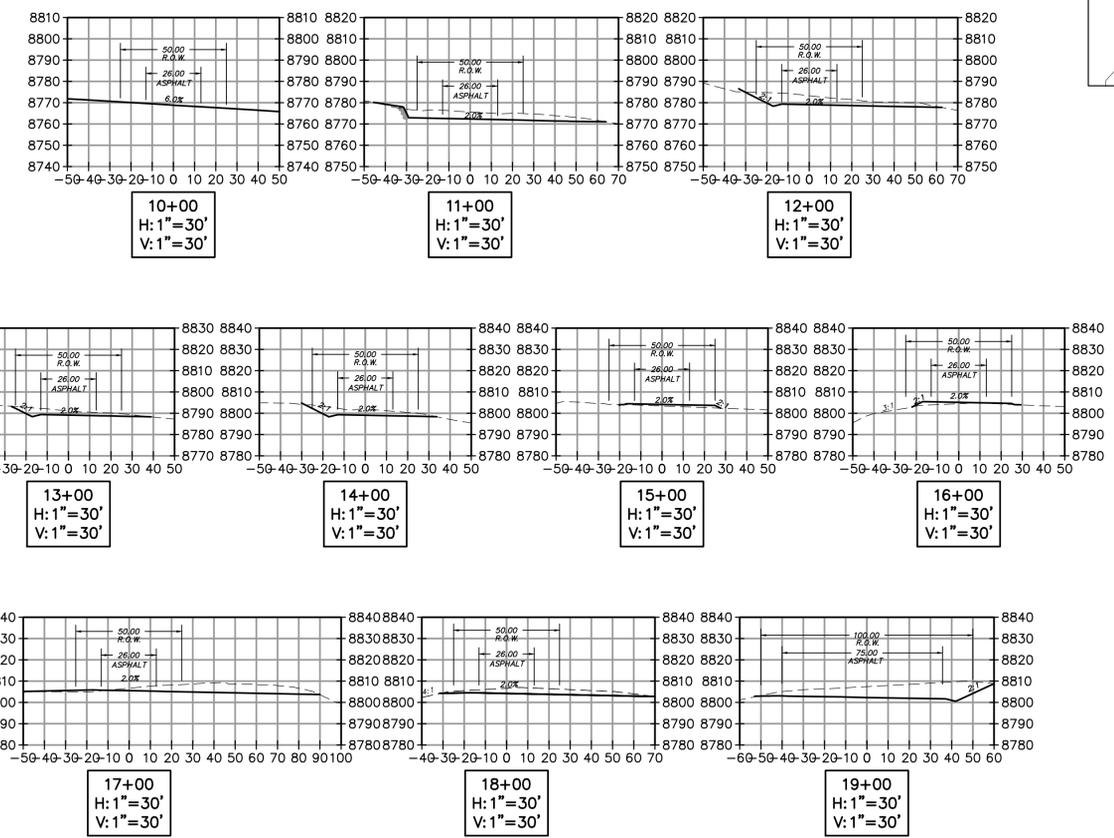
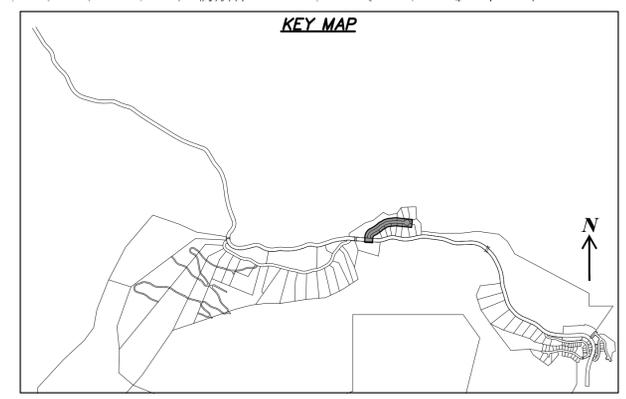
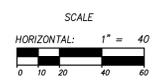
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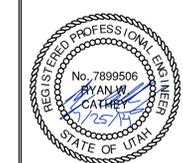


HEARTWOOD DRIVE
 STA: 10+00.00 TO 19+25.00



SUMMIT EDEN PHASE 1B
EARTHWORK AND SECTIONS
HEARTWOOD DRIVE

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 MURRAY, UT 84107
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SHEET NUMBER
3.00
 SCALE
 VERTICAL: 1" = 30'
 HORIZONTAL: 1" = 40'
 JOB NUMBER
SLB079306

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC DATE SUBMITTED: 01/07/2014

REVISIONS
 NO. BY DATE REVISIONS
 1 RMC 8/27/2013 ADDRESS CHANGE SEWER REVISIONS
 2 RMC 5/27/2014 PERMITS AND SEWER REVISIONS
 3 RMC 7/25/2014 COUNTY COMMENTS
 4 RMC 7/25/2014 COUNTY COMMENTS

CAUTION
 The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans, and must be approved by the preparer of these plans.



LEGEND



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.



INSTALL 15' X 50' VEHICLE WASH DOWN AREA WITH 1"-2.5" COARSE AGGREGATE PLACED A MINIMUM 8" THICK. SUPPLY WATER FOR VEHICLE WASH DOWN.



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



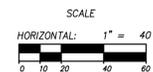
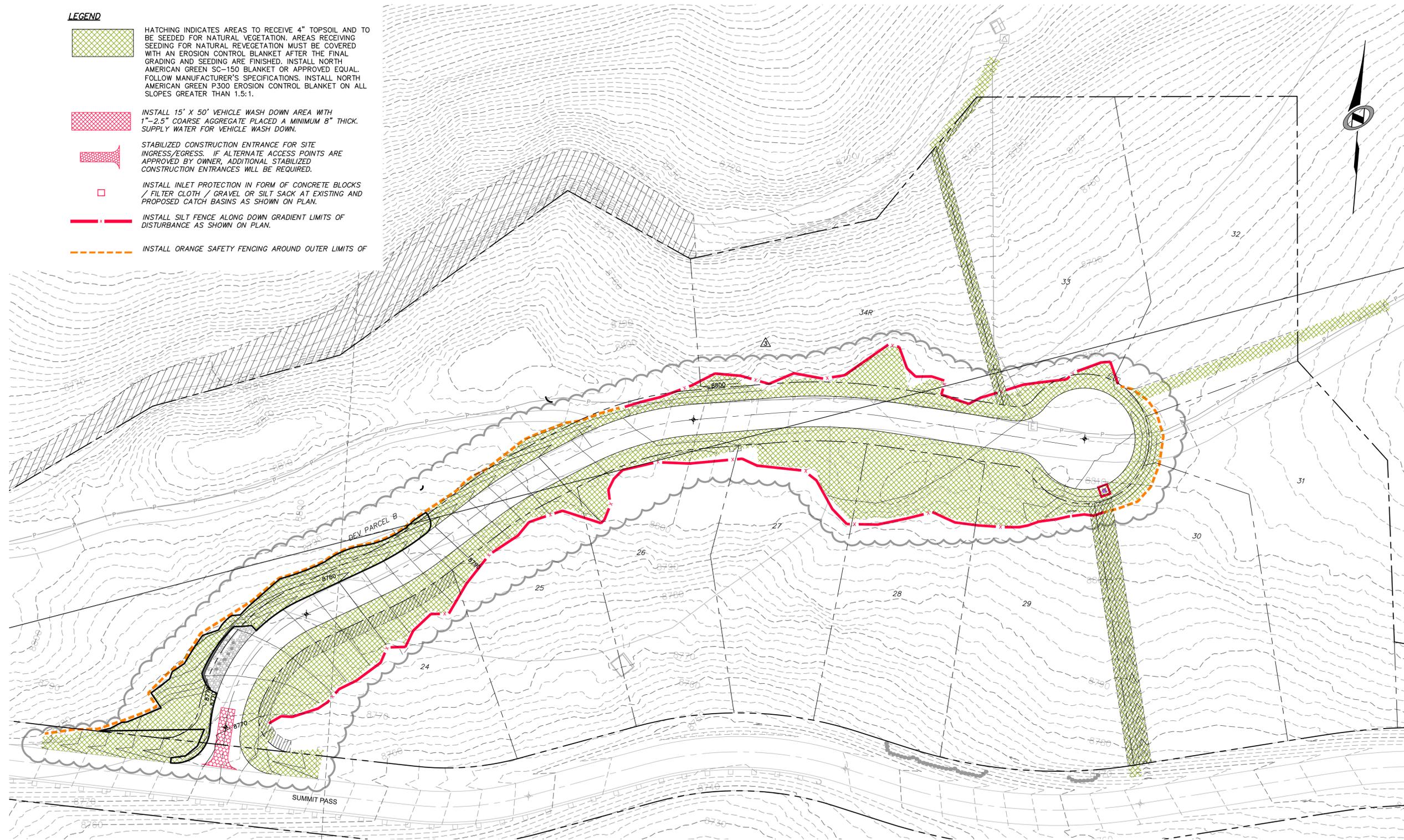
INSTALL INLET PROTECTION IN FORM OF CONCRETE BLOCKS / FILTER CLOTH / GRAVEL OR SILT SACK AT EXISTING AND PROPOSED CATCH BASINS AS SHOWN ON PLAN.



