



April 6, 2023

Letter #001

Julee Olander
Project Planner
Washoe County – Community Services Department
1001 East Ninth Street
Reno, NV 89512

Project: IVGID Effluent Storage Tank
Re: SUP Application WSUP23-0002 – Effluent Storage Tank

This letter is written with regard to the Incline Village General Improvement District (District) Special Use Permit application submitted on October 8, 2022. The information included herein is presented in support of application WCSUP23-0002 to provide further clarification on the proposed design elements and Washoe County code exemptions requested. Included with this submittal is an updated set of 90% design drawings (dated February 2023). The scope of the project remains unchanged, however these drawings supersede the drawings submitted with the original application and should be used as reference for application review process moving forward. Additional reference materials are included and specifically referenced, where applicable.

In Exhibit A, the proposed grading is presented as shown in the 90% design drawings referenced above. Washoe County code Sections WDCD110.438.45 & .55(a) require cut/fill slopes to stand at a maximum 3:1 slope. The project has four areas (A1 – A4) where proposed slopes exceed 3:1. The permanent slopes will be finish graded with surface undulations to promote a natural surface topography and to avoid a uniform/engineered appearance. In general, the proposed slopes steeper than 3:1 are necessary to facilitate the construction of the proposed project and to minimize the impact/grading footprint, where possible.

One fundamental aspect of the overall project grading approach is to balance the cut and fill volumes on site. This serves to eliminate large export volumes and related heavy truck traffic on the local roads; it is anticipated that export material will be removed from the Tahoe Basin (i.e. Carson Valley) and disposed at a suitable receiving facility. An additional key component of the grading plan is to create an access road that can accommodate the heavy construction vehicles necessary to erect the concrete tank. This will include concrete trucks, concrete pump trucks, dump trucks, heavy earthwork equipment, crane trucks, and general support vehicles. Existing roads and driveways throughout the Waster Water Recovery Facility (WRRF) are not suitable for the construction traffic/vehicles required for construction of the new storage tank.

Please refer to the attached, updated 90% design drawings and specific excerpts in Attachment A and the corresponding summary of proposed design elements below:

Grading Extents and Proposed Slopes

- **Area A1:** The embankment below the proposed construction access road (Sta 14+50 to 17+40) is comprised of on-site fill material (Labelled **A1, pink border**). This slope is proposed as a 2.5:1 fill slope and is comparable to existing slopes in this area that also average a 2.5:1 slope. The toe of the current slope is founded on an existing access roadway. Reducing the proposed slope to 3:1 would increase the fill slope footprint substantially due to the natural slope below the existing road. The extension of fill slope would result in additional tree removal, further loss of any existing vegetation, and an increase in visual impact as viewed from the scenic highway corridor (SR28). A retaining wall was reviewed as an alternative to the earthen embankments, however, the visual impact was deemed more significant for the scenic corridor so the graded embankment is proposed.
- **Area A2:** The area above the proposed access road (Sta 17+00 to 18+30) and below the existing storage tank is a proposed 2:1 cut slope (Labelled **A2, blue border**). The cut bank was designed at this slope to prevent undermining of the 0.5 million gallon (MG) existing tank foundation. If the cut slope were reduced to a 3:1 slope it would extend into the zone of influence of the structure and compromise the structural integrity of the storage tank.

- **Area A3:** This area is below the access road (Sta 18+00 to 18+75) at the uphill end near the proposed tank pad and is fill material placed over the face of the existing earthen dam (Labelled **A3, orange border**). This slope is proposed as a 2.5:1 fill slope. This area is filled to balance the cut required for this portion of the access road and matches the existing average slope of the existing dam face and adjacent slope. A slope decrease to 3:1 will increase the area impacted by project fill and result in an inconsistent slope face relative to existing conditions.
- **Area A4:** This embankment surrounds the proposed tank (Labelled **A4, green border**) and is fill material cut from beneath the tank area used to fill the existing pond and tie into the top of the pond bank; the existing pond embankment slopes are 2:1 unvegetated slopes. Area A4 is completely within the extents of the existing pond footprint. The project requires an area surrounding the tank perimeter wide enough for cast-in-place concrete operations to pour the tank wall and roof panels. This area will also have to accommodate the heavy equipment required to facilitate the concrete panel lifts and placement. The flat area around the tank will also be used for ongoing future maintenance and inspections. This proposed grading also increases the area available for potential future improvements to the Waste Water Recovery Facility (WRRF) by creating additional area at minimal slope (2%). A decrease in proposed slope to 3:1 will encroach on the area surrounding the tank necessary for construction of the tank and future maintenance.

Slope stabilization and Tree Removal

IVGID is requesting a variance to the re-vegetation requirements in WCD110.438.70 to more closely match existing conditions seen in the photo exhibits attached to the application. The existing slopes are generally composed of sparse vegetation made up of manzanita and coniferous trees. As noted in the project Geotechnical Design Report, topsoil was not observed in the proposed grading area (Section 8.1.1 Site Clearing) and the soil profile in the project area is derived from granitic bedrock materials and generally consists of decomposed granite. IVGID proposes to use a mulch and pine needle blend on the slopes with an erosion control blanket for slope stabilization. This proposal has been submitted to TRPA and is currently in review. The intent is to mimic existing conditions.

IVGID is also requesting a variance to WCD110.412.25.c requiring replacement of significant trees (>6") removed at a 1:1 caliper ratio. For the project parcel (APN 130-010-08) a significant portion (>50%) of existing trees will be preserved in their existing locations. In Exhibit B, the display shows the tree removal required for the project. This currently includes 65 trees. However, some of these trees are likely to be removed by the North Lake Tahoe Fire Protection District (NLTFPD) as part of a defensible space program; the defensible space tree removal scope is not yet confirmed due to the current snow pack but estimated to commence in May 2023.

The estimated 65 tree count is inclusive of trees likely to be removed as part of the defensible space program, therefore, the total number of project trees removed is anticipated to decrease. Of the 65 trees, thirty (30) are less than 14" diameter (TRPA reporting threshold) and 35 are greater than 14" diameter (54" from ground height). The trees greater than 14" diameter are shown in Exhibit B; the trees smaller than 14" diameter are not shown but are scattered throughout the project areas and fill slopes A1 thru A4 shown in Exhibit A. The existing site is densely forested where not developed for the WRRF or IVGID Public Works facilities. Planting additional trees to satisfy the replacement requirement of 110.412.25.c is not practical in this location based on an estimated 1,000" caliper ratio (250 4-inch trees). The forest health and defensible space considerations preclude replacement of these trees. As stated above, the project has been submitted to TRPA for review and IVGID will update Washoe County staff of progress or response from TRPA and/or NLTFPD project staff.

Site drainage

The existing pond currently receives water from an approximate 45-acre watershed area upstream of the pond. The 100-year, 24-hour design storm peak flow rate is 5.5-cfs. As shown on the design drawings, the proposed drainage improvements include a rip-rap lined swale intended to collect the stormwater flows and discharge it at a location adjacent to the existing pond spillway outlet where 5-cfs is currently discharged with no energy dissipation facility. Therefore, the drainage conditions are comparable to existing conditions with improved outlet conditions. A Dam Decommissioning Design Report (Exhibit D) was completed for the decommissioning of the existing dam, as required by the Nevada Division of Water Resources – Dam Safety. The design report is attached and summarizes the existing and proposed drainage conditions around the tank as outlined in this section.



The 12%-grade portion of the new access road way (Sta. 14+50 to 18+75, Sheet 12 design drawings) is paved to minimize erosion potential and is superelevated to drain the inside of the road as indicated on the design drawings (refer to Sheet 12). A 200LF infiltration trench has been sized per TRPA BMP calculation requirements (Exhibit E) and is proposed to collect/infiltrate runoff from this portion of the access road. There is also an inlet with overflow piping and energy dissipater at the outlet to convey water safely in the case of extreme storm events. The remaining portion of the access roadway (STA 10+00 to 14+50, Sheet 11) is unchanged and existing drainage patterns and flow rates will be maintained.

Thank you for your time and consideration of this application and requested variances. Please do not hesitate to contact me for any further clarifications necessary.

Sincerely,

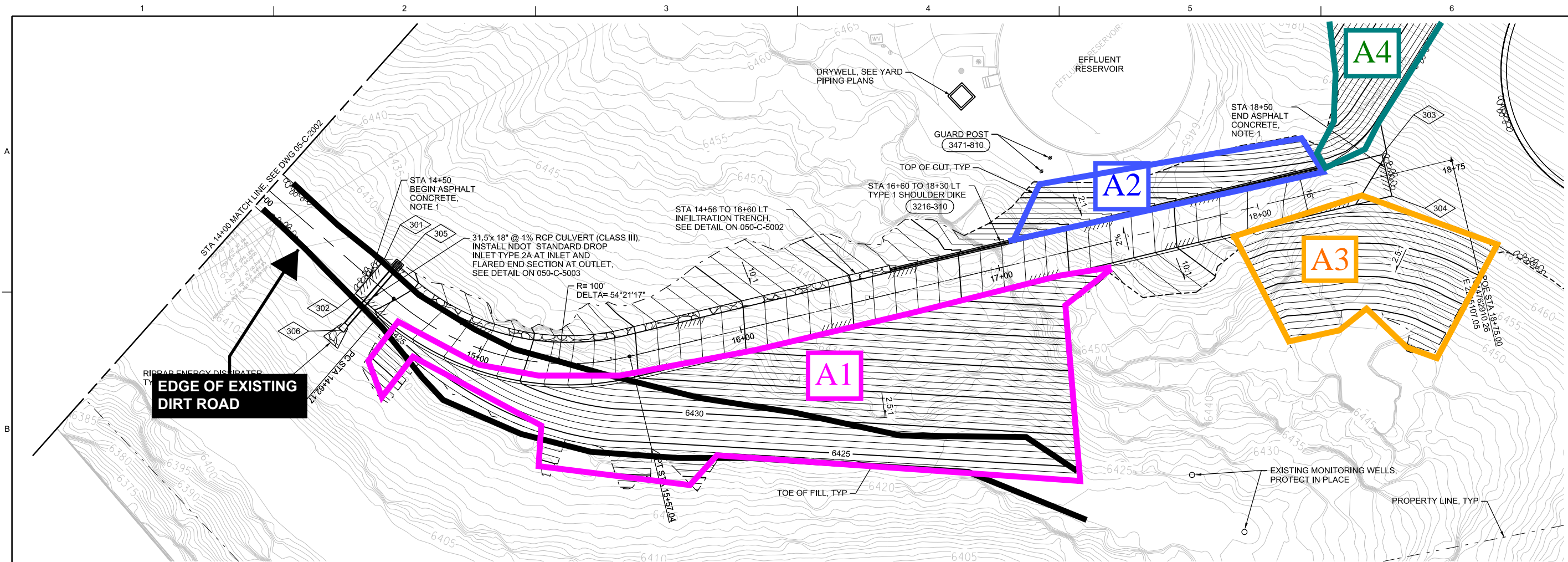
Hudson Klein
Principal Engineer

Enclosures



Exhibit A

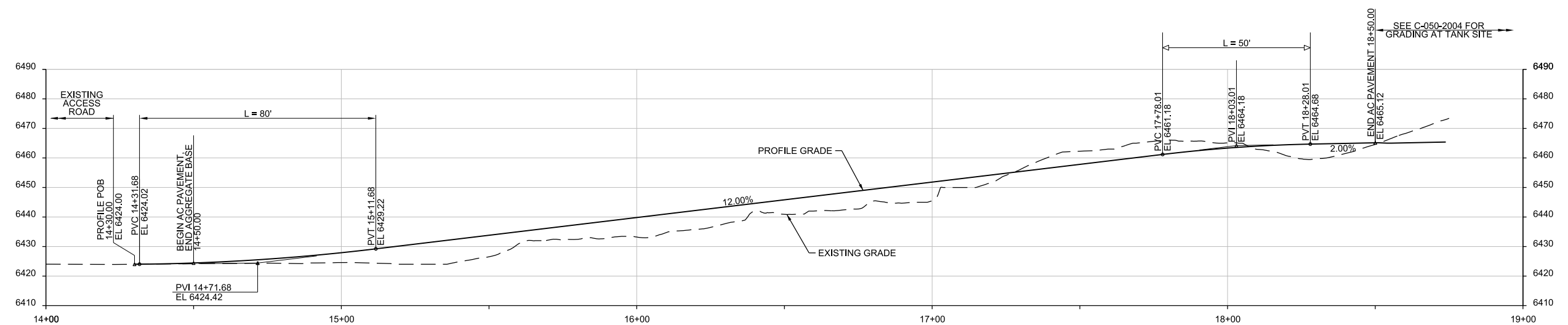
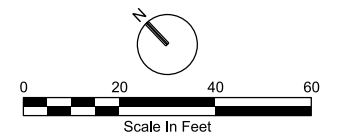
Grading Plan



PLAN
1"=20"

- NOTES:**
- SEE 050-C-3001 FOR ROADWAY TYPICAL SECTION.
 - ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE STABILIZED. SEE 050-C-2006 FOR SLOPE STABILIZATION PLAN.