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



INSTALL ORANGE SAFETY FENCING AROUND OUTER LIMITS OF



SUMMIT EDEN PHASE 1B
EROSION CONTROL PLAN
HEARTWOOD DRIVE

NV5
 BEYOND ENGINEERING
 5217 SOUTH STATE STREET, SUITE 200
 MURRAY, UT 84107
 801.743.0300 TEL. 801.743.0300 FAX
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SHEET NUMBER
4.00

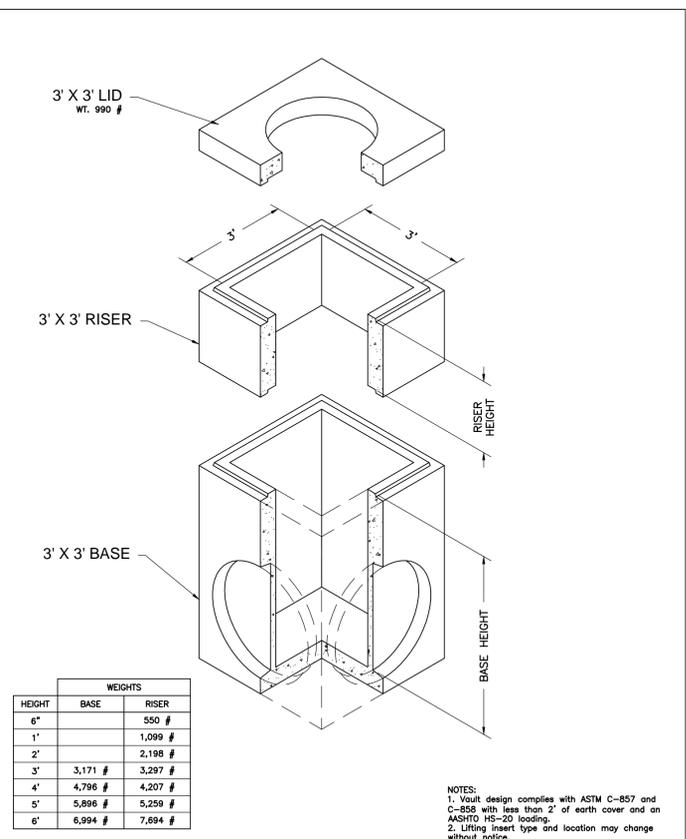
SCALE
 VERTICAL: 1" = 40'
 HORIZONTAL: 1" = 40'

JOB NUMBER
SLB079306

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC DATE SUBMITTED: 01/07/2014

NO.	BY	DATE	REVISIONS
1	RWC	8/27/2013	ADDITIONAL 1
2	RWC	5/27/2014	ADJUST COUNTY SEWER REVISIONS
3	RWC	5/27/2014	REVISIONS TO EROSION CONTROL REVISIONS
4	RWC	7/25/2014	COUNTY COMMENTS

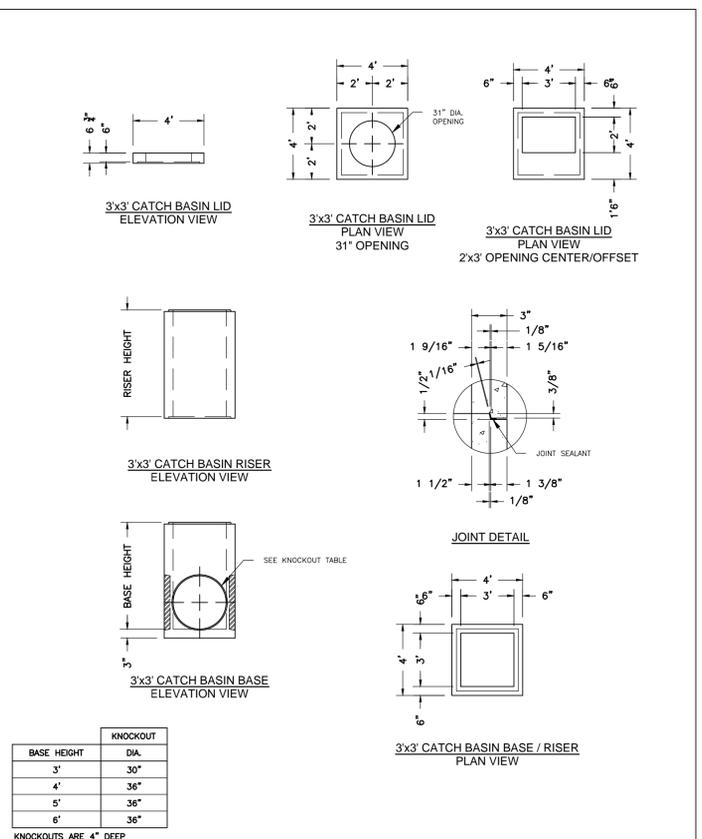
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Oldcastle Precast

3' x 3' Basin
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 ISSUE DATE: 1/08
 www.oldcastleprecast.com

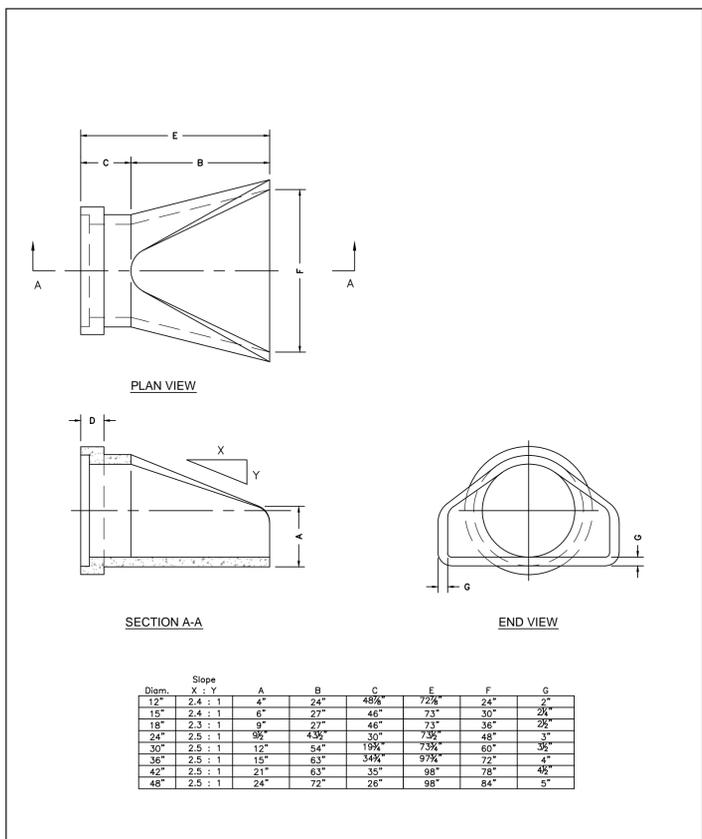
3' x 3' Catch Basin Bases, Risers and lid
 Copyright © 2008



Oldcastle Precast

3' x 3' Basin
 FILE NAME: 210DC3X3CB000
 ISSUE DATE: 1/08
 www.oldcastleprecast.com