POINT NO.	DESCRIPTION	ELEVATION	NORTHING	EASTING
301	EOP, MATCH EXISTING	6424.28	14763158.86	2244788.90
302	EOP, MATCH EXISTING	6424.60	14763157.29	2244772.98
303	EOP	6464.96	14762929.69	2245089.40
304	EOP	6465.28	14762915.83	2245081.40
305	CENTER OF INLET RIM/INV EL	6424.40/6420.32	14763154.15	2244791.88
306	CULVERT OUTLET	6420.00	14763150.96	2244759.58



PROFILE
1"=20"

REGISTERED PROFESSIONAL ENGINEER
TRAVIS J. HOWARD
CIVIL
LICENSE NO. 021924
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	REVISION	APVD	BY	APVD

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE TEAM

EFFLUENT EXPORT POND LINING PROJECT

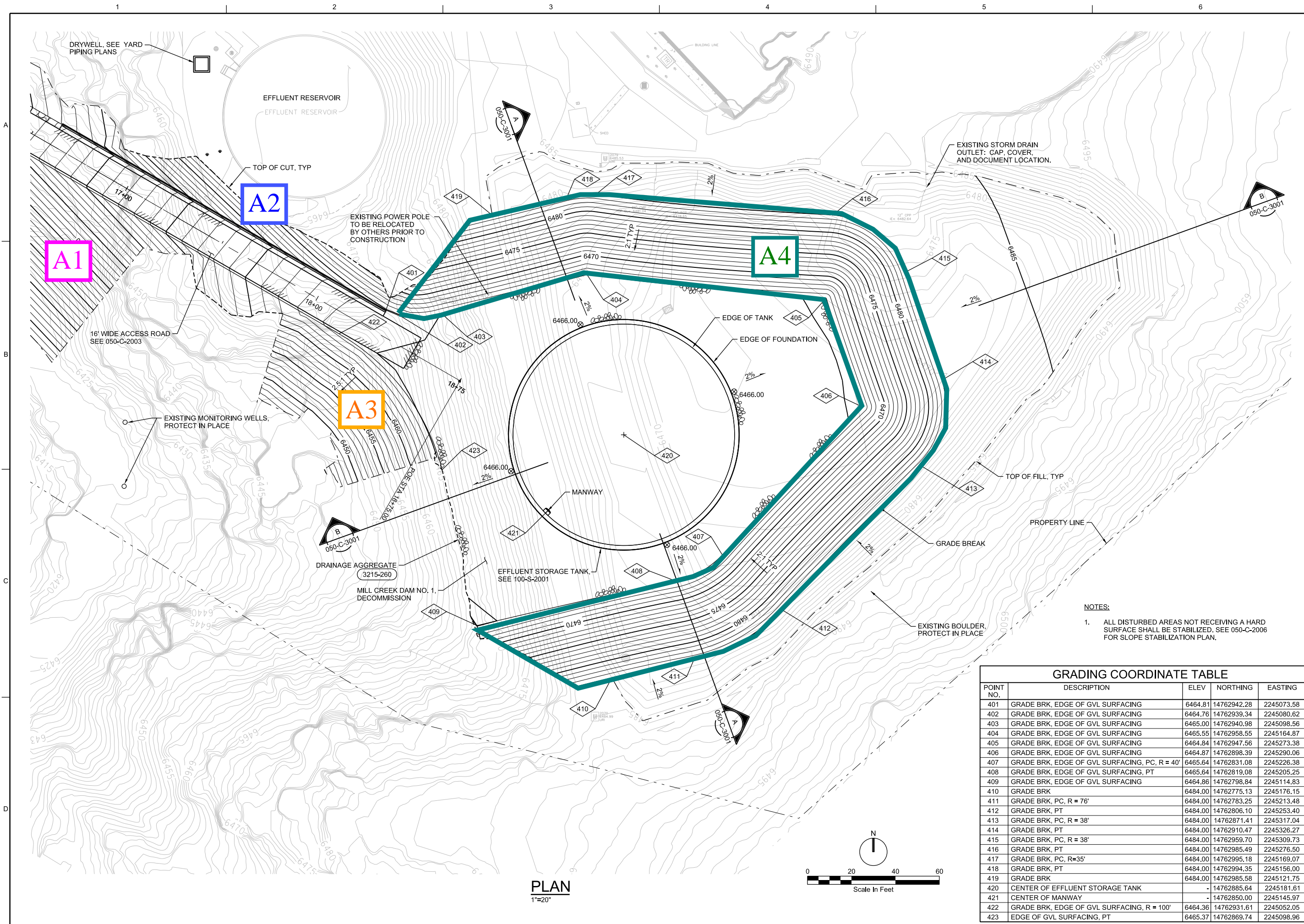
Jacobs
CIVIL

ACCESS ROAD
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-2003
SHEET	12 of 43

90% DESIGN - NOT FOR CONSTRUCTION



REGISTERED PROFESSIONAL ENGINEER
 TRAVIS J. HOWARD
 CIVIL
 LICENSE NO. 021924
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	REVISION	BY	APVD
		T HOWARD	K BISHOP		B CHELONIS	A KELLOGG

INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT
 ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

Jacobs
 CIVIL
 EFFLUENT STORAGE TANK
 CONSTRUCTION GRADING PLAN

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-2004
SHEET	13 of 43

NOTES:
 1. ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE STABILIZED. SEE 050-C-2006 FOR SLOPE STABILIZATION PLAN.

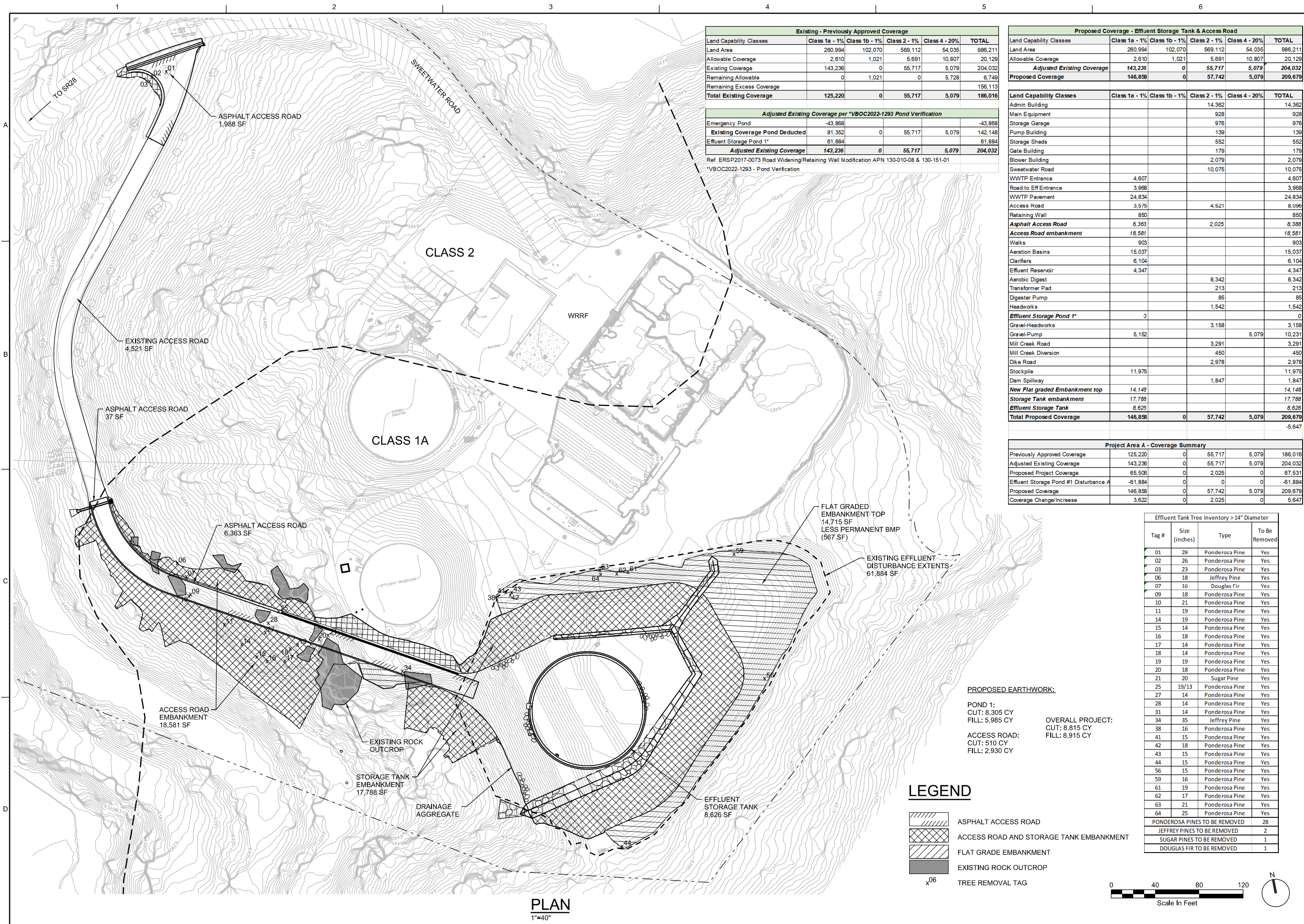
GRADING COORDINATE TABLE				
POINT NO.	DESCRIPTION	ELEV	NORTHING	EASTING
401	GRADE BRK, EDGE OF GVL SURFACING	6464.81	14762942.28	2245073.58
402	GRADE BRK, EDGE OF GVL SURFACING	6464.76	14762939.34	2245080.62
403	GRADE BRK, EDGE OF GVL SURFACING	6465.00	14762940.98	2245098.56
404	GRADE BRK, EDGE OF GVL SURFACING	6465.55	14762958.55	2245164.87
405	GRADE BRK, EDGE OF GVL SURFACING	6464.84	14762947.56	2245273.38
406	GRADE BRK, EDGE OF GVL SURFACING	6464.87	14762898.39	2245290.06
407	GRADE BRK, EDGE OF GVL SURFACING, PC, R = 40'	6465.64	14762831.08	2245226.38
408	GRADE BRK, EDGE OF GVL SURFACING, PT	6465.64	14762819.08	2245205.25
409	GRADE BRK, EDGE OF GVL SURFACING	6464.86	14762798.84	2245114.83
410	GRADE BRK	6484.00	14762775.13	2245176.15
411	GRADE BRK, PC, R = 76'	6484.00	14762783.25	2245213.48
412	GRADE BRK, PT	6484.00	14762806.10	2245253.40
413	GRADE BRK, PC, R = 38'	6484.00	14762871.41	2245317.04
414	GRADE BRK, PT	6484.00	14762910.47	2245326.27
415	GRADE BRK, PC, R = 38'	6484.00	14762959.70	2245309.73
416	GRADE BRK, PT	6484.00	14762985.49	2245276.50
417	GRADE BRK, PC, R=35'	6484.00	14762995.18	2245169.07
418	GRADE BRK, PT	6484.00	14762994.35	2245156.00
419	GRADE BRK	6484.00	14762985.58	2245121.75
420	CENTER OF EFFLUENT STORAGE TANK	-	14762885.64	2245181.61
421	CENTER OF MANWAY	-	14762850.00	2245145.97
422	GRADE BRK, EDGE OF GVL SURFACING, R = 100'	6464.36	14762931.61	2245052.05
423	EDGE OF GVL SURFACING, PT	6465.37	14762869.74	2245098.96

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Exhibit B

Tree Removal & Coverage Plan



Existing - Previously Approved Coverage					
Land Capability Classes	Class 1a - 1%	Class 1b - 1%	Class 2 - 1%	Class 4 - 20%	TOTAL
Land Area	260,994	102,070	569,112	54,035	986,211
Allowable Coverage	2,610	1,021	5,691	10,807	20,129
Existing Coverage	143,236	0	55,717	5,079	204,032
Remaining Allowable	0	1,021	0	5,728	6,749
Remaining Excess Coverage					156,113
Total Existing Coverage	125,220	0	55,717	5,079	186,016

Adjusted Existing Coverage per VBCC2022-1293 Pond Verification					
Emergency Pond	-43,868				-43,868
Existing Coverage Pond Deducted	81,352	0	55,717	5,079	142,148
Effluent Storage Pond 1*	61,884				61,884
Adjusted Existing Coverage	143,236	0	55,717	5,079	204,032

Ref. ERS2017-0073 Road Widening/Retaining Wall Modification APN 130-010-08 & 130-151-01
 *VBCC2022-1293 - Pond Verification

Proposed Coverage - Effluent Storage Tank & Access Road					
Land Capability Classes	Class 1a - 1%	Class 1b - 1%	Class 2 - 1%	Class 4 - 20%	TOTAL
Land Area	260,994	102,070	569,112	54,035	986,211
Allowable Coverage	2,610	1,021	5,691	10,807	20,129
Adjusted Existing Coverage	143,236	0	55,717	5,079	204,032
Proposed Coverage	146,858	0	57,742	5,079	209,679

Land Capability Classes	Class 1a - 1%	Class 1b - 1%	Class 2 - 1%	Class 4 - 20%	TOTAL
Admin Building			14,362		14,362
Main Equipment			928		928
Storage Garage			976		976
Pump Building			139		139
Storage Sheds			552		552
Gate Building			179		179
Blower Building			2,079		2,079
Sweetwater Road			10,075		10,075
WWTP Entrance	4,607				4,607
Road to Eff Entrance	3,968				3,968
WWTP Pavement	24,834				24,834
Access Road	3,575		4,521		8,096
Retaining Wall	850				850
Asphalt Access Road	6,363		2,025		8,388
Access Road embankment	18,581				18,581
Walks	903				903
Aeration Basins	15,037				15,037
Clarifiers	6,104				6,104
Effluent Reservoir	4,347				4,347
Aerobic Digest			8,342		8,342
Transformer Pad			213		213
Digester Pump			85		85
Headworks			1,542		1,542
Effluent Storage Pond 1*	0				0
Gravel-Headworks			3,158		3,158
Gravel-Pump	5,152			5,079	10,231
Mill Creek Road			3,291		3,291
Mill Creek Diversion			450		450
Dike Road			2,978		2,978
Stockpile	11,975				11,975
Dam Spillway			1,847		1,847
New Flat graded Embankment top	14,148				14,148
Storage Tank embankment	17,788				17,788
Effluent Storage Tank	8,625				8,625
Total Proposed Coverage	146,858	0	57,742	5,079	209,679
					-5,647

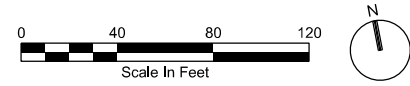
Project Area A - Coverage Summary					
Previously Approved Coverage	125,220	0	55,717	5,079	186,016
Adjusted Existing Coverage	143,236	0	55,717	5,079	204,032
Proposed Project Coverage	65,508	0	2,025	0	67,531
Effluent Storage Pond #1 Disturbance A	-61,884	0	0	0	-61,884
Proposed Coverage	146,858	0	57,742	5,079	209,679
Coverage Change/Increase	3,622	0	2,025	0	5,647

Effluent Tank Tree Inventory > 14" Diameter				
Tag #	Size (Inches)	Type	To Be Removed	
01	29	Ponderosa Pine	Yes	
02	26	Ponderosa Pine	Yes	
03	23	Ponderosa Pine	Yes	
06	18	Jeffrey Pine	Yes	
07	16	Douglas Fir	Yes	
09	18	Ponderosa Pine	Yes	
10	21	Ponderosa Pine	Yes	
11	19	Ponderosa Pine	Yes	
14	19	Ponderosa Pine	Yes	
15	14	Ponderosa Pine	Yes	
16	18	Ponderosa Pine	Yes	
17	14	Ponderosa Pine	Yes	
18	14	Ponderosa Pine	Yes	
19	19	Ponderosa Pine	Yes	
20	18	Ponderosa Pine	Yes	
21	20	Sugar Pine	Yes	
25	19/13	Ponderosa Pine	Yes	
27	14	Ponderosa Pine	Yes	
28	14	Ponderosa Pine	Yes	
31	14	Ponderosa Pine	Yes	
34	35	Jeffrey Pine	Yes	
38	16	Ponderosa Pine	Yes	
41	15	Ponderosa Pine	Yes	
42	18	Ponderosa Pine	Yes	
43	15	Ponderosa Pine	Yes	
44	15	Ponderosa Pine	Yes	
59	16	Ponderosa Pine	Yes	
61	19	Ponderosa Pine	Yes	
62	17	Ponderosa Pine	Yes	
63	21	Ponderosa Pine	Yes	
64	25	Ponderosa Pine	Yes	
PONDEROSA PINES TO BE REMOVED				28
JEFFREY PINES TO BE REMOVED				2
SUGAR PINES TO BE REMOVED				1
DOUGLAS FIR TO BE REMOVED				1

PROPOSED EARTHWORK:
 POND 1:
 CUT: 8,305 CY
 FILL: 5,985 CY
 ACCESS ROAD:
 CUT: 510 CY
 FILL: 2,930 CY
 OVERALL PROJECT:
 CUT: 8,815 CY
 FILL: 8,915 CY

LEGEND

- ASPHALT ACCESS ROAD
- ACCESS ROAD AND STORAGE TANK EMBANKMENT
- FLAT GRADE EMBANKMENT
- EXISTING ROCK OUTCROP
- TREE REMOVAL TAG



PLAN
1"=40"



Jacobs
 EXHIBIT
 EFFLUENT STORAGE TANK AND ACCESS ROAD
 PROPOSED COVERAGE
 EFFLUENT EXPORT POND LINING PROJECT

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	
SHEET	of

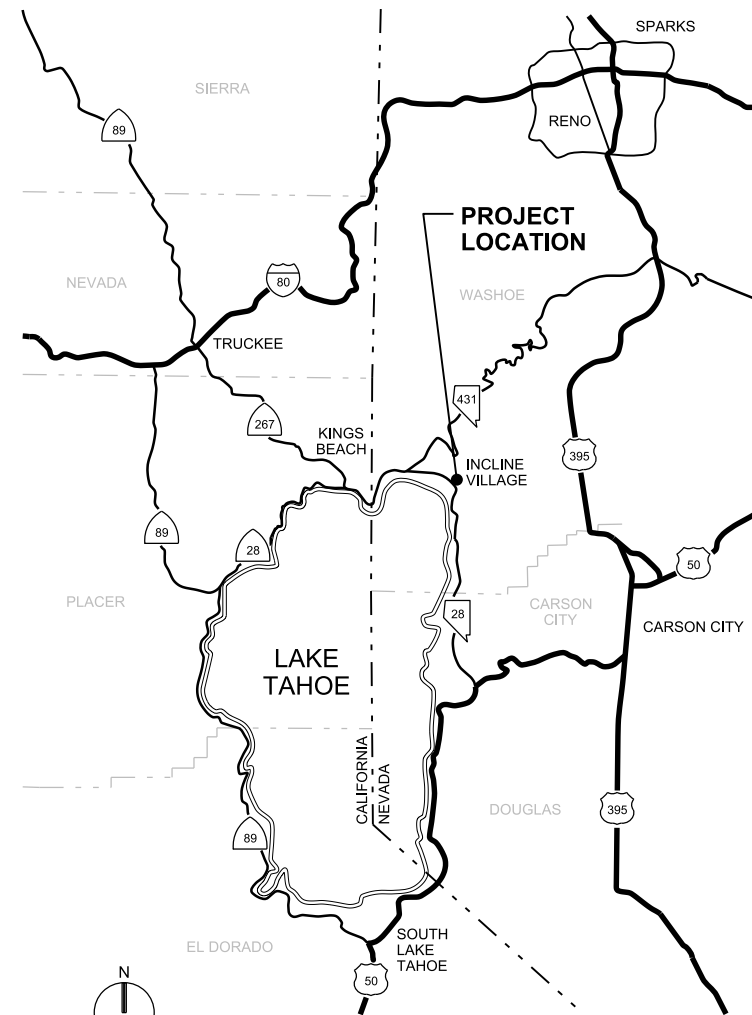
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INCLINE VILLAGE GENERAL IMPROVEMENT DISTRICT POND 1 PRESTRESSED CONCRETE EFFLUENT STORAGE TANK

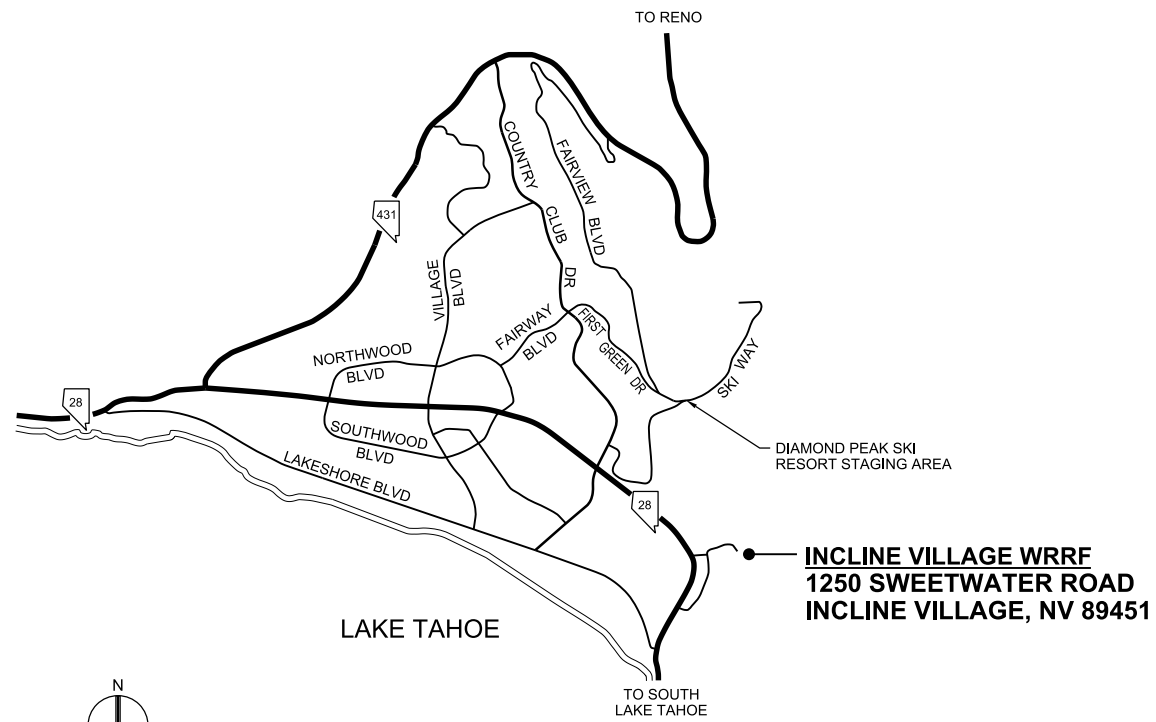
INCLINE VILLAGE WASHOE COUNTY NEVADA

IVGID PROJECT NO.: 2599SS2010
PWP: WA-2021-016

90% DESIGN DRAWINGS
FEBRUARY 2023



LOCATION MAP



VICINITY MAP

**INCLINE VILLAGE GENERAL IMPROVEMENT DISTRICT
BOARD OF TRUSTEES:**

- | | |
|-------------------------|----------------------|
| MATTHEW DENT | CHAIRMAN |
| SARA SCHMITZ | VICE CHAIRMAN |
| RAY TULLOCH | TREASURER |
| DAVE NOBLE | SECRETARY |
| MICHAELA TONKING | TRUSTEE |



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(775) 329-7300

DESIGN OFFICE:
2525 AIRPARK DRIVE
REDDING, CA 96001
(530) 243-5831

REGISTERED PROFESSIONAL ENGINEER
ASHLEY E. KELLOGG
CIVIL
LICENSE NO. 028969
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	J. MINOR	CHK	REVISION	BY	APVD
							A. KELLOGG
							B. CHELONIS



JACOBS
GENERAL
COVER, LOCATION, AND
VICINITY MAP

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	001-G-0001
SHEET	1 of 43

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A
B
C
D

SHT NO.	DWG NO	DRAWING TITLE
001 - GENERAL		
1	001-G-0001	COVER, LOCATION, AND VICINITY MAP
2	001-G-0002	DRAWING INDEX
3	001-G-0003	ABBREVIATIONS AND SYMBOLS LEGEND
4	001-G-0004	CIVIL LEGEND AND NOTES
5	001-G-0005	STRUCTURAL NOTES
6	001-G-0006	MECHANICAL LEGEND, NOTES AND PIPE SCHEDULE
7	001-G-0007	INSTRUMENTATION AND CONTROL LEGEND
8	001-G-0008	ELECTRICAL LEGEND
030 - INSTRUMENTATION AND CONTROL		
9	030-N-0001	EFFLUENT STORAGE P&ID
050 - CIVIL		
10	050-C-2001	OVERALL SITE PLAN AND SURVEY CONTROL
11	050-C-2002	ACCESS ROAD PLAN AND PROFILE
12	050-C-2003	ACCESS ROAD PLAN AND PROFILE
13	050-C-2004	EFFLUENT STORAGE TANK CONSTRUCTION GRADING PLAN
14	050-C-2005	EFFLUENT STORAGE TANK FINAL GRADING PLAN
15	050-C-2006	SLOPE STABILIZATION PLAN
16	050-C-3001	EFFLUENT STORAGE TANK GRADING SECTION & DETAILS
17	050-C-5001	SLOPE STABILIZATION DETAILS
18	050-C-5002	DRAINAGE DETAILS
19	050-C-5003	DRAINAGE DETAILS
060 - TEMPORARY EROSION CONTROL		
20	060-C-2001	TEMPORARY EROSION CONTROL PLAN
21	060-C-2002	TEMPORARY EROSION CONTROL DETAILS
080 - MECHANICAL / YARD PIPING		
22	080-SM-2001	EXISTING EFFLUENT RESERVOIR VAULT DEMOLITION PLAN AND SECTION
23	080-SM-2002	EXISTING EFFLUENT RESERVOIR VAULT PLAN AND SECTIONS
24	080-YP-2001	YARD PIPING PLAN
25	080-YP-2002	YARD PIPING PROFILE 16" EFFLUENT
26	080-YP-2003	YARD PIPING PROFILES 8" EFFLUENT
100 - EFFLUENT STORAGE TANK		
27	100-SM-2001	EFFLUENT STORAGE TANK FOUNDATION PLAN
28	100-SM-2002	EFFLUENT STORAGE TANK ROOF PLAN
29	100-SM-3001	EFFLUENT STORAGE TANK SECTION
30	100-SM-3002	EFFLUENT STORAGE TANK SECTIONS

SHT NO.	DWG NO	DRAWING TITLE
800 - ELECTRICAL		
31	800-E-0001	ONE LINE DIAGRAM
32	800-E-1001	OVERALL SITE PLAN
33	800-E-3001	MOTOR CONTROL DIAGRAM
900 - STANDARD DETAILS		
34	900-SD-0001	CIVIL - STANDARD DETAILS
35	900-SD-0002	CIVIL - STANDARD DETAILS
36	900-SD-0003	STRUCTURAL - STANDARD DETAILS
37	900-SD-0004	STRUCTURAL - STANDARD DETAILS
38	900-SD-0005	STRUCTURAL - STANDARD DETAILS
39	900-SD-0006	PROCESS MECHANICAL - STANDARD DETAILS
40	900-SD-0007	INSTRUMENTATION AND CONTROL - STANDARD DETAILS
41	900-SD-0008	INSTRUMENTATION AND CONTROL - STANDARD DETAILS
42	900-SD-0009	ELECTRICAL - STANDARD DETAILS
43	900-SD-0010	ELECTRICAL - STANDARD DETAILS

REGISTERED PROFESSIONAL ENGINEER
 ASHLEY E. KELLOGG
 CIVIL
 LICENSE NO. 028969
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

NO.	DATE	DR	J. MINOR	CHK	REVISION	BY	APVD



Jacobs
 GENERAL
 DRAWING INDEX

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	001-G-0002
SHEET	2 of 43

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GENERAL SITE NOTES:

- 1. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADJUST WORK PLAN ACCORDINGLY PRIOR TO BEGINNING CONSTRUCTION.

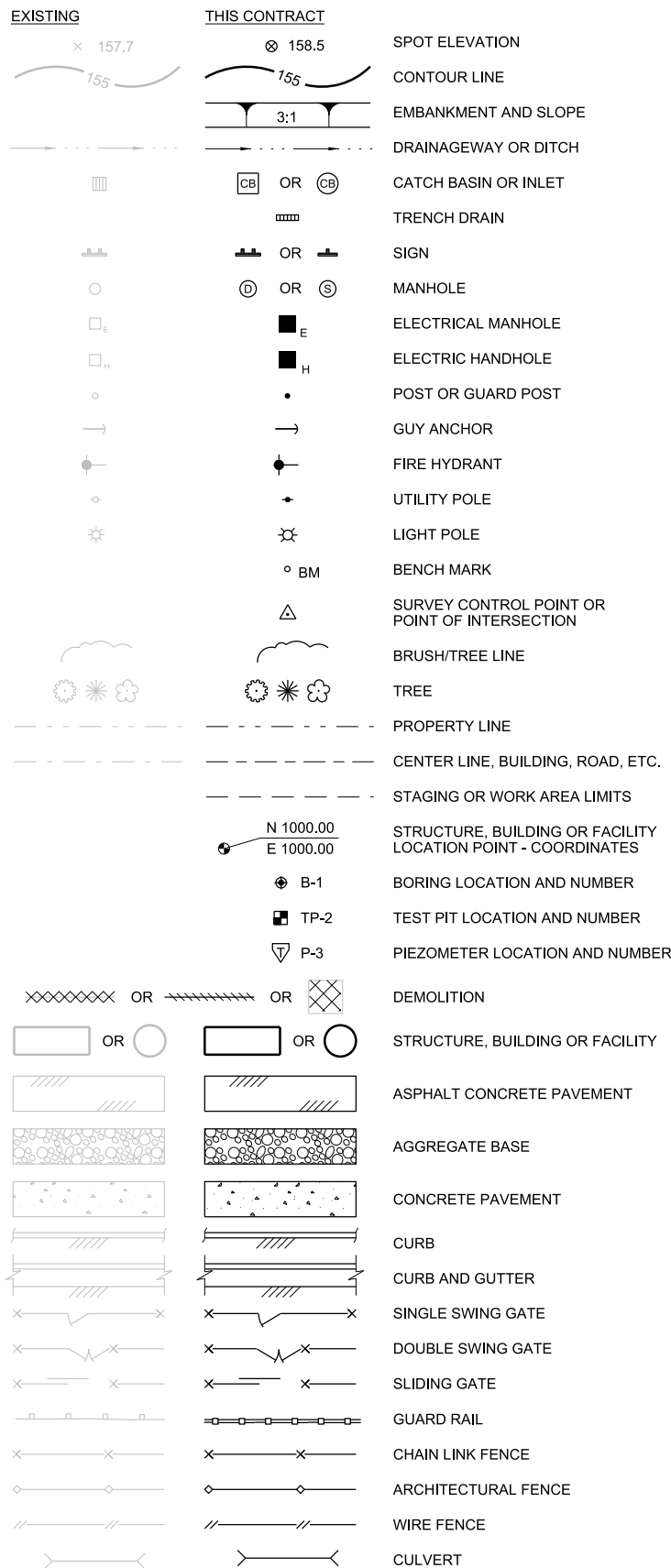
GENERAL YARD PIPING AND UTILITIES NOTES:

- 1. EXISTING UNDERGROUND UTILITIES OBTAINED FROM AS-BUILTS AND FROM FIELD SURVEY. CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION PRIOR TO EXCAVATION. PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION.