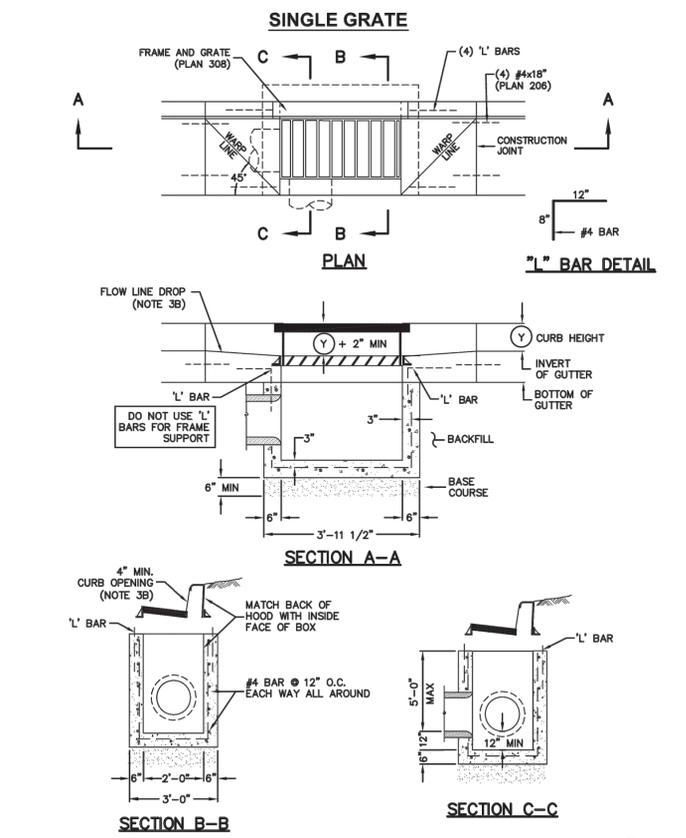
3' x 3' Catch Basin Bases, risers and lid
 Copyright © 2008



Oldcastle Precast

Flared End
 FILE NAME: 210DPERNDFLARE
 ISSUE DATE: 5/2008
 www.oldcastleprecast.com

Flared End Section for Round Pipe
 Copyright © 2008



Oldcastle Precast

Catch basin
 Plan
315
 September 2010 155 Sheet 1 of 2

SUMMIT EDEN PHASE 1B
STORM DRAIN DETAILS

REVISIONS

NO.	BY	DATE	REVISIONS
1	RMC	8/27/2013	ADD COLUMN 1
2	RMC	5/27/2014	REVISE GRATE & RISER REVISIONS
3	RMC	5/27/2014	REVISE GRATE & RISER REVISIONS
4	RMC	7/25/2014	COUNTY COMMENTS

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC DATE SUBMITTED: 01/07/2014

NV5
 BEYOND ENGINEERING

5217 SOUTH STATE STREET, SUITE 200
 801743.0300 TEL. 801743.0300 FAX
 MURRAY, UT 84107
 WWW.NV5.COM

REGISTERED PROFESSIONAL ENGINEER

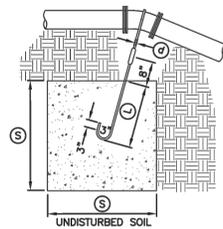
No. 7899506
 RYAN W. CATHEY
 STATE OF UTAH

SHEET NUMBER
5.00

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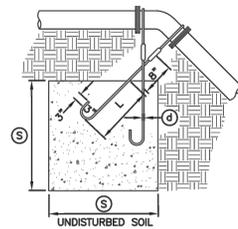
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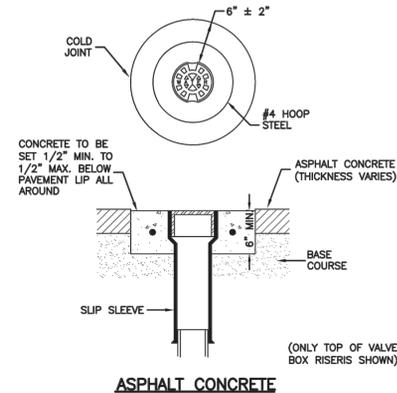
TYPE A RESTRAINT
 FOR 11 1/4" - 22 1/2" VERTICAL BENDS

PIPE SIZE NOMINAL DIAMETER - INCH	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	SIDE OF CURVE - FEET	DIAMETER OF SHANK OR REBAR RODS - INCH	DEPTH OF ROD CONCRETE - FEET
4"	11 1/4"	8	2.0	5/8"	1.5
4"	22 1/2"	15.6	2.5	5/8"	2.0
6"	11 1/4"	15.6	2.5	5/8"	2.0
6"	22 1/2"	34.3	3.25	5/8"	2.0
8"	11 1/4"	27	3.0	5/8"	2.0
8"	22 1/2"	64	4.0	5/8"	2.0
12"	11 1/4"	64	4.0	5/8"	2.0
12"	22 1/2"	125	5.0	3/4"	3.0
16"	11 1/4"	107	4.25	7/8"	3.0
16"	22 1/2"	216	6.0	7/8"	3.0
20"	11 1/4"	138	5.17	1"	3.5
20"	22 1/2"	334	6.94	1"	4.0
24"	11 1/4"	240	6.22	1"	4.0
24"	22 1/2"	478	7.81	1"	4.0
30"	11 1/4"	369	7.17	1"	4.0
30"	22 1/2"	733	9.02	1"	4.0

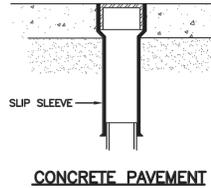


TYPE B RESTRAINT
 FOR 45" VERTICAL BENDS

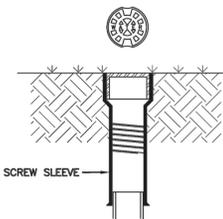
PIPE SIZE NOMINAL DIAMETER - INCH	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	SIDE OF CURVE - FEET	DIAMETER OF SHANK OR REBAR RODS - INCH	DEPTH OF ROD CONCRETE - FEET
4"	45"	1	3.0	5/8"	2.0
6"		2.37	4.0	5/8"	2.5
8"		3.97	4.75	5/8"	3.0
12"		9.04	6.25	5/8"	4.0
16"		17.24	7.75	3/4"	4.0
20"		26.52	9.25	3/4"	4.0
24"		37.82	10.07	3/4"	4.0
30"		58.26	11.63	3/4"	4.0



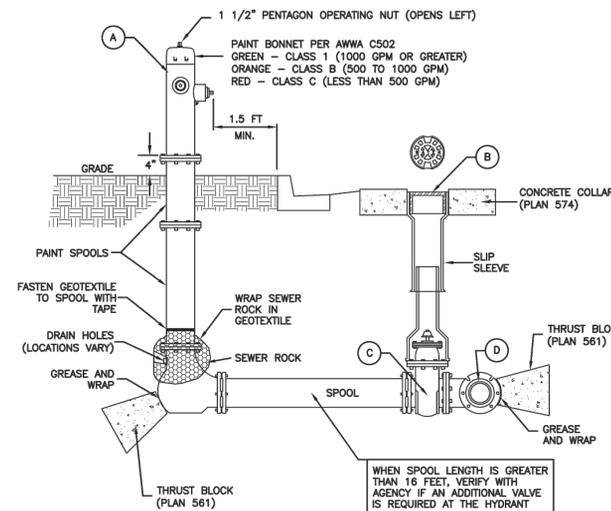
ASPHALT CONCRETE



CONCRETE PAVEMENT



LANDSCAPED AREA

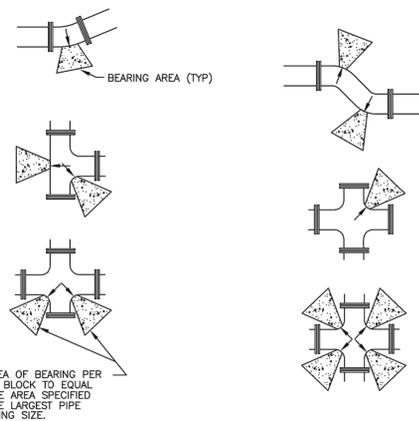


No.	*	ITEM	DESCRIPTION
(A)		FIRE HYDRANT	AWWA C502
(B)		VALVE BOX WITH LID	2-PIECE CAST IRON
(C)		GATE VALVE WITH 2" X 2" NUT	AWWA C509
(D)		TEE WITH 125 # FLANGE	AWWA C110

* FURNISHED BY UTILITY AGENCY

SECTION

Plan 562
 Tie-down thrust restraints
 April 1997 269

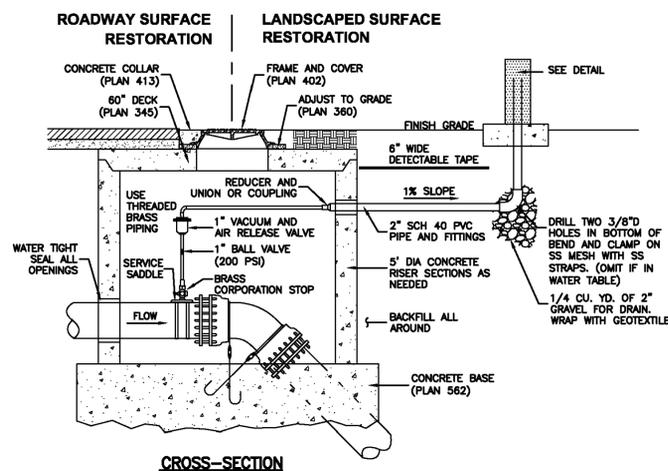


SIZE OF PIPE	TEES, VALVES, DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2	3	2	2	2
6"	4	5.5	3	1.5	1
8"	6.5	9.5	5	2.75	1.5
12"	14	20	11	5.5	3
14"	19	26.5	14.5	7.5	4
16"	24	34	18.5	9.5	6
20"	27	52	28.5	14.5	16
24"	53	74	41	21	53
30"	81	114	62	32	16

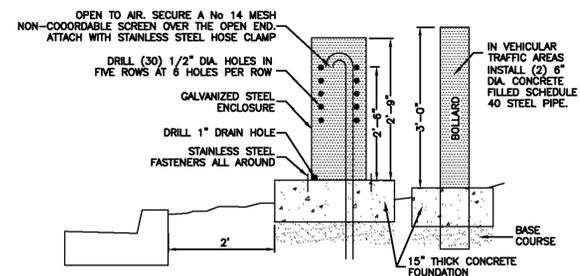
Direct bearing thrust block

April 1997 239 Plan No. 561

Plan 574
 Cover collar for water valve box
 August 2010 277



CROSS-SECTION



DETAIL

February 2011 279 Plan No. 575

Plan 511
 Fire hydrant with valve
 February 2011 237

SUMMIT EDEN PHASE 1B
WATER DETAILS

DATE SUBMITTED: 01/07/2014

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC

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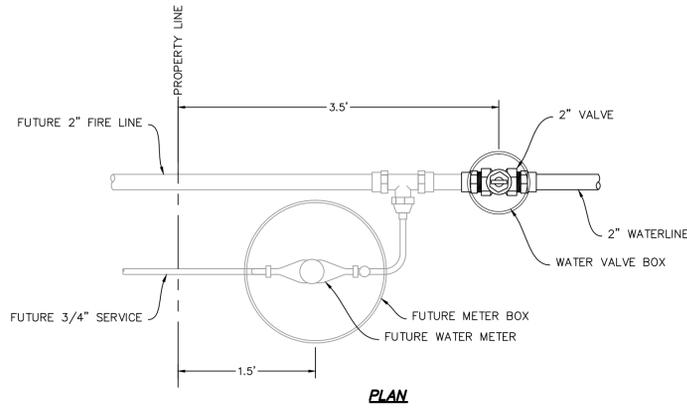
REGISTERED PROFESSIONAL ENGINEER
 No. 7899506
 RYAN W. CATHEY
 STATE OF UTAH

SHEET NUMBER
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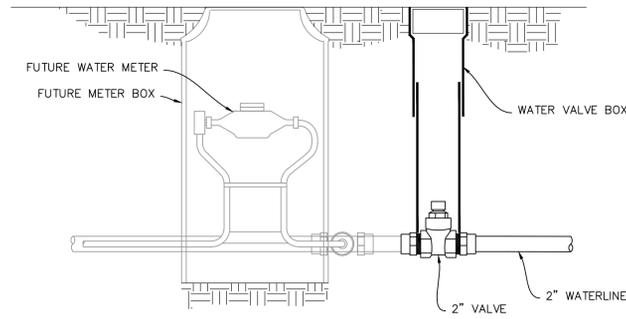
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JOB NUMBER
SLB079306





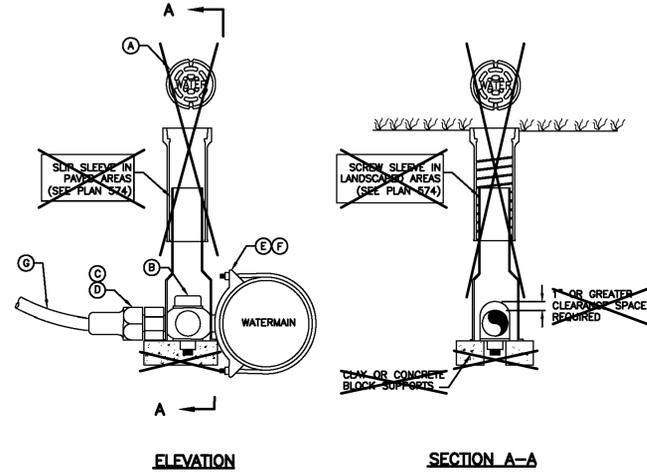
PLAN



SECTION

NOTE:
 FUTURE SIZES ARE PRELIMINARY.
 ACTUAL SIZE TO BE DETERMINED
 BY BUILDING DESIGNER

WATER LATERAL DETAIL
 NO SCALE



ELEVATION

SECTION A-A

LEGEND			
No.	*	ITEM	DESCRIPTION
(A)		VALVE BOX WITH LID	2-PIECE CAST IRON
(B)		CORPORATION STOP	BRASS
(C)		COPPER ADAPTER	
(D)		FLARE OR PACK JOINT COPPER ADAPTER	
(E)		SERVICE SADDLE CLAMP	D.I., A.C., C.I.
(F)		SERVICE SADDLE CLAMP	P.V.C.
(G)		COPPER PIPE (SERVICE LINE)	TYPE K (SOFT)

OMIT VALVE BOX

* FURNISHED BY UTILITY AGENCY

1 1/2" and 2" Service taps

August 2001

265

Plan 552

SUMMIT EDEN PHASE 1B
WATER DETAILS

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC DATE SUBMITTED: 01/07/2014

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REGISTERED PROFESSIONAL ENGINEER
 No. 7899506
 RYAN W. CATHEY
 7/25/14
 STATE OF UTAH