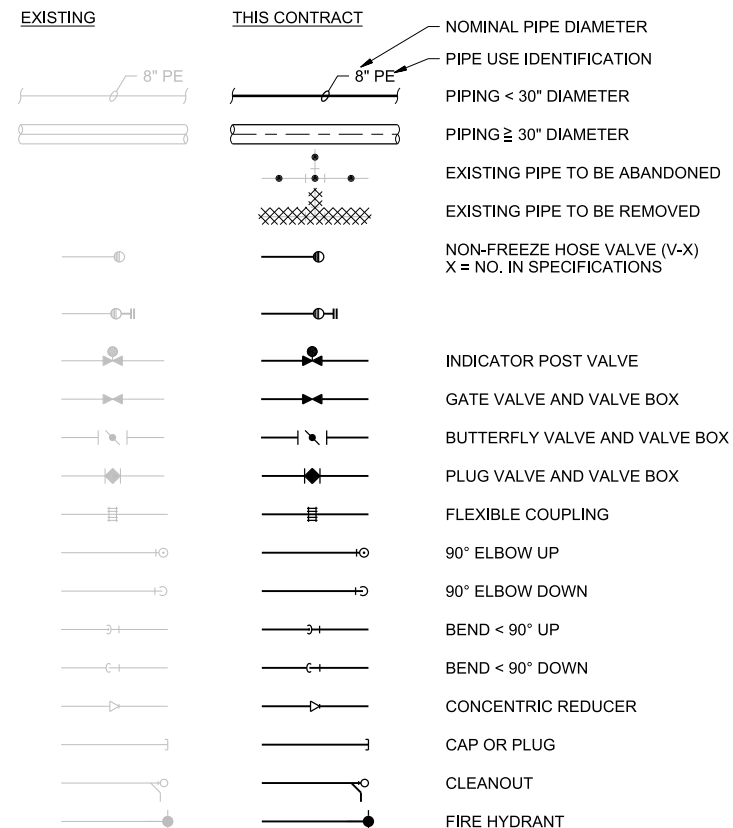
GENERAL NOTE:

- 1. THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

CIVIL LEGEND



YARD PIPING LEGEND



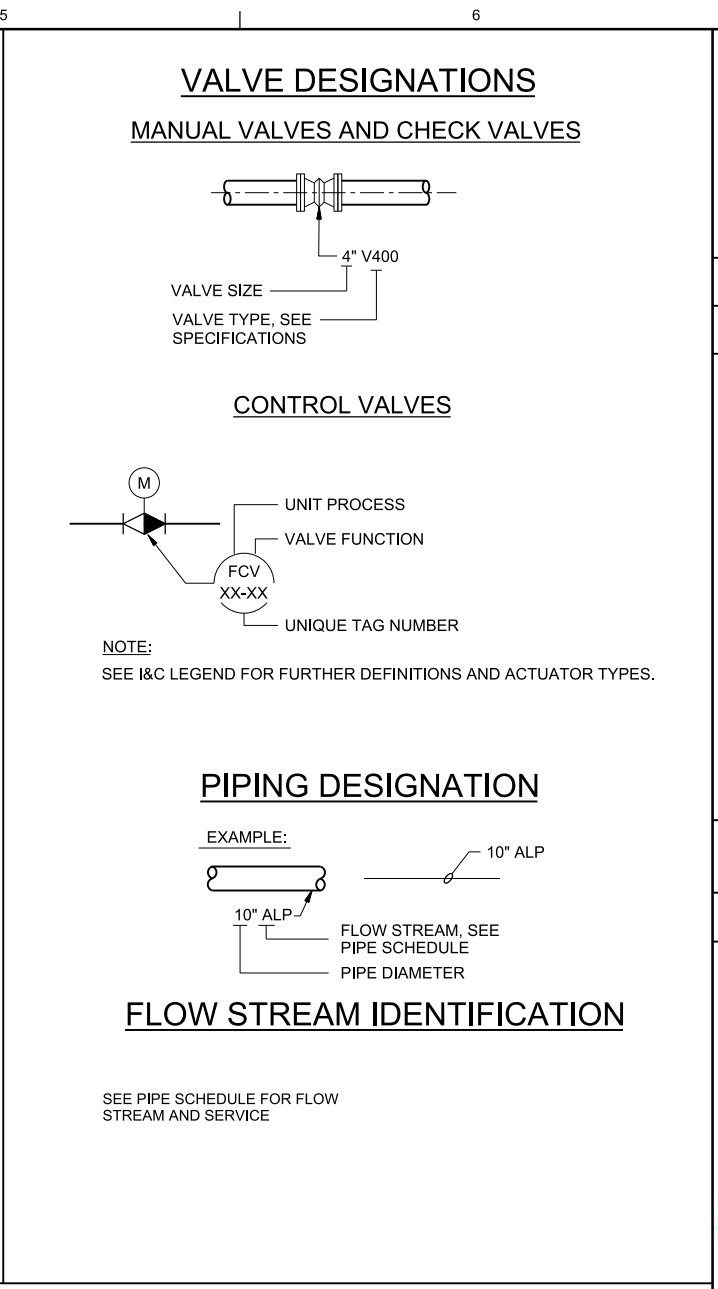
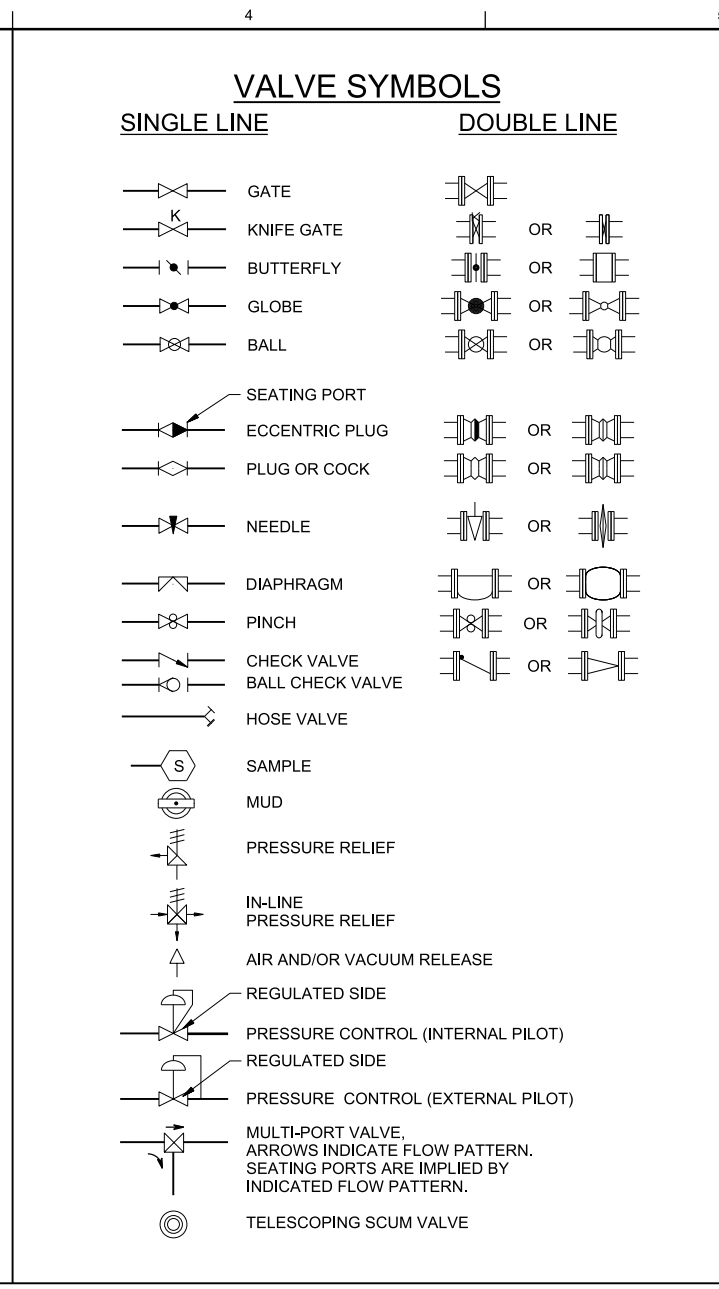
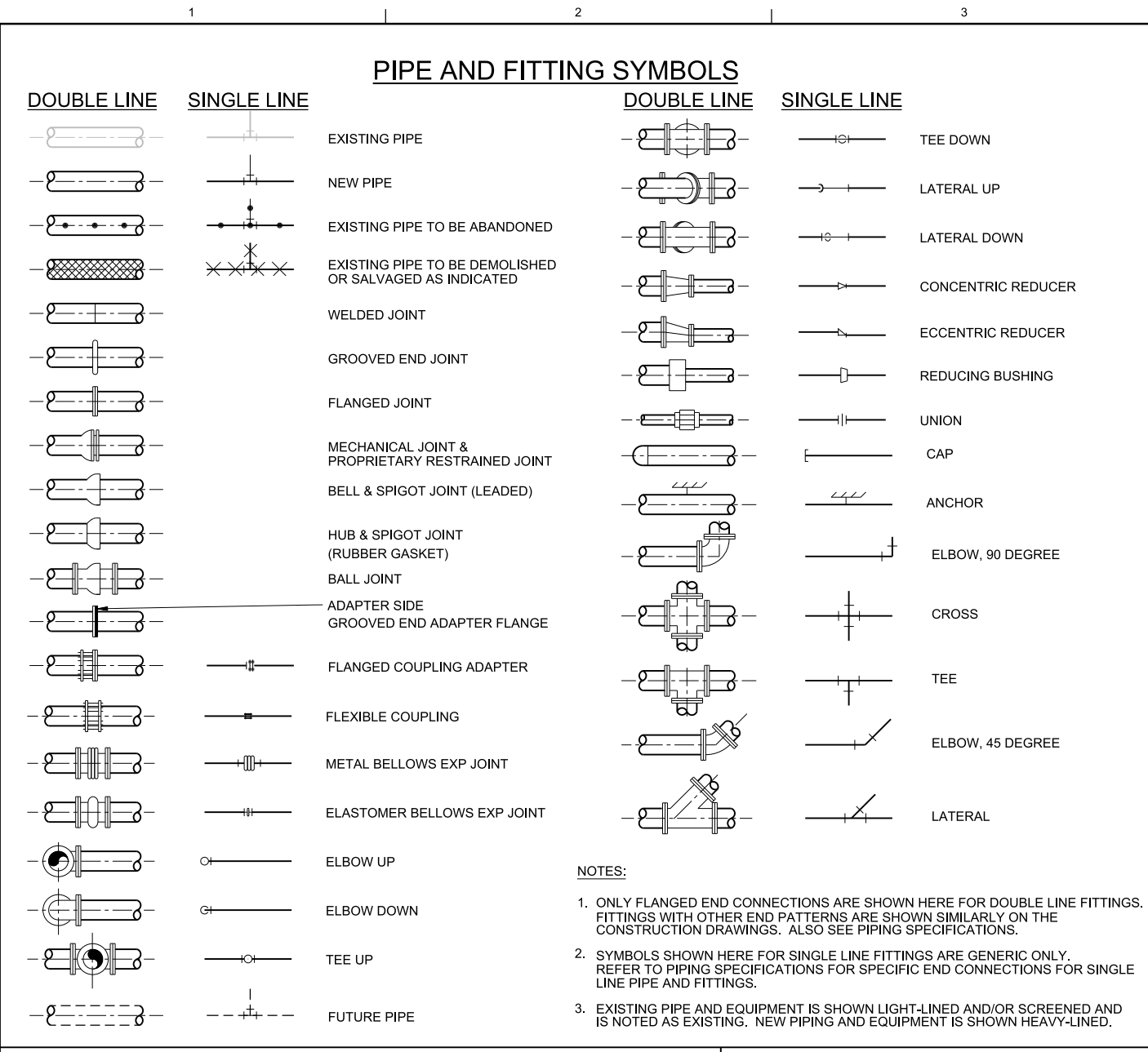
REGISTERED PROFESSIONAL ENGINEER TRAVIS J. HOWARD CIVIL LICENSE NO. 021924 STATE OF NEVADA NOT FOR CONSTRUCTION

Table with columns for DSGN, NO., DATE, DR, THOMASD, K BISHOP, CHK, REVISION, APVD, A KELLOGG. Includes names like T HOWARD, K BISHOP, B CHELONIS, A KELLOGG.

Logo for Incline Village General Improvement District and Jacobs logo. Text: EFFLUENT EXPORT POND LINING PROJECT

Jacobs logo and text: GENERAL CIVIL LEGEND AND NOTES

Table with metadata: VERIFY SCALE, DATE FEBRUARY 2023, PROJ W8Y12900, DWG 001-G-0004, SHEET 4 of 43



MECHANICAL AND NOTES

GENERAL PIPING NOTES

- LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
- SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
- CONTRACTOR SHALL DESIGN PIPE SUPPORTS AS SPECIFIED.
- ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
- ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
- SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
- NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
- WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.
- ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED.

PIPE SCHEDULE

FLOW STREAM	SERVICE	SIZE (INCH) (NOTE 1)	SPEC SECTION	MATERIAL (NOTE 2)	INSTALLATION	JOINT TYPE (NOTE 3)	TEST PRESSURE/TYPE (PSIG)	LINING	COATINGS (NOTE 4)	REMARKS
EFF	EFFLUENT	>=6	33 05 01.02	CLDI	EXPOSED	FL	SEE SPEC	CEMENT	SYSTEM NO. 5	GROOVED END JOINTS WHERE SHOWN.
					SUBMERGED	FL			SYSTEM NO. 3	
					BURIED	FL, MJ, PRJ			POLY	
OF	OVERFLOW	>=10	33 05 01.02	CLDI	EXPOSED	FL	SEE SPEC	CEMENT	SYSTEM NO. 5	
					SUBMERGED	FL		CEMENT	SYSTEM NO. 3	

NOTES:

- SYMBOLS:
 - < LESS THAN
 - <= LESS THAN OR EQUAL TO
 - > GREATER THAN
 - >= GREATER THAN OR EQUAL TO
- PIPE MATERIALS: ANY DEVIATIONS FROM THE DESIGNATED MATERIALS IN THIS SCHEDULE SHALL BE AS NOTED ON THE DRAWINGS. CLDI = CEMENT-LINED DUCTILE IRON
- JOINTS: FL = FLANGED, MJ = MECHANICAL JOINT, PRJ = PROPRIETARY JOINT
- COATINGS: SYSTEM NO.: IN ACCORDANCE WITH SPECIFICATION SECTION 09 90 00; POLY: POLYETHYLENE ENCASEMENT

REGISTERED PROFESSIONAL ENGINEER
JOHN SIMONDS
MECHANICAL
LICENSE NO. 027655
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	APVD	BY	APVD
		W. MISSLIN	J. MINOR	J. SIMONDS		A. KELLOGG
PROJECT: EFFLUENT EXPORT POND LINING PROJECT			REVISION			

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT - ONE TEAM

Jacobs

GENERAL
MECHANICAL LEGEND, NOTES
AND PIPE SCHEDULE

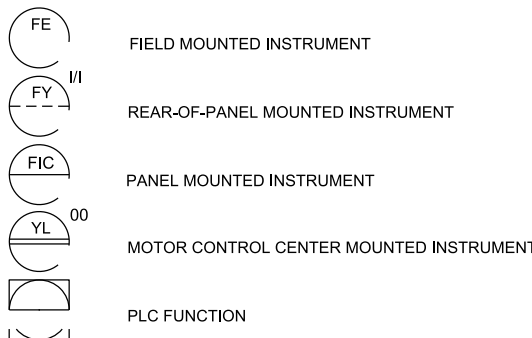
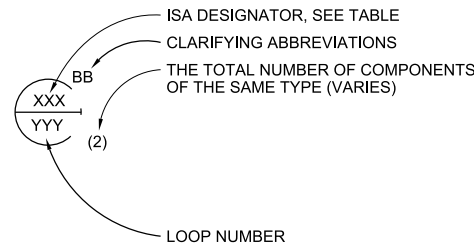
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SHEET: 6 of 43

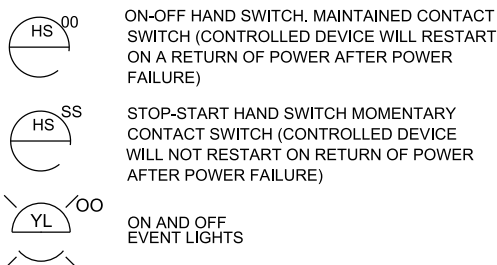
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INSTRUMENTATION IDENTIFICATION

EXAMPLE SYMBOLS



SPECIAL CASES



INSTRUMENT IDENTIFICATION LETTERS TABLE

LETTER	FIRST LETTER (S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+) / ANALOG		ALARM		
B	BURNER FLAME		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
C	CONDUCTIVITY			CONTROL	
D	DENSITY (S,G)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	GAUGE		GLASS	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION				MIDDLE
N	TORQUE		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
O	USERS CHOICE (+)		ORIFICE		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE	INTEGRATE		
R			RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (+)		MULTIFUNCTION	MULTIFUNCTION (+)	MULTIFUNCTION (+)
V	VIBRATION			VALVE OR DAMPER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED (+)		UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	EVENT			RELAY OR COMPUTE (+)	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

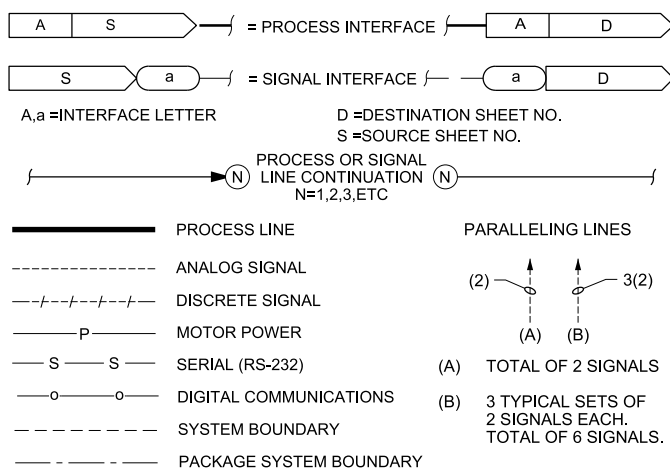
TABLE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARD.