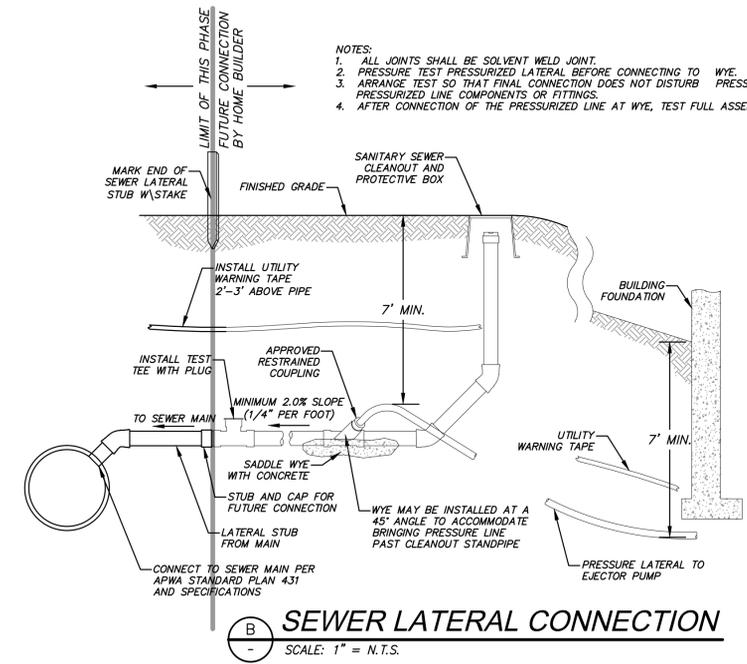
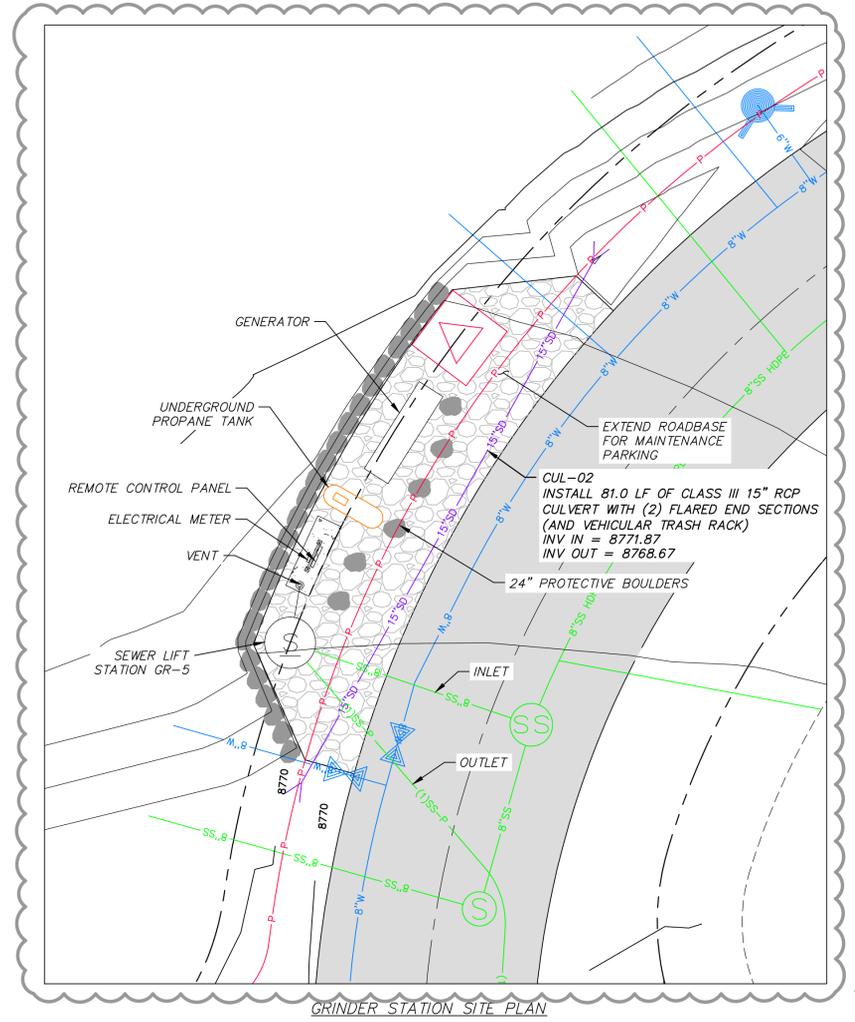
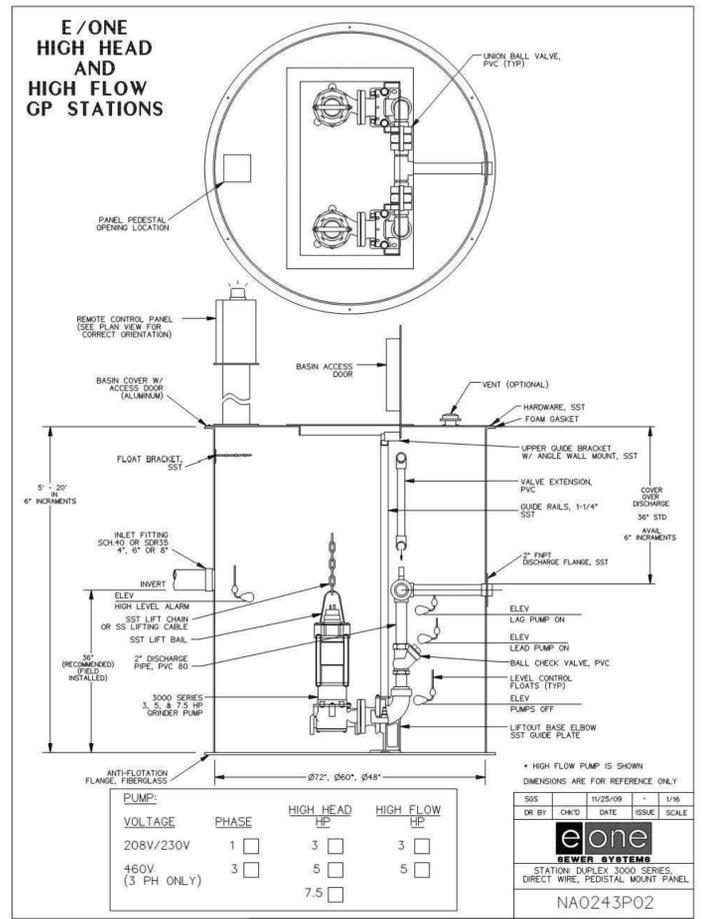
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SCALE
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JOB NUMBER
SLB079306



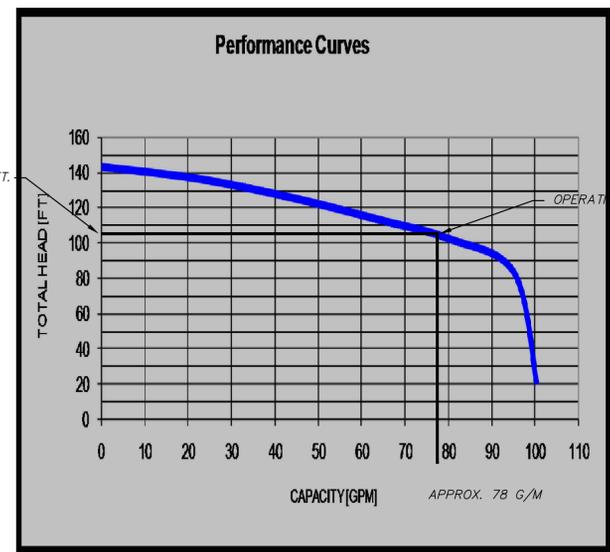
CAUTION
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PUMP NAME	INVERT IN	INVERT IN SIZE	SUMP ELEV	BASIN DIA.	PUMP HEAD	PUMP HP	DISCHARGE DIA	DISCHARGE VELOCITY	MIN STORAGE VOLUME (gal)	STATION DETAIL	PUMP	PEAK FLOW (GPM)	AUTO DIALER	MAIN POWER TRANSFER SWITCH	POWER
GR-5	8759.37	8"	8754.37	72"	105	5	3"	3.66	1050	DUPLX 3000 SERIES	SUBMERSIBLE GRINDER PUMP E-ONE 3H51	78	CELLULAR	MANUAL	1 PHASE/240 VOLT

SEWER GRINDER PUMP DETAILS
SCALE: 1" = N.T.S.

Grinder Station Calculations	
GR-5	
Head Difference	8754.34-8848.06=93.72 ft.
Pipe Length	1210 ft.
Friction Loss	10.81 ft.
Flow Calc.	(26 units) (3.2 People/household)(100 gallons/day/capita)=5.78 g/m average
Peaking Factor (Ten States Method)	$Q_{peak}/Q_{avg} = 18 + VP/4 + VP = 4.5$ $Q_{peak} = 23.0$ g/m
Pump Curve	See Pump Curve = 78 g/m



NO.	BY	DATE	REVISIONS
1	RHC	8/7/2013	ADD ROOM 1
2	RHC	5/27/2014	REVISE GRINDER PUMP REVISIONS
3	RHC	5/27/2014	REVISE GRINDER PUMP REVISIONS
4	RHC	7/25/2014	REVISE GRINDER PUMP REVISIONS

SUMMIT EDEN PHASE 1B
GRINDER PUMP VAULT
SEWER DETAILS

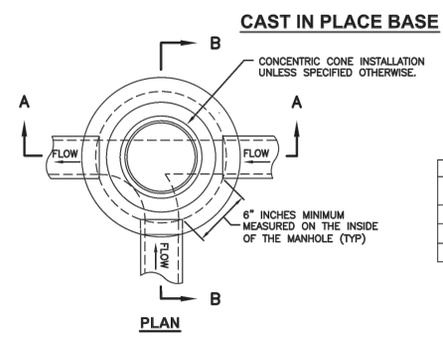
DATE SUBMITTED: 01/07/2014
PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC



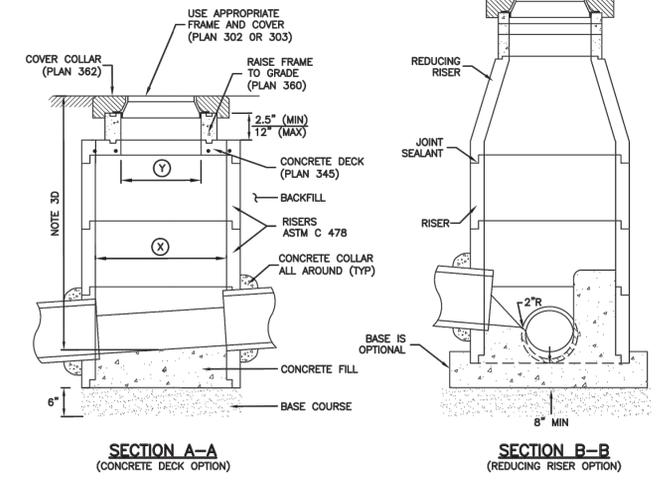
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SCALE: VERTICAL: 1" = N/A, HORIZONTAL: 1" = N/A
JOB NUMBER: **SLB079306**