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS.

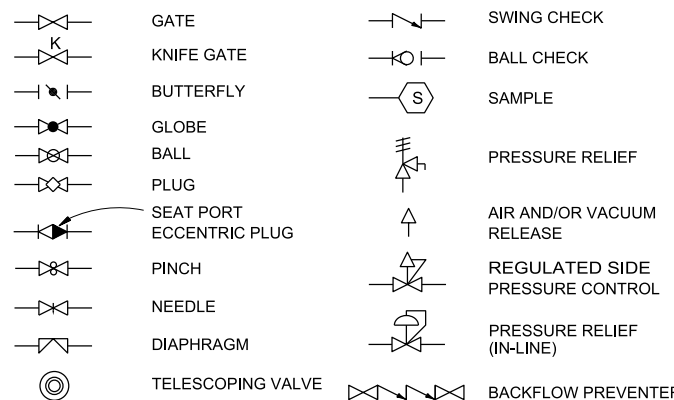
PLC INTERFACES

- ▲ ANALOG INPUT (4-20mA DC)
- ▼ ANALOG OUTPUT (4-20mA DC)
- △ DISCRETE INPUT (120VAC)
- ▽ DISCRETE OUTPUT (DRY CONTACT, 120VAC)
- ◇ ETHERNET CONNECTION

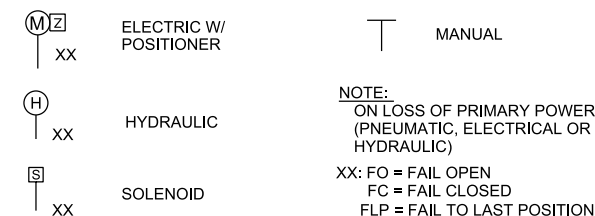
INTERFACE SYMBOLS & LINE LEGEND



VALVE SYMBOLS



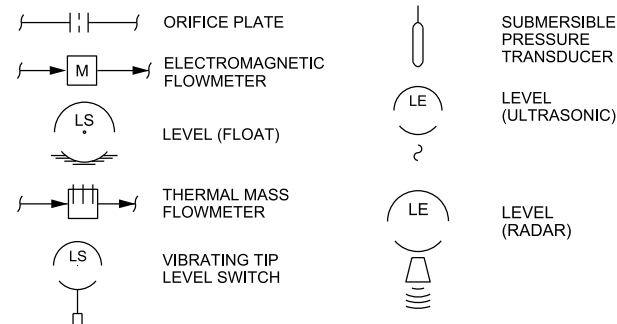
ACTUATOR SYMBOLS



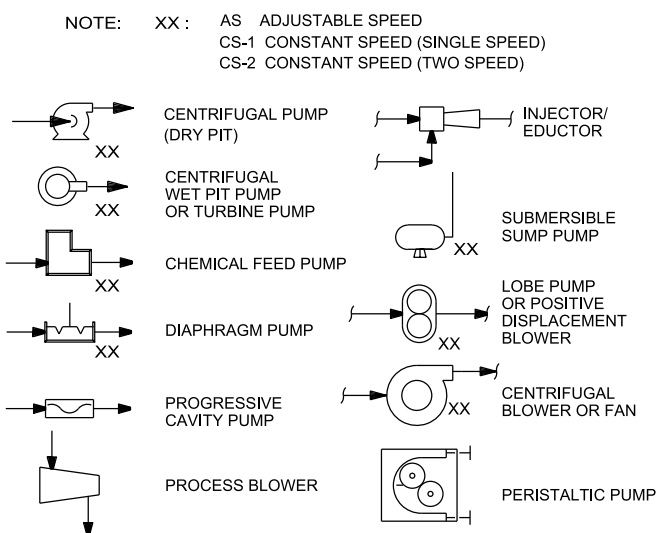
GATE SYMBOLS



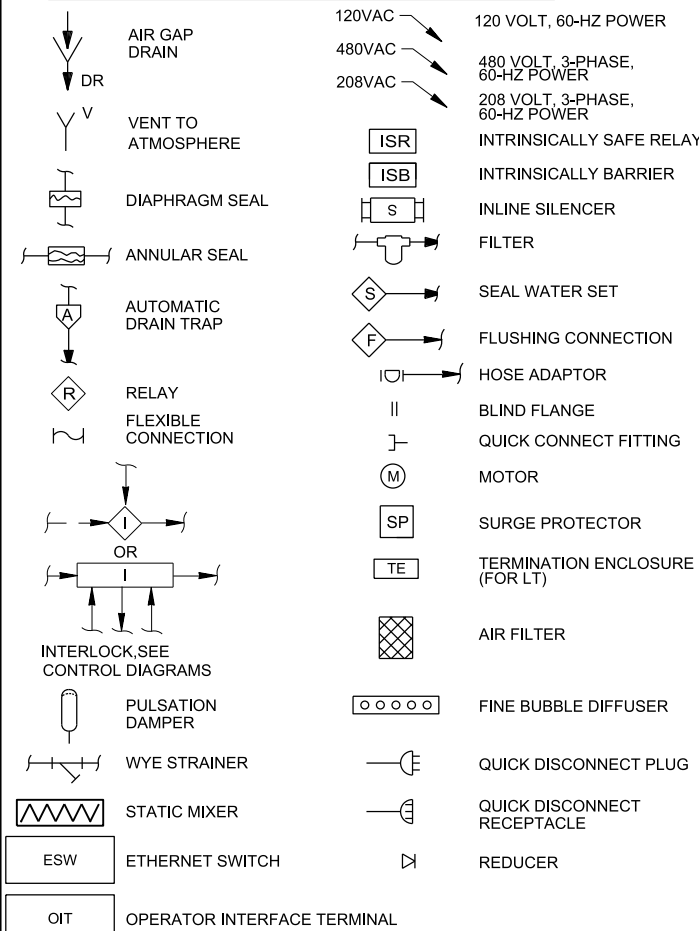
PRIMARY ELEMENT SYMBOLS



PUMP AND FAN SYMBOLS



MISCELLANEOUS SYMBOLS



ABBREVIATIONS

AUTO	AUTOMATIC	SP	SET POINT
CMD	COMMAND	SPD	SPEED
CP	CONTROL PANEL	SS	START - STOP OR SUSPENDED SOLIDS
CS	CONTROL STATION	TE	TERMINAL ENCLOSURE
DO	DISSOLVED OXYGEN	TEMP	TEMPERATURE
ESTOP	EMERGENCY STOP	TJB	TERMINAL JUNCTION BOX
ESW	ETHERNET SWITCH	TYP	TYPICAL
FDBK	FEEDBACK	UPS	UNINTERRUPTIBLE POWER SUPPLY
HMI	HUMAN MACHINE INTERFACE	VFD	VARIABLE FREQUENCY DRIVE
HOA	HAND-OFF-AUTO		
IO	INPUT/OUTPUT		
LCP	LOCAL CONTROL PANEL		
MCC	MOTOR CONTROL CENTER		
MCP	MASTER CONTROL PANEL		
MSC	MANUFACTURER SUPPLIED CABLE		
N.C.	NORMALLY CLOSED		
N.O.	NORMALLY OPEN		
OOR	ON-OFF-REMOTE		
OC	OPEN-CLOSE (D)		
OCR	OPEN-CLOSE-REMOTE		
OIT	OPERATOR INTERFACE TERMINAL		
OL	OVERLOAD		
OOA	ON-OFF-AUTO		
OSC	OPEN-STOP-CLOSE		
PLC	PROGRAMMABLE LOGIC CONTROLLER		
REM	REMOTE		

GENERAL NOTES

- THIS A STANDARD LEGEND, THEREFORE NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.
- COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (***) ARE TO BE PROVIDED UNDER DIVISION 26, ELECTRICAL.
- COMPONENTS AND PANELS SHOWN WITH A (◆) ARE SPECIFIED UNDER SECTION 40 91 00.

SELF CONTAINED VALVE & EQUIPMENT TAG NUMBERS

W: UNIT PROCESS OR FACILITY
D:
ACP = AIR COMPRESSOR PANEL OR PACKAGE
ARV = AIR RELEASE VALVE
BLR = BLOWER
CV = CHECK VALVE
HV = HAND OPERATED VALVE
FAN = FAN, SUPPLY OR EXHAUST
FV = FLOW VALVE
FCV = FLOW CONTROL VALVE
M = MECHANICAL EQUIPMENT
MXR = MIXER
MXS = MIXER, STATIC
PMP = PUMP
PSV = PRESSURE RELIEF VALVE
SOV = SOLENOID VALVE
TR = TRASH RACK
T = TANK

FLOW STREAM IDENTIFICATION

SEE PIPE SCHEDULE



Jacobs
GENERAL
INSTRUMENTATION AND CONTROL
LEGEND

VERIFY SCALE	DATE	FEBRUARY 2023
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	DWG	001-G-0007
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SYMBOL	DESCRIPTION
ONE-LINE DIAGRAM-1	
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE
	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO
	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO
	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO
	FUSE, CURRENT RATING AND QUANTITY INDICATED
	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO
	ELECTRONIC STARTER/SPEED CONTROL RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE
	CABLE OR BUS CONNECTION POINT
	KEY INTERLOCK
	SURGE ARRESTER (GAP TYPE)
	CAPACITOR - KVAR INDICATED, 3 PHASE
	AC MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED
	GENERATOR, KW/KVA RATING SHOWN
	ANALOG METER WITH SWITCH - SCALE RANGE SHOWN V = VOLTAGE KW = KILOWATTS A = AMPERAGE KVAR = KILOVARS PF = POWER FACTOR
	DIGITAL POWER METER (MULTIFUNCTION)
	UTILITY REVENUE METER
	GROUND
	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED
	SHIELDED ISOLATION TRANSFORMER
	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED
	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS. RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION
	TVSS

SYMBOL	DESCRIPTION
ONE-LINE DIAGRAM-2	
	DRAWOUT POWER CIRCUIT BREAKER, MEDIUM VOLTAGE
	NON DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND VACUUM CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT VACUUM CONTACTOR, MEDIUM VOLTAGE
	MEDIUM VOLTAGE CABLE STRESS CONE TYPE TERMINATION, OPEN TERMINATOR OR ELBOW
	SWITCH - LOAD BREAK, GROUP OPERATED, MEDIUM VOLTAGE
	SWITCH W/ARCING HORNS, MEDIUM VOLTAGE
	DISCONNECTING FUSE - SOLID MATERIAL, MEDIUM VOLTAGE
	SWITCH - HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	FUSE - EXPULSION, HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	GROUND SWITCH, GANG OPERATED
	TERMINAL BLOCK LUG
	DELTA CONNECTION
	WYE GROUNDED CONNECTION, SOLID GROUND
	WYE NEUTRAL GROUND RESISTOR OR IMPEDANCE CONNECTION
	RELAY OR DEVICE, FUNCTION NUMBER AS INDICATED
	CURRENT TRANSFORMER, ZERO SEQUENCE, RATIO AND QUANTITY INDICATED
	BUSHING CURRENT TRANSFORMER, MULTI-RATIO AND QUANTITY INDICATED
	MOTOR OPERATOR, BREAKER OR SWITCH
	ENERGY MONITORING UNIT
	MOTOR PROTECTION RELAY
NOTES: 1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS. 2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.	