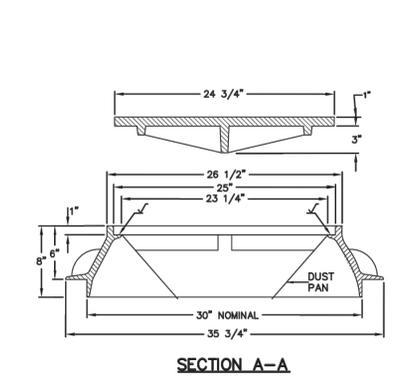
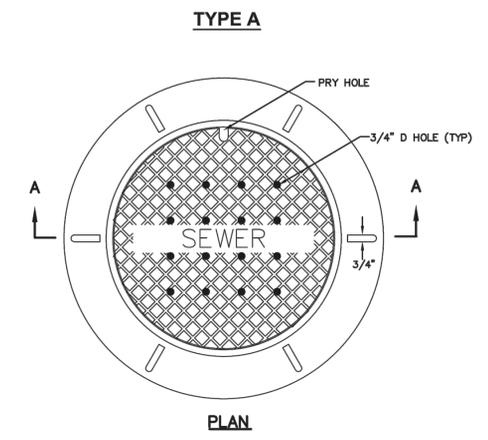
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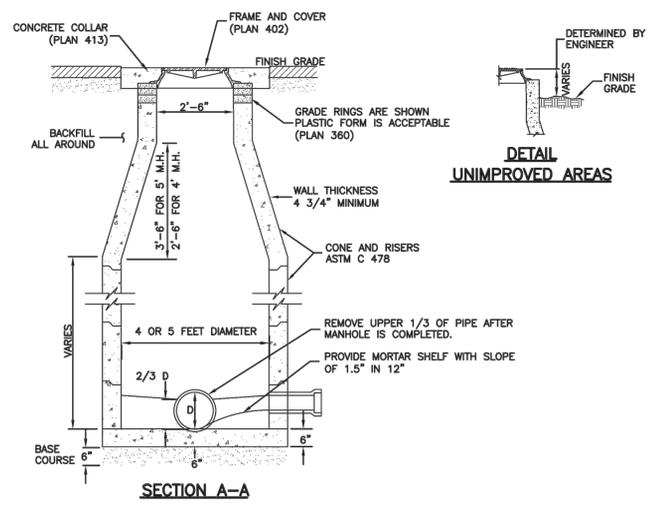
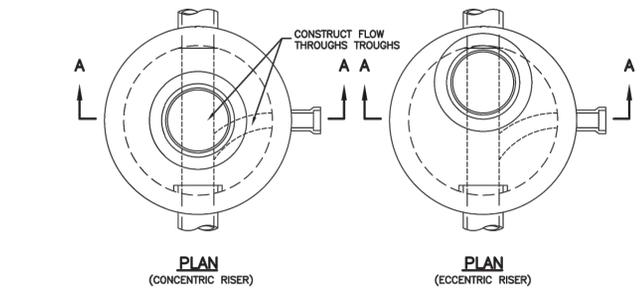
MANHOLE STYLE	DIMENSION	
A	⊗=48" ⊙=30"	
B	⊗=60" ⊙=44"	
C	⊗=60" ⊙=30"	



Precast manhole Plan 341
 November 2010 187 Sheet 1 of 2

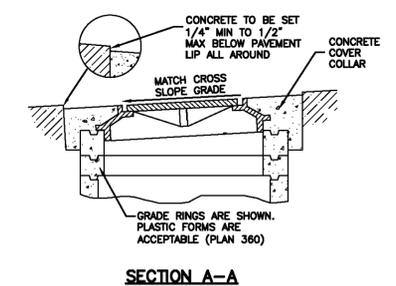
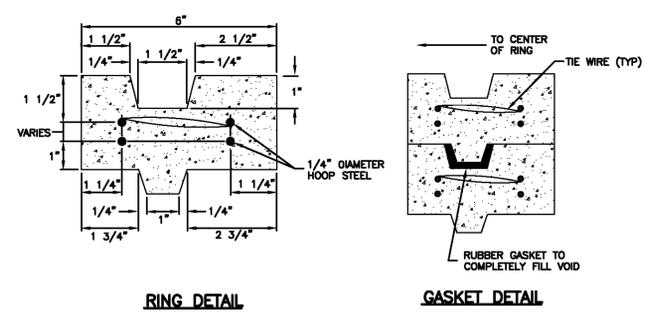
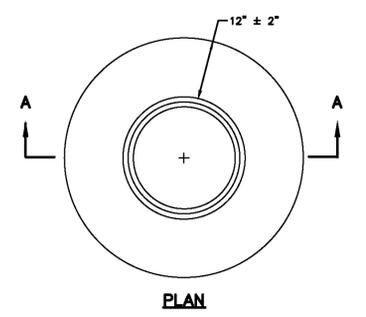
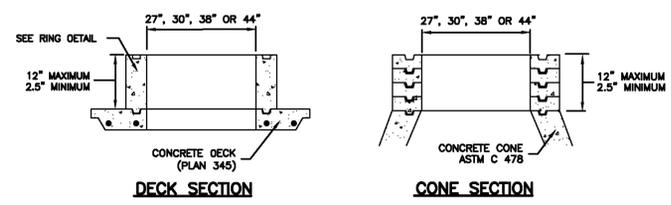


30" Frame and cover Plan 402
 April 1997 211

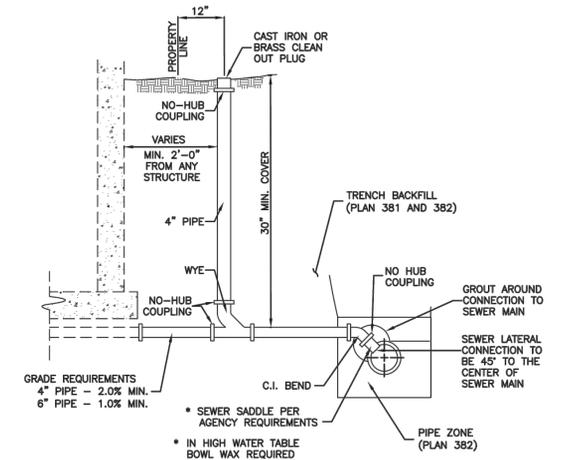


Sanitary sewer manhole Plan 411
 April 2011 213

GRADE RING



Cover collar for sanitary sewer manhole Plan 413
 September 2001 217



Sewer lateral connection Plan 431
 January 2011 219

Raise frame to grade Plan 360
 May 2008 193 Sheet 1 of 2



NO.	BY	DATE	REVISIONS
1	RHC	8/27/2013	ADD ROOM 1
2	RHC	5/27/2014	REVISIONS TO SEWER REVISIONS
3	RHC	5/27/2014	REVISIONS TO SEWER REVISIONS
4	RHC	7/25/2014	REVISIONS TO SEWER REVISIONS

SUMMIT EDEN PHASE 1B
SEWER DETAILS

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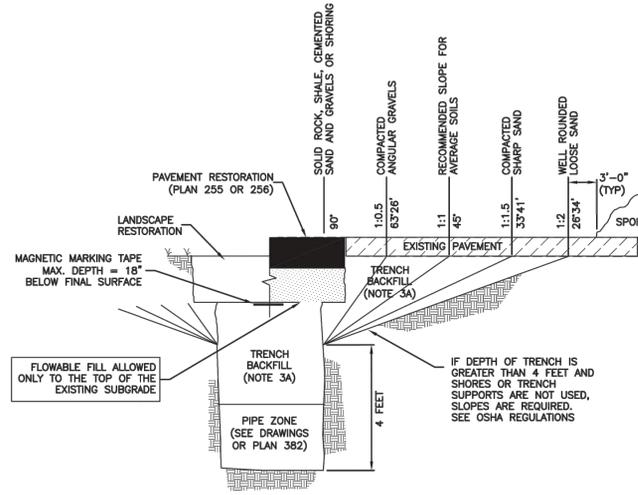
SHEET NUMBER	5.11
SCALE	VERTICAL: 1" = N/A HORIZONTAL: 1" = N/A
JOB NUMBER	SLB079306

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC DATE SUBMITTED: 01/07/2014

The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans unless such changes or uses are specifically approved by the engineer.

Trench backfill

1. **GENERAL**
 - A. The 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 90 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).



Trench backfill

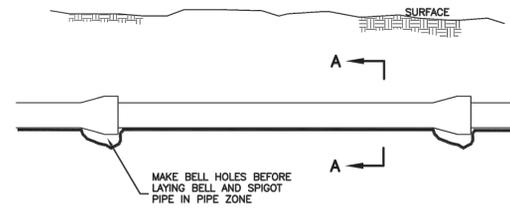
Plan
381

202

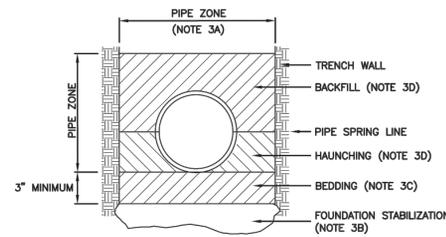
January 2011

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 lift 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 lift 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 providing pipe restraints as required by pipe manufacturer.
 - 3) Reset pipe to line and grade if pipe "floats" out of position.