SYMBOL	DESCRIPTION
CONTROL DIAGRAM-1	
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK
	3 POSITION SELECTOR SWITCH MAINTAINED CONTACT
	TOGGLE SWITCH, ON-OFF TYPE
	INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN S - STROBE B - BLUE R - RED C - CLEAR W - WHITE
	MOTOR STARTER CONTACTOR COIL
	CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
	TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
	SOLENOID VALVE, X INDICATES NUMERICAL ORDER IN CIRCUIT
	CONTACT - NORMALLY OPEN
	CONTACT - NORMALLY CLOSED
	REMOTE DEVICE
	TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSSES WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, CLOSSES WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSSES WHEN DE-ENERGIZED AND TIMED OUT
	TERMINAL BLOCK, REMOTE
	TERMINAL BLOCK, INTERNAL
	FUSED TERMINAL BLOCK
POWER SYSTEM PLAN-1	
	CONNECTION POINT TO EQUIPMENT SPECIFIED. RACEWAY, CONDUCTOR, TERMINATION AND CONNECTION IN THIS DIVISION.
	MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN.
	PANELBOARD - SURFACE MOUNTED
	PANELBOARD LETTER OR NUMBER FACILITY NUMBER LP - LOW VOLTAGE PANEL DP - DISTRIBUTION PANEL
	PANELBOARD - FLUSH MOUNTED
	TERMINAL JUNCTION BOX
	MOTOR, SQUIRREL CAGE INDUCTION
	GENERATOR, VOLTAGE AND SIZE AS INDICATED.
	HOME RUN - DESTINATION SHOWN
	EXPOSED CONDUIT AND CONDUCTORS*
	CONCEALED CONDUIT AND CONDUCTORS*

SYMBOL	DESCRIPTION
POWER SYSTEM PLAN-2	
NOTE: ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.	
	CROSSHATCHES WITH BAR INDICATE NO.10 CONDUCTOR. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE.
	CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND.
	CONDUIT DOWN
	CONDUIT UP
	CONDUIT, STUBBED AND CAPPED
	CONDUIT TERMINATION AT CABLE TRAY
	CONCRETE ENCASED DUCT BANK WHERE XXXX IS THE DUCT BANK NAME. SEE CIRCUIT AND RACEWAY CODING DEFINITION
	CONCEALED CONDUIT ROUTING AREA
	CONDUIT ROUTING AREA
	CABLE TRAY
	TRANSFORMER
	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE
	CONTROL STATION. SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.
	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE
	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE
	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED
LIGHTING SYSTEM PLAN	
	LUMINAIRE, SEE SCHEDULE
	LUMINAIRE, SEE SCHEDULE
	LUMINAIRE WITH INTERNAL BATTERY BACKUP, SEE SCHEDULE
	STRIP LUMINAIRE, SEE SCHEDULE
	LUMINAIRE AND POLE, SEE SCHEDULE
	WALL MOUNTED LUMINAIRE, SEE SCHEDULE
	FLOOD LIGHTS - AIM IN THE DIRECTION SHOWN
	STANDBY LIGHTING UNIT, SURFACE MOUNTED, SEE SCHEDULE
	EXIT LIGHTS - FILLED SECTION INDICATES LIGHTED FACE, ARROW INDICATES EGRESS DIRECTIONAL INDICATORS, XX = FIXTURE NUMBER, SEE SCHEDULE
	SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT
	WALL SWITCH: 2- DOUBLE POLE P- PILOT LIGHT 3- THREE WAY K- KEY OPERATED 4- FOUR WAY D- DIMMER WP- WEATHERPROOF CRE- CORROSION RESISTANT L- EXPLOSIONPROOF L- MOMENTARY 3-WAY M- MOTOR RATED MS- MANUAL STARTER WITH OVERLOADS

REGISTERED PROFESSIONAL ENGINEER
CRAIG M. CUSWORTH
ELECTRICAL
LICENSE NO. 022425
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	REVISION	BY	APVD
		J. JABSHIER	J. MINOR			A. KELLOGG

JACOBS
GENERAL
ELECTRICAL LEGEND

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	001-G-0008
SHEET	8 of 43

90% DESIGN - NOT FOR CONSTRUCTION

HMI

LEVEL LEVEL

LOW PRESSURE RUN REMOTE RUNNING FAILED LEAK

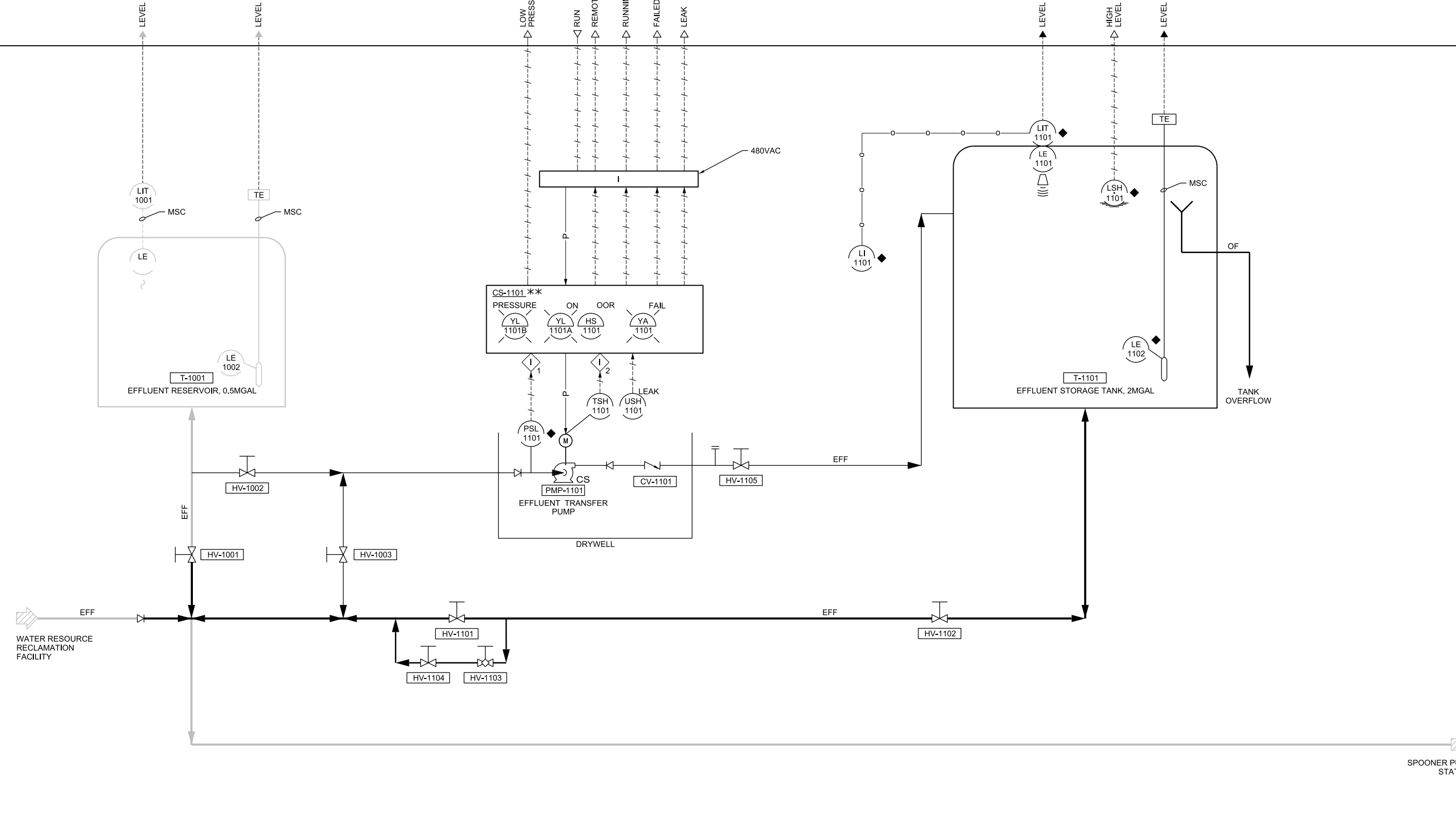
LEVEL HIGH LEVEL LEVEL

LCP-1000, RESERVOIR RTU

LEVEL LEVEL

LOW PRESSURE RUN REMOTE RUNNING FAILED LEAK

LEVEL HIGH LEVEL LEVEL



- INTERLOCK DESCRIPTION:**
1. STOP PUMP(S) ON LOW SUCTION PRESSURE CONDITION AFTER ADJUSTABLE TIME DELAY (0-30 SEC) AND ALARM TO SCADA.
 2. STOP PUMP ON HIGH MOTOR TEMPERATURE ALARM AFTER ADJUSTABLE TIME DELAY (0-30 SEC) AND LOCKOUT WITH MANUAL RESET.

REGISTERED PROFESSIONAL ENGINEER
 CRAIG M. CUSWORTH
 ELECTRICAL
 LICENSE NO. 022425
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

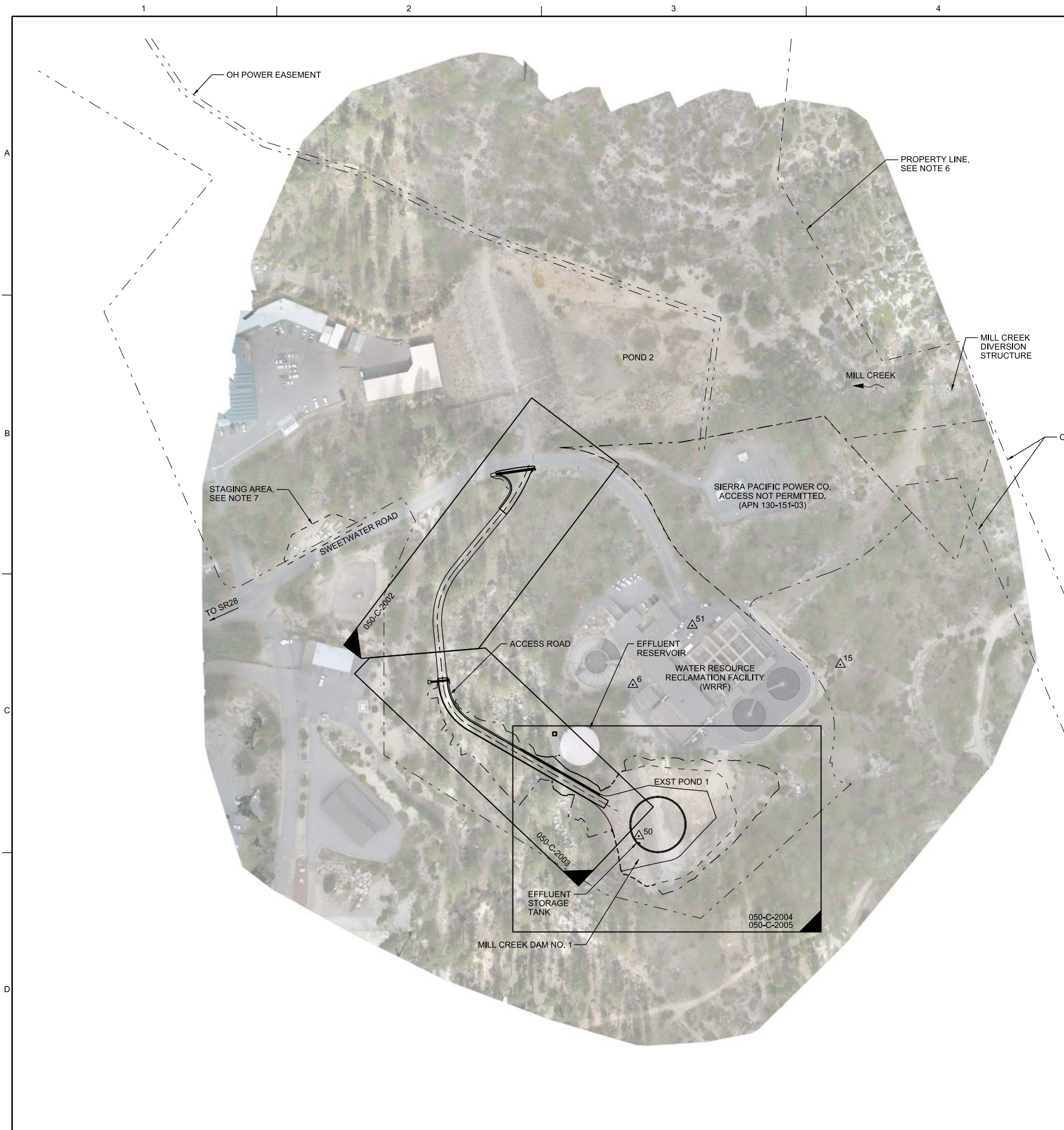
NO.	DATE	DR	CHK	REVISION	BY	APVD



Jacobs
 INSTRUMENTATION AND CONTROL
EFFLUENT STORAGE P&ID

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
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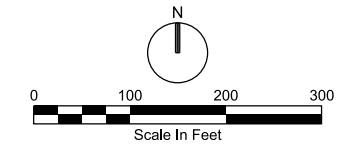
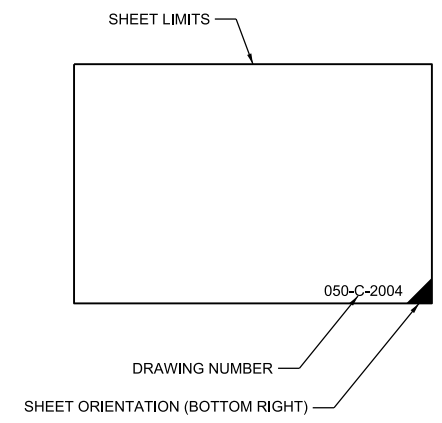


NOTES:

- MAPPING COMPILED BY JACOBS BASED ON DATA COLLECTED IN OCTOBER 2021 USING A COMBINATION OF TERRESTRIAL AND AERIAL SURVEY METHODS. CONTOUR INTERVAL EQUALS 1-FOOT.
- HORIZONTAL DATUM: NEVADA STATE PLANE COORDINATE SYSTEM ZONE WEST(NAD 83/94) MODIFIED GROUND.
- MEAN COMBINATION FACTOR (CF): 0.999802100. DISTANCES SHOWN HEREON ARE GROUND DISTANCES. TO CONVERT GROUND DISTANCE TO GRID DISTANCE, MULTIPLY BY THE CF.
- VERTICAL DATUM: NGVD29 BASED ON AERIAL PHOTO CONTROL POINT 15, AS SHOWN ON SHEET C-2 OF IMPROVEMENT PLANS TITLED "FACILITY IMPROVEMENTS-HEADWORKS, AERATION, DIGESTION, AND ADMINISTRATION BUILDING FOR INCLINE VILLAGE GENERAL IMPROVEMENT DISTRICT WASTEWATER TREATMENT PLANT (CORRECTED ACCORDING TO CONSTRUCTION RECORDS 8/93)"; DATED OCTOBER, 1991, AND PREPARED BY HDR ENGINEERING, INC. ELEVATIONS OF SAID CONTROL POINT PUBLISHED THEREON IS AS FOLLOWS: CONTROL POINT 15: 6516.90
- DATE OF AERIAL PHOTO: OCTOBER 6, 2021
- IVGID PROPERTY INFORMATION:
 OWNER: INCLINE VILLAGE GENERAL IMPROVEMENT DISTRICT
 ADDRESS: 1250 SWEETWATER ROAD
 APN: 130-010-08
 LAND USE: 400
 LAND ZONING: TA TC 67% / PR 33%
 PARCEL SIZE: 3,802,788 SQUARE FEET (87.3 ACRES)
- A PORTION OF THE DIAMOND PEAK SKI RESORT PARKING LOT IS AVAILABLE FOR STAGING. COORDINATE ACCESS AND LIMITS OF STAGING AT DIAMOND PEAK WITH IVGID. SEE VICINITY MAP ON COVER SHEET FOR APPROXIMATE LOCATION.

SURVEY CONTROL POINTS				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
15	14763183.09	2245521.04	6516.90	CP Spike
50	14762864.04	2245146.00	6484.75	5/8 RBR & Cap
6	14763145.68	2245134.93	6485.87	PK Nail
51	14763255.76	2245245.43	6485.23	Mag Nail in Cut Triangle AC

LEGEND

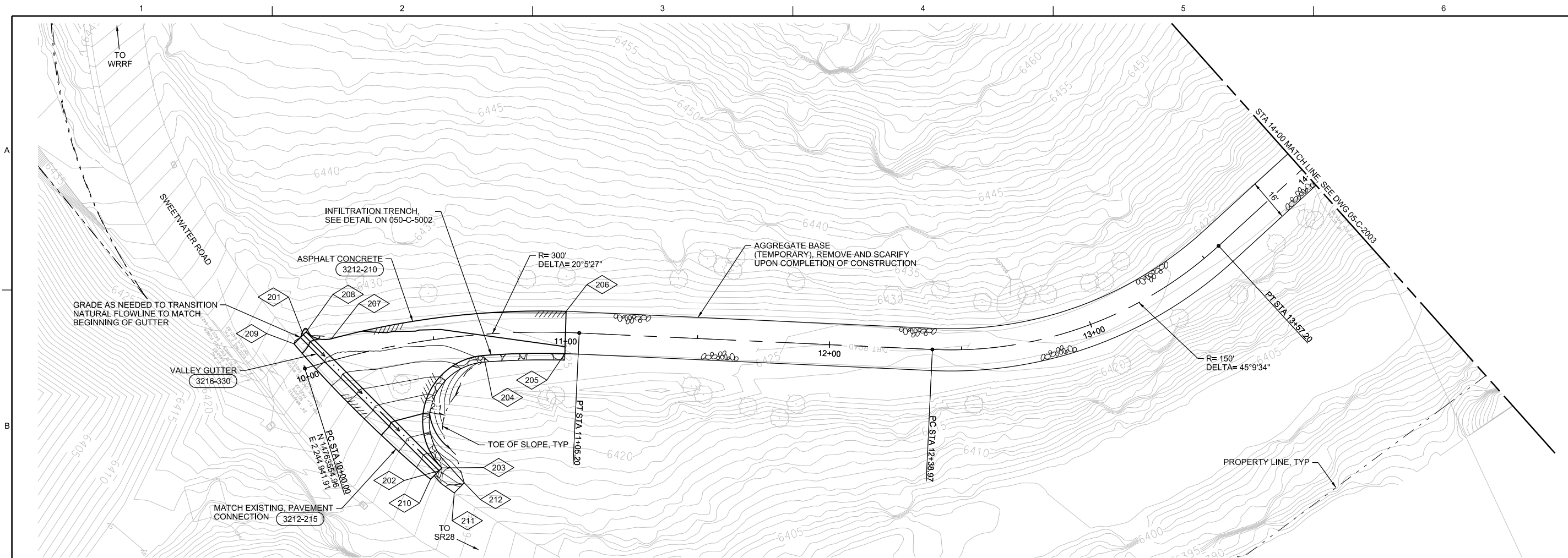


REGISTERED PROFESSIONAL ENGINEER
 TRAVIS J. HOWARD
 CIVIL
 LICENSE NO. 021924
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	REVISION	BY	APVD
		T HOWARD	K BISHOP			A KELLOGG
						B CHELONIS

JACOBS
 CIVIL
OVERALL SITE PLAN AND SURVEY CONTROL
 90% DESIGN - NOT FOR CONSTRUCTION

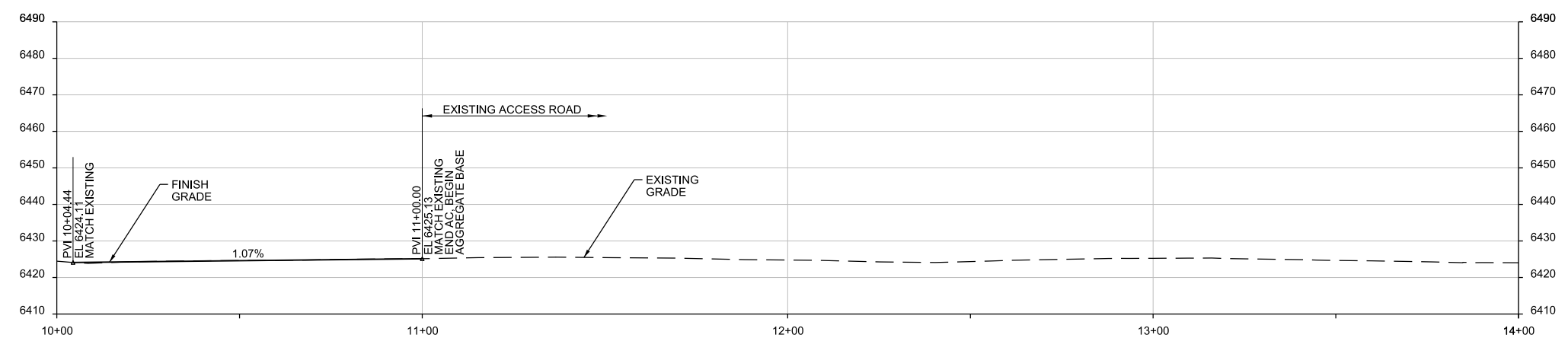
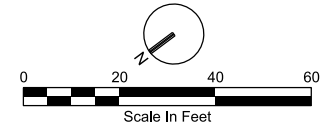
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-2001
SHEET	10 of 43



PLAN
1"=20"

NOTE:
1. ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE STABILIZED. SEE 050-C-2006 FOR SLOPE STABILIZATION PLAN.

GRADING COORDINATE TABLE				
POINT NO.	DESCRIPTION	ELEV	NORTHING	EASTING
201	BEGIN VALLEY GUTTER FL	6425.43	14763547.78	2244952.54
202	END VALLEY GUTTER FL	6417.03	14763537.55	2244880.53
203	EOP, PC, R = 25'	6417.10	14763536.06	2244880.69
204	EOP, PCC, R = 292'	6424.43	14763497.88	2244905.30
205	EOP, MATCH EXISTING	6424.92	14763472.86	2244887.45
206	EOP, MATCH EXISTING	6426.23	14763462.90	2244899.97
207	EOP, PCC, R = 308'	6424.55	14763540.12	2244944.87
208	EOP, PRC, R = 10'	6425.50	14763546.30	2244952.75
209	EOP, MATCH EXISTING	6425.60	14763552.68	2244951.85
210	EOP, MATCH EXISTING	6417.23	14763542.01	2244879.85
211	EDGE OF INFILTRATION DITCH	6416.07	14763538.00	2244870.32
212	EDGE OF INFILTRATION DITCH	6417.10	14763532.67	2244871.07



PROFILE
1"=20"

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CIVIL
LICENSE NO. 021924
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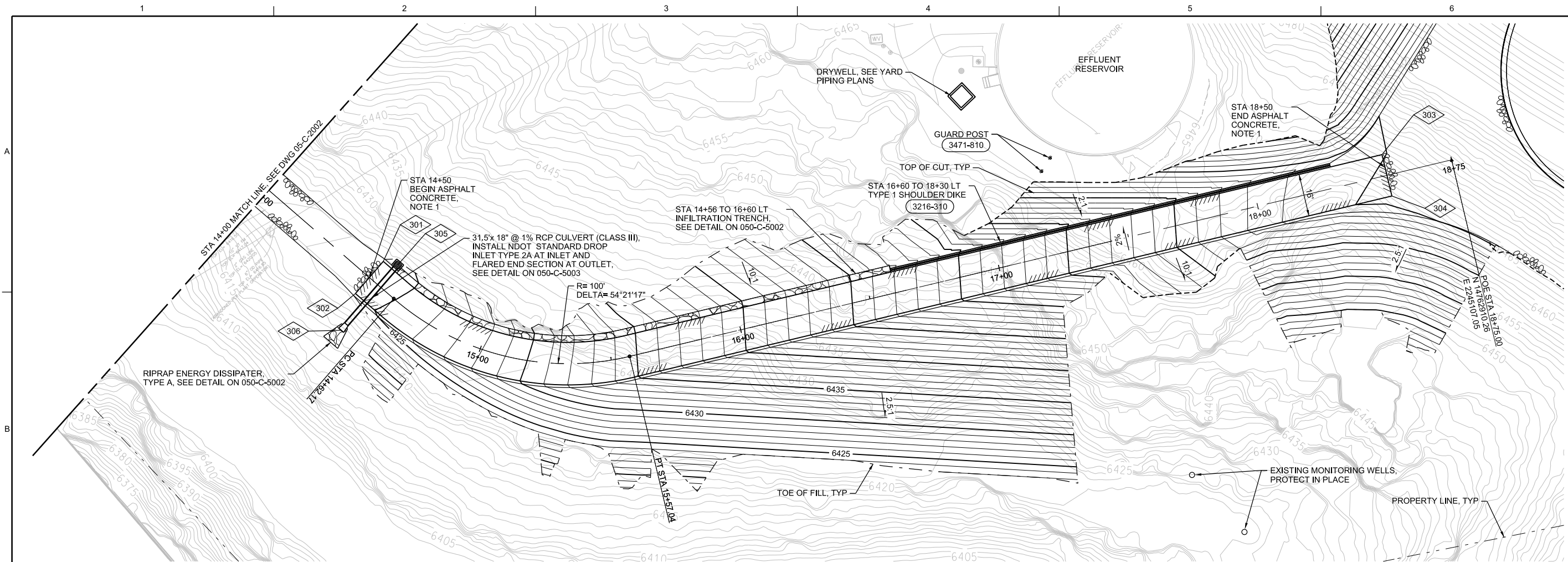
NO.	DATE	DR	CHK	REVISION	BY	APVD



Jacobs
CIVIL
ACCESS ROAD
PLAN AND PROFILE

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-2002
SHEET	11 of 43

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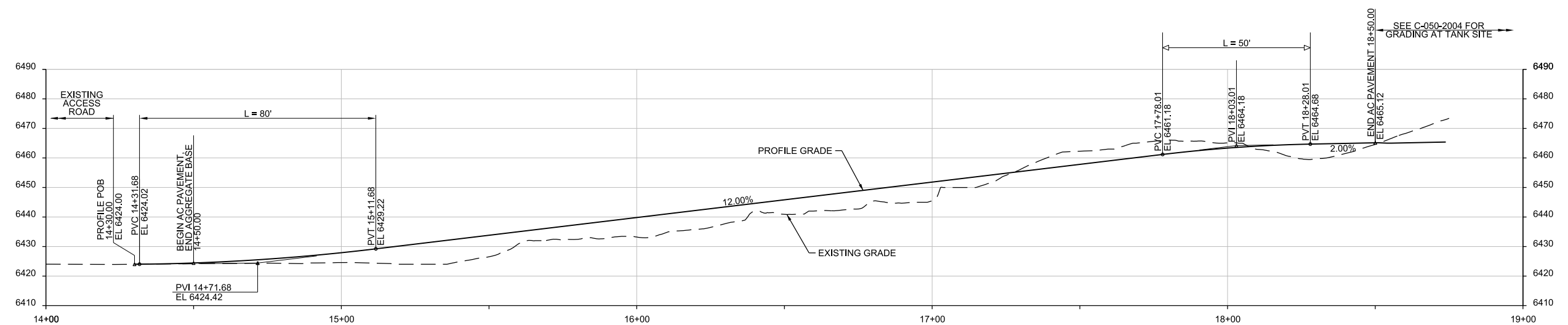
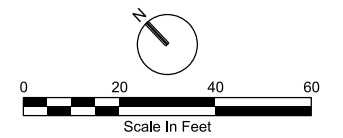


PLAN
1"=20"

- NOTES:**
- SEE 050-C-3001 FOR ROADWAY TYPICAL SECTION.
 - ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE STABILIZED. SEE 050-C-2006 FOR SLOPE STABILIZATION PLAN.

GRADING COORDINATE TABLE

POINT NO.	DESCRIPTION	ELEVATION	NORTHING	EASTING
301	EOP, MATCH EXISTING	6424.28	14763158.86	2244788.90
302	EOP, MATCH EXISTING	6424.60	14763157.29	2244772.98
303	EOP	6464.96	14762929.69	2245089.40
304	EOP	6465.28	14762915.83	2245081.40
305	CENTER OF INLET RIM/INV EL	6424.40/6420.32	14763154.15	2244791.88
306	CULVERT OUTLET	6420.00	14763150.96	2244759.58



PROFILE
1"=20"

REGISTERED PROFESSIONAL ENGINEER
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NO.	DATE	REVISION	CHK	APVD	BY	APVD

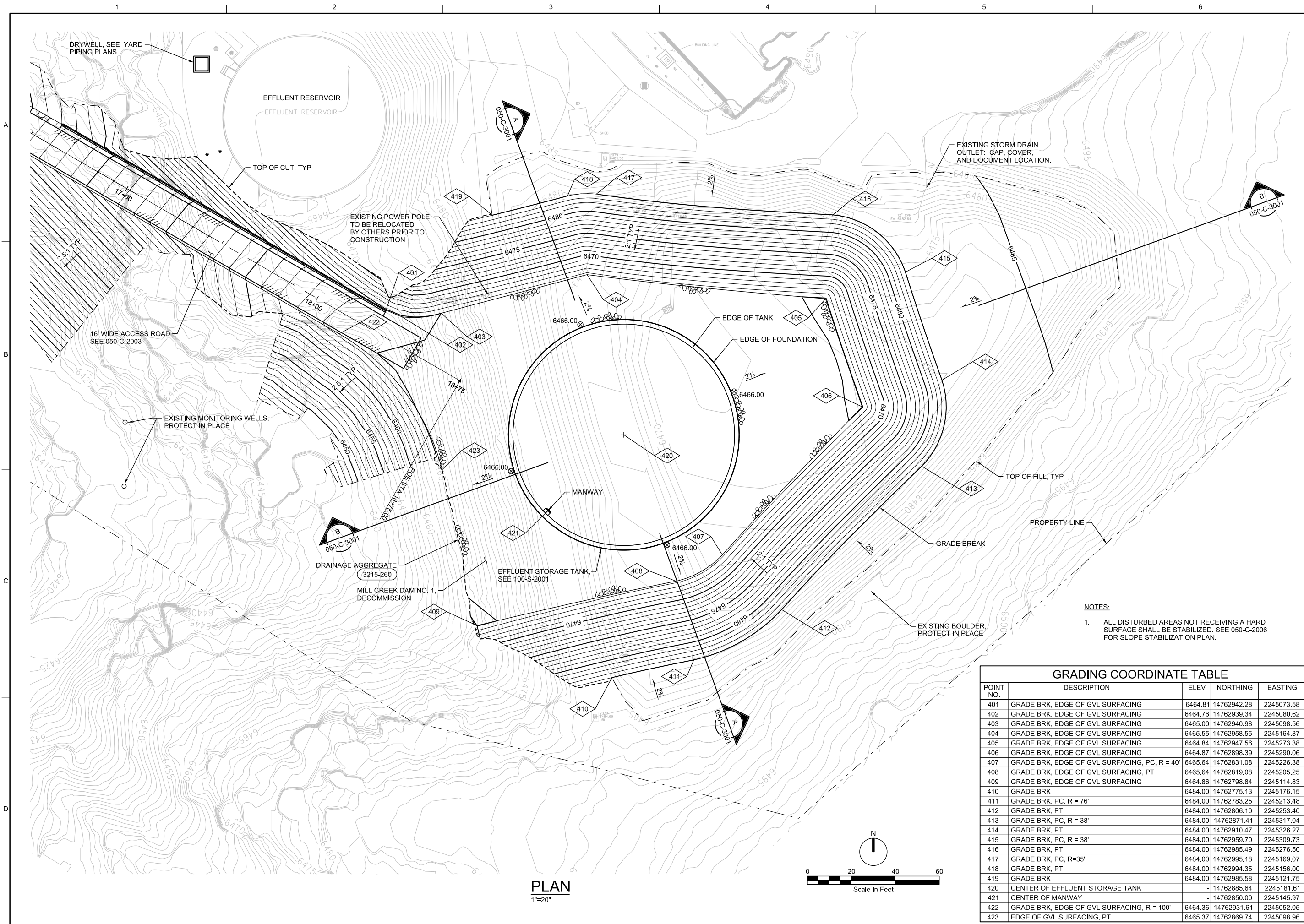
T. HOWARD
 DR
 K. BISHOP
 CHK
 B. CHELONIS
 APVD
 A. KELLOGG
 APVD

INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT
 ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