ELEVATION VIEW



SECTION A-A

INSTALLATION
 CONCRETE PIPE: FOLLOW ASTM C 1479
 *STANDARD PRACTICE FOR INSTALLATION OF PRECAST CONCRETE SEWER, STORM DRAIN, AND CULVERT PIPE USING STANDARD INSTALLATIONS.
 PVC AND HDPE PIPE: FOLLOW ASTM D 2321
 *STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS.
 CORRUGATED METAL PIPE: FOLLOW ASTM A 798
 *STANDARD PRACTICE FOR INSTALLING FACTORY-MADE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS.
 VITRIFIED CLAY PIPE: FOLLOW ASTM C 12.
 *STANDARD RECOMMENDED PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES.

Pipe zone backfill

Plan
382

204

January 2011



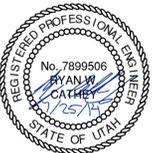
SUMMIT EDEN PHASE 1B
MISCELLANEOUS DETAILS

NO.	BY	DATE	REVISIONS
1	RHC	8/27/2013	ADD ROOM 1
2	RHC	5/27/2014	REVIS OSHA SEWER REGULATIONS
3	RHC	5/27/2014	REVIS OSHA SEWER REGULATIONS
4	RHC	7/25/2014	COUNTY COMMENTS

DATE SUBMITTED: 01/07/2014

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC

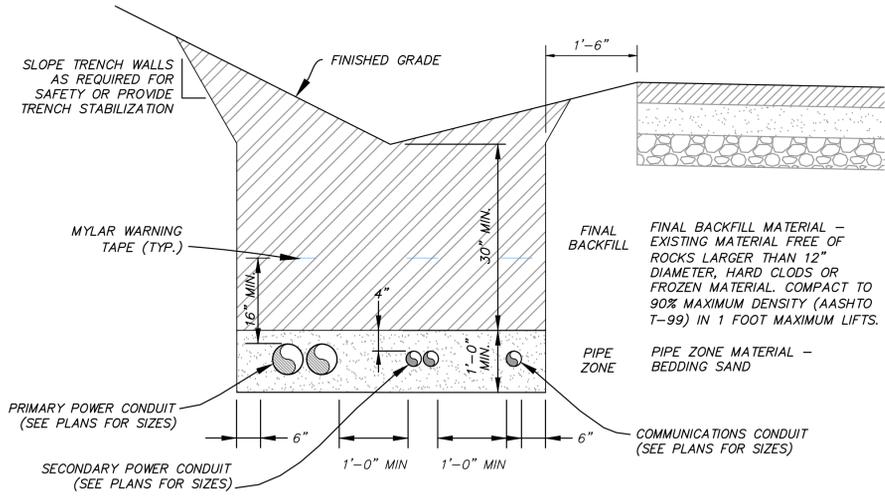
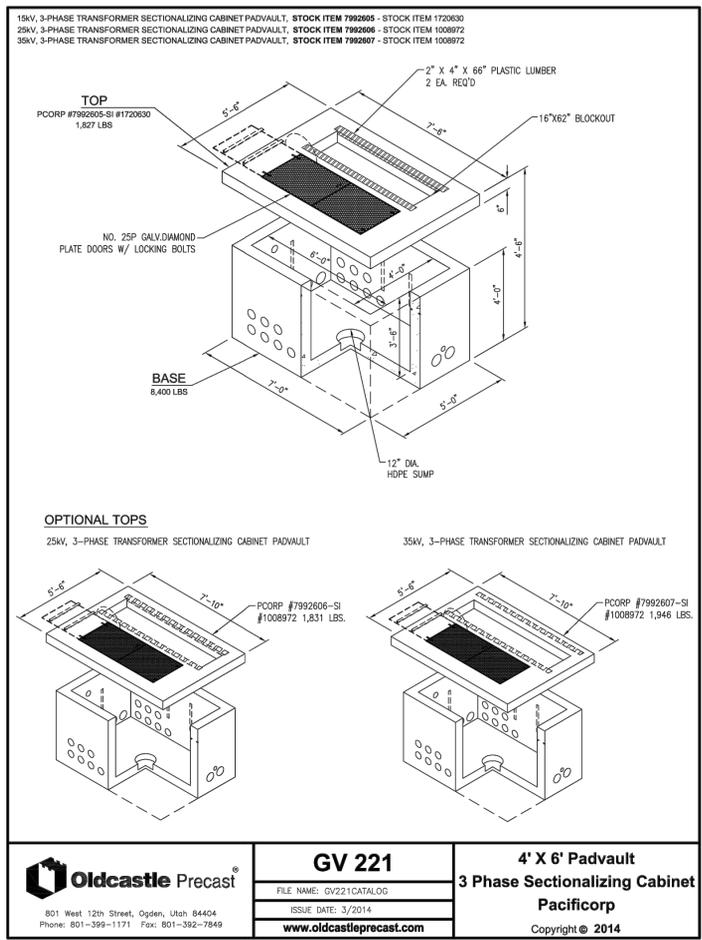
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SHEET NUMBER
5.12

SCALE
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 HORIZONTAL: 1" = N/A

JOB NUMBER
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NOTE: EACH CONDUIT REQUIRES 2500lb MULE TAPE WITHIN

POWER CONDUIT TRENCH

VAR NTS

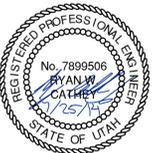
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2	RMC	5/27/2014	REVISIONS
3	RMC	5/27/2014	REVISIONS
4	RMC	7/25/2014	REVISIONS

SUMMIT EDEN PHASE 1B
ELECTRICAL DETAILS

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC
 DATE SUBMITTED: 01/07/2014

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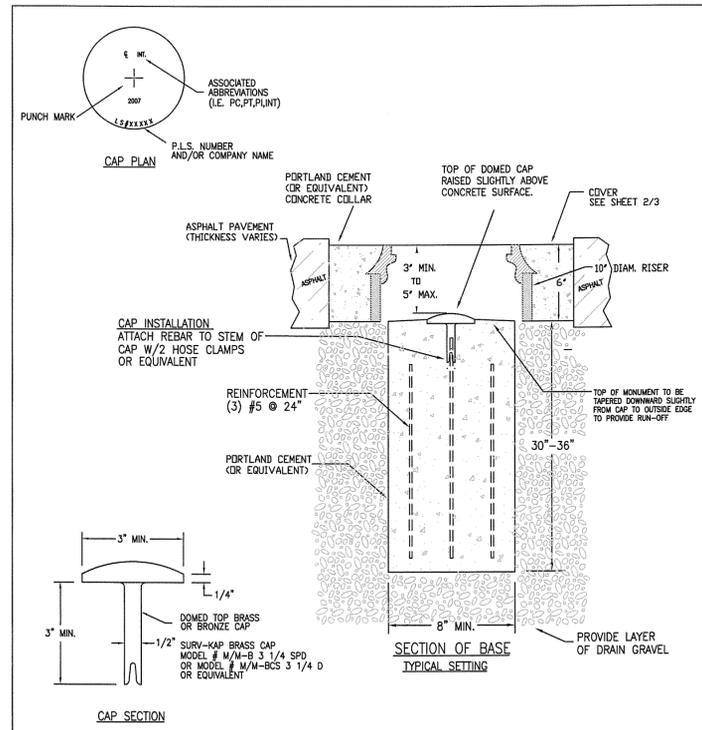


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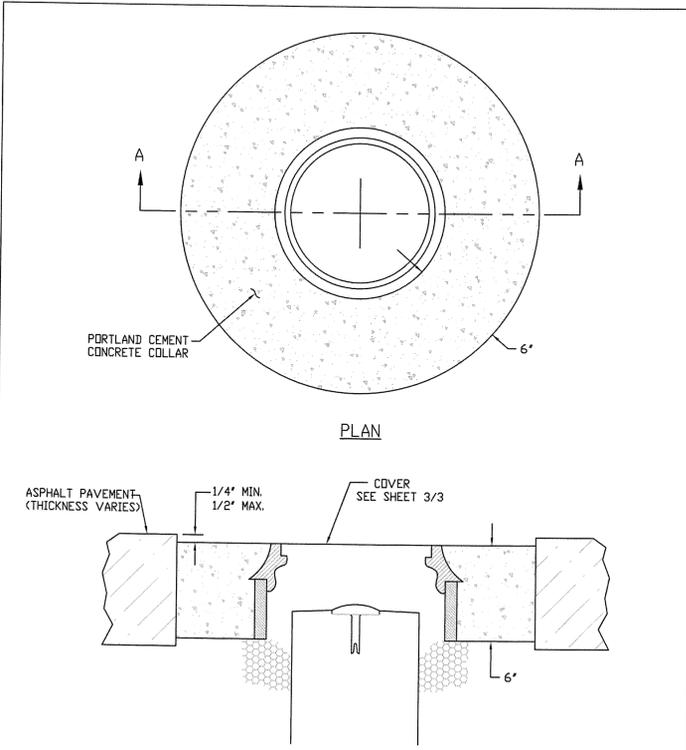
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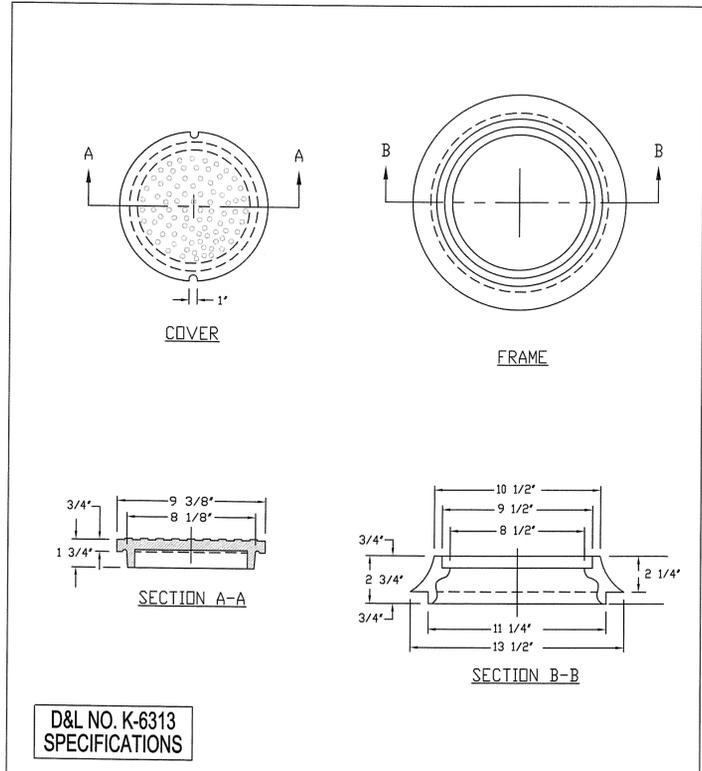


CAP CAN BE PURCHASED FROM SURVEYOR'S OFFICE

WEBER COUNTY SURVEY OFFICE	RING & LID SURVEY MONUMENT	STANDARD PLANS
		Monument Standard
3/28/10	399-8020	SHEET 1 OF 3



WEBER COUNTY SURVEY OFFICE	Cover Collar For Survey Monuments	STANDARD PLANS
		Monument Specifications
3/28/10	399-8020	SHEET 2 OF 3

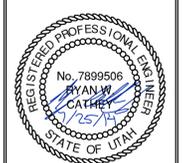


WEBER COUNTY SURVEY OFFICE	RING & LID SURVEY MONUMENT	STANDARD PLANS
		Monument Specifications
3/28/10	399-8020	SHEET 3 OF 3

NO.	BY	DATE	REVISIONS
1	RHC	8/27/2013	ADD ITEM 1
2	RHC	5/27/2014	REVISE COVER & SEWER REVISIONS
3	RHC	5/27/2014	REVISE COVER & SEWER REVISIONS
4	RHC	7/25/2014	REVISE COVER & SEWER REVISIONS

SUMMIT EDEN PHASE 1B
MISCELLANEOUS DETAILS
 PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC
 DATE SUBMITTED: 01/07/2014

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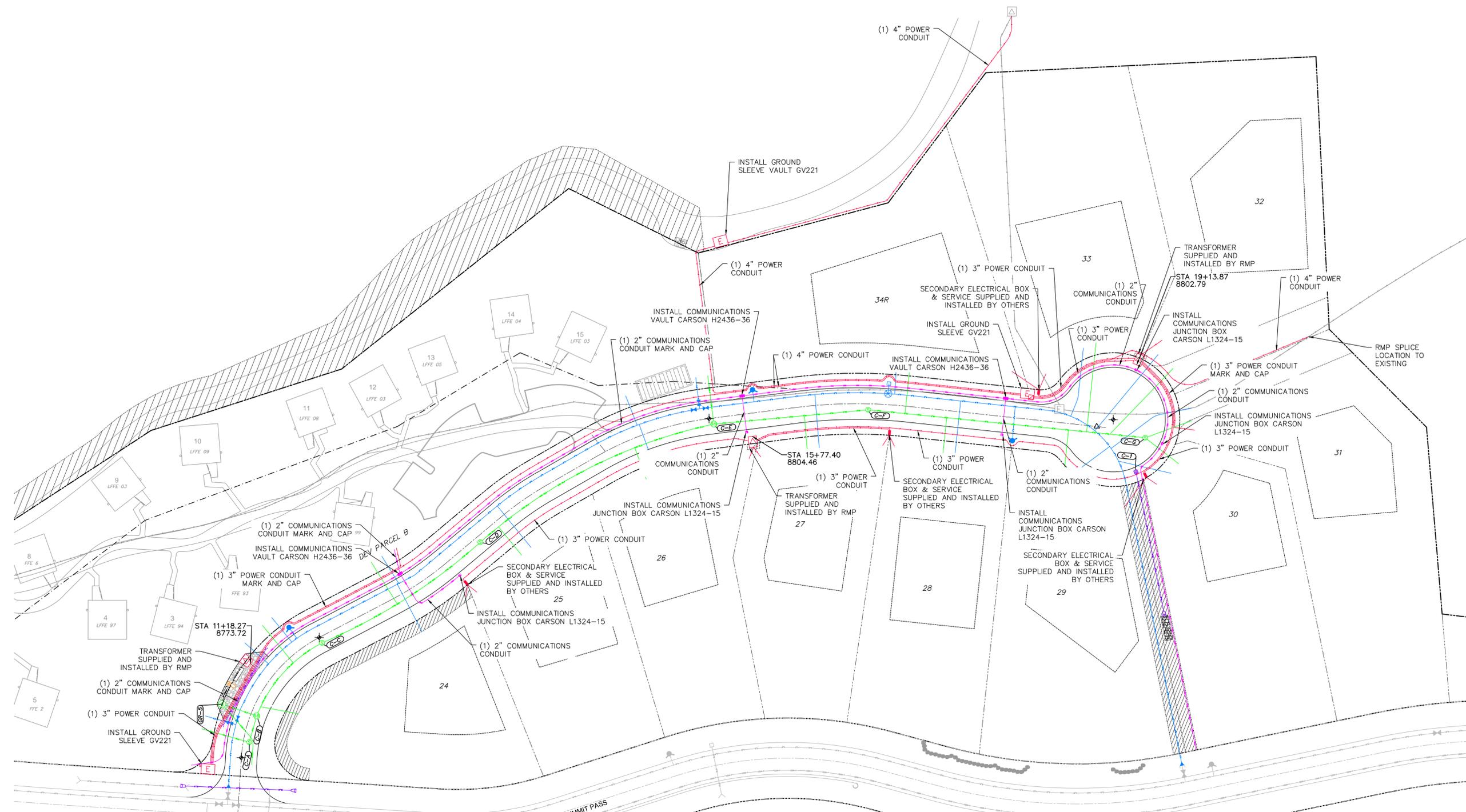


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BOWDEN
 XREES:



NO.	BY	DATE	REVISIONS
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2	RMC	8/19/14	REVISE CONDUIT SIZES
3	RMC	8/19/14	REVISE CONDUIT SIZES
4	RMC	8/19/14	REVISE CONDUIT SIZES

SUMMIT EDEN PHASE 1B
DRY UTILITY PLAN

DATE SUBMITTED: 01/07/2014

PREPARED FOR: SUMMIT MOUNTAIN HOLDING GROUP, LLC

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CALL BEFORE YOU DIG
 BLUE STAKES 1 800 632 6781

REGISTERED PROFESSIONAL ENGINEER
 No. 7899506
 RYAN W. CATHEY
 STATE OF UTAH

SHEET NUMBER
6.00

SCALE
 VERTICAL: 1" = 40'
 HORIZONTAL: 1" = 40'

JOB NUMBER
SLB079306

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 CAUTION