Jacobs
 CIVIL
 ACCESS ROAD
 PLAN AND PROFILE

VERIFY SCALE
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 DWG 050-C-2003
 SHEET 12 of 43

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SPWURL U:\LAS0-APP385\ICS_workdir\108867\1250926_14\050-C-2004_W8Y12900.dgn FILENAME: 050-C-2004_W8Y12900.dgn PLOT DATE: 2/24/2023 PLOT TIME: 1:51:55 PM

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		T HOWARD	K BISHOP		B CHELONIS	A KELLOGG

INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT
 ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

Jacobs
 CIVIL
 EFFLUENT STORAGE TANK
 CONSTRUCTION GRADING PLAN

VERIFY SCALE
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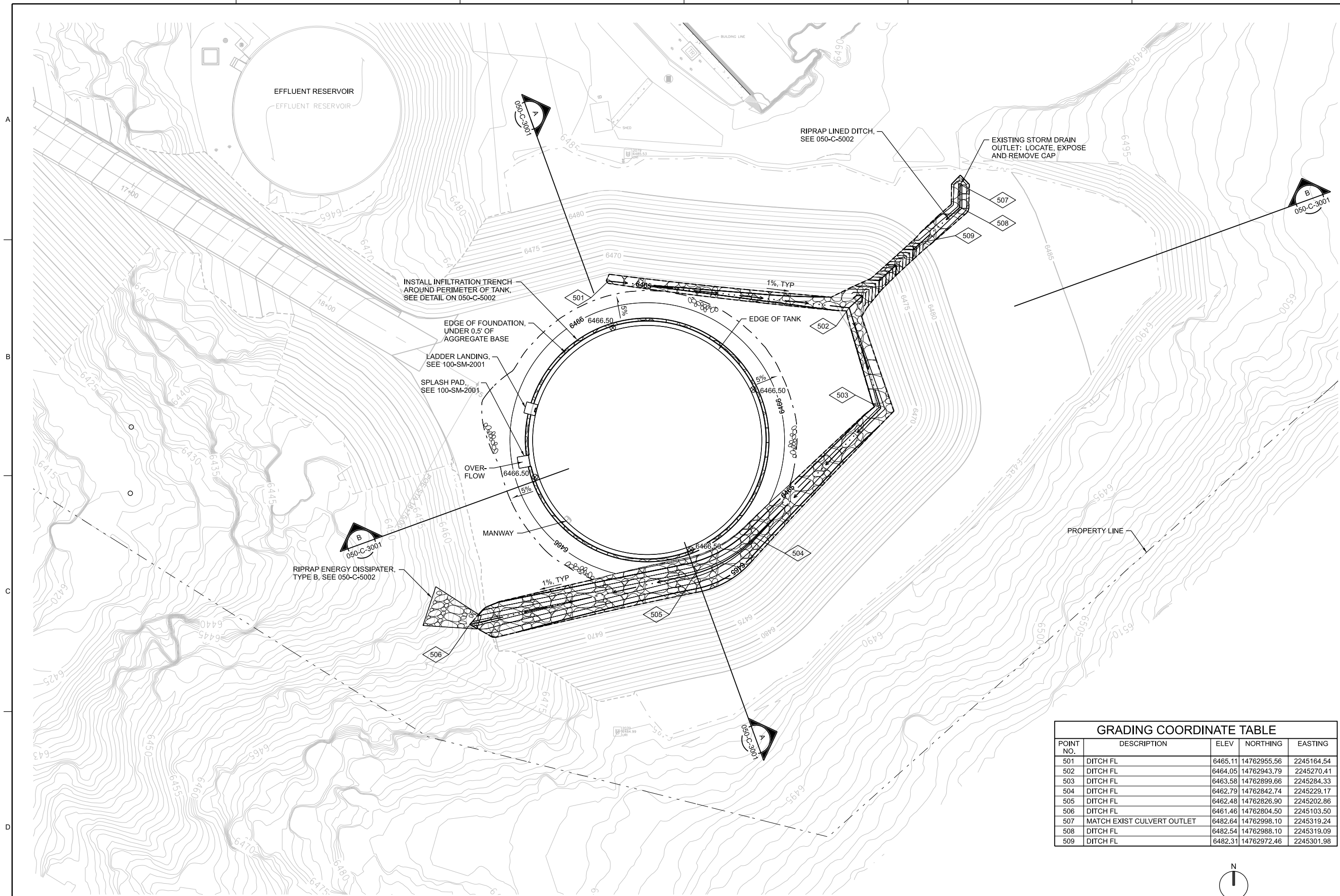
DATE FEBRUARY 2023
 PROJ W8Y12900
 DWG 050-C-2004
 SHEET 13 OF 43

NOTES:
 1. ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE STABILIZED. SEE 050-C-2006 FOR SLOPE STABILIZATION PLAN.

POINT NO.	DESCRIPTION	ELEV	NORTHING	EASTING
401	GRADE BRK, EDGE OF GVL SURFACING	6464.81	14762942.28	2245073.58
402	GRADE BRK, EDGE OF GVL SURFACING	6464.76	14762939.34	2245080.62
403	GRADE BRK, EDGE OF GVL SURFACING	6465.00	14762940.98	2245098.56
404	GRADE BRK, EDGE OF GVL SURFACING	6465.55	14762958.55	2245164.87
405	GRADE BRK, EDGE OF GVL SURFACING	6464.84	14762947.56	2245273.38
406	GRADE BRK, EDGE OF GVL SURFACING	6464.87	14762898.39	2245290.06
407	GRADE BRK, EDGE OF GVL SURFACING, PC, R = 40'	6465.64	14762831.08	2245226.38
408	GRADE BRK, EDGE OF GVL SURFACING, PT	6465.64	14762819.08	2245205.25
409	GRADE BRK, EDGE OF GVL SURFACING	6464.86	14762798.84	2245114.83
410	GRADE BRK	6484.00	14762775.13	2245176.15
411	GRADE BRK, PC, R = 76'	6484.00	14762783.25	2245213.48
412	GRADE BRK, PT	6484.00	14762806.10	2245253.40
413	GRADE BRK, PC, R = 38'	6484.00	14762871.41	2245317.04
414	GRADE BRK, PT	6484.00	14762910.47	2245326.27
415	GRADE BRK, PC, R = 38'	6484.00	14762959.70	2245309.73
416	GRADE BRK, PT	6484.00	14762985.49	2245276.50
417	GRADE BRK, PC, R=35'	6484.00	14762995.18	2245169.07
418	GRADE BRK, PT	6484.00	14762994.35	2245156.00
419	GRADE BRK	6484.00	14762985.58	2245121.75
420	CENTER OF EFFLUENT STORAGE TANK	-	14762885.64	2245181.61
421	CENTER OF MANWAY	-	14762850.00	2245145.97
422	GRADE BRK, EDGE OF GVL SURFACING, R = 100'	6464.36	14762931.61	2245052.05
423	EDGE OF GVL SURFACING, PT	6465.37	14762869.74	2245098.96

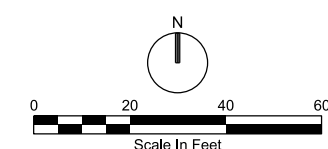
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90% DESIGN - NOT FOR CONSTRUCTION



PLAN
1"=20"

POINT NO.	DESCRIPTION	ELEV	NORTHING	EASTING
501	DITCH FL	6465.11	14762955.56	2245164.54
502	DITCH FL	6464.05	14762943.79	2245270.41
503	DITCH FL	6463.58	14762899.66	2245284.33
504	DITCH FL	6462.79	14762842.74	2245229.17
505	DITCH FL	6462.48	14762826.90	2245202.86
506	DITCH FL	6461.46	14762804.50	2245103.50
507	MATCH EXIST CULVERT OUTLET	6482.64	14762998.10	2245319.24
508	DITCH FL	6482.54	14762988.10	2245319.09
509	DITCH FL	6482.31	14762972.46	2245301.98



REGISTERED PROFESSIONAL ENGINEER
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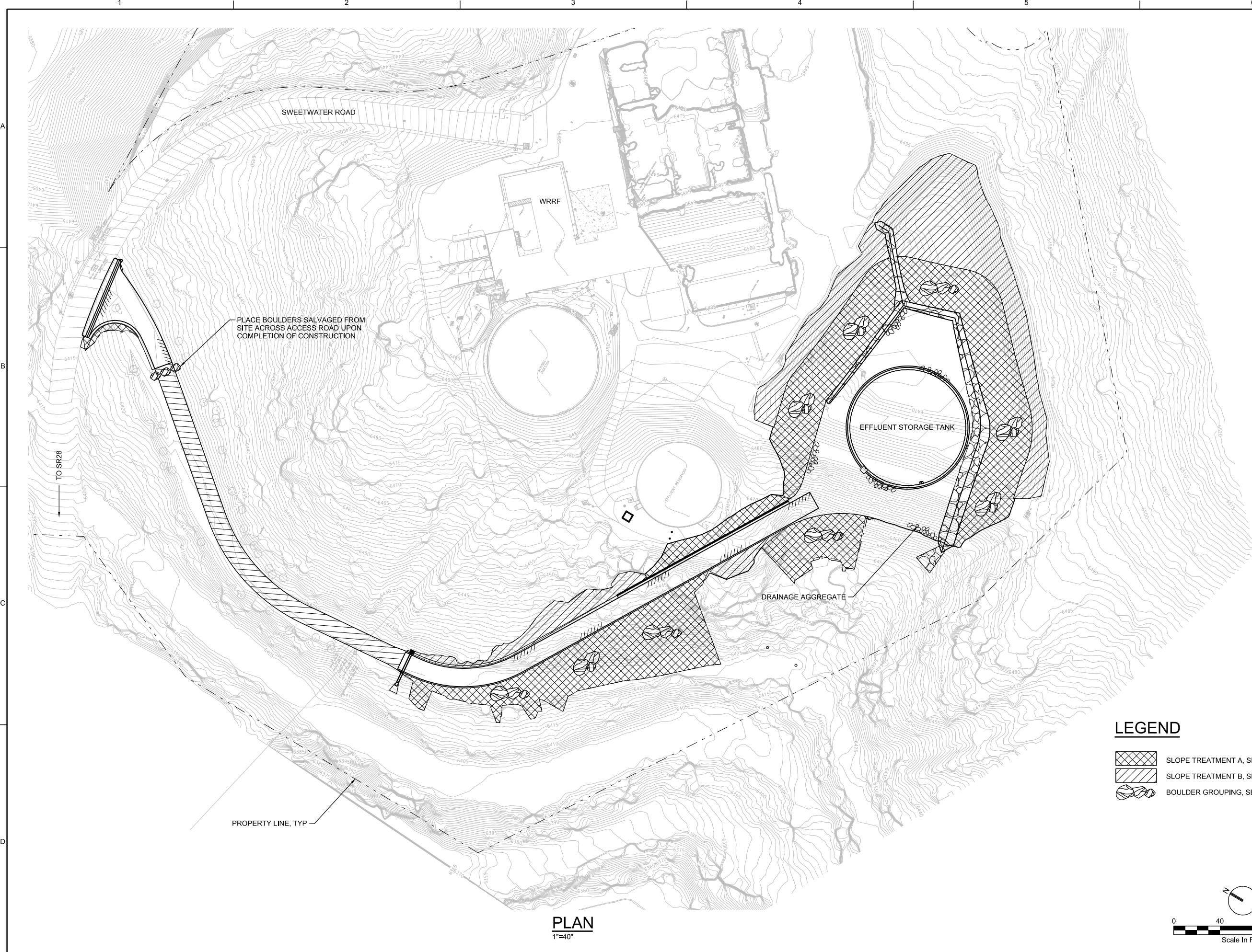
NO.	DATE	DR	CHK	REVISION	BY	APVD

INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT
 ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

Jacobs
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 EFFLUENT STORAGE TANK
 FINAL GRADING PLAN




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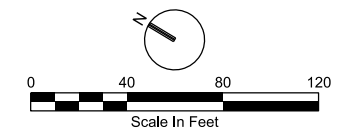
DATE FEBRUARY 2023
 PROJ W8Y12900
 DWG 050-C-2005
 SHEET 14 of 43



PLAN
1"=40'

LEGEND

-  SLOPE TREATMENT A, SEE 050-C-5001 FOR DETAILS
-  SLOPE TREATMENT B, SEE 050-C-5001 FOR DETAILS
-  BOULDER GROUPING, SEE 050-C-5001 FOR DETAILS



REGISTERED PROFESSIONAL ENGINEER
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INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

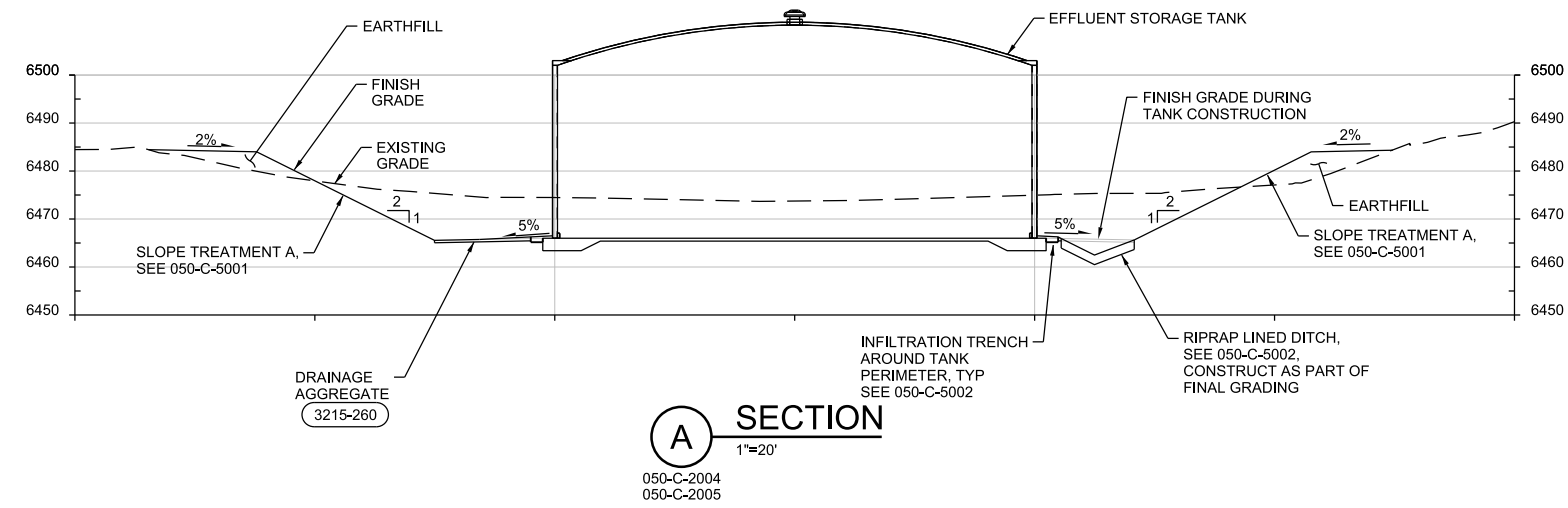
Jacobs CIVIL
 SLOPE STABILIZATION PLAN

DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-2006
SHEET	15 of 43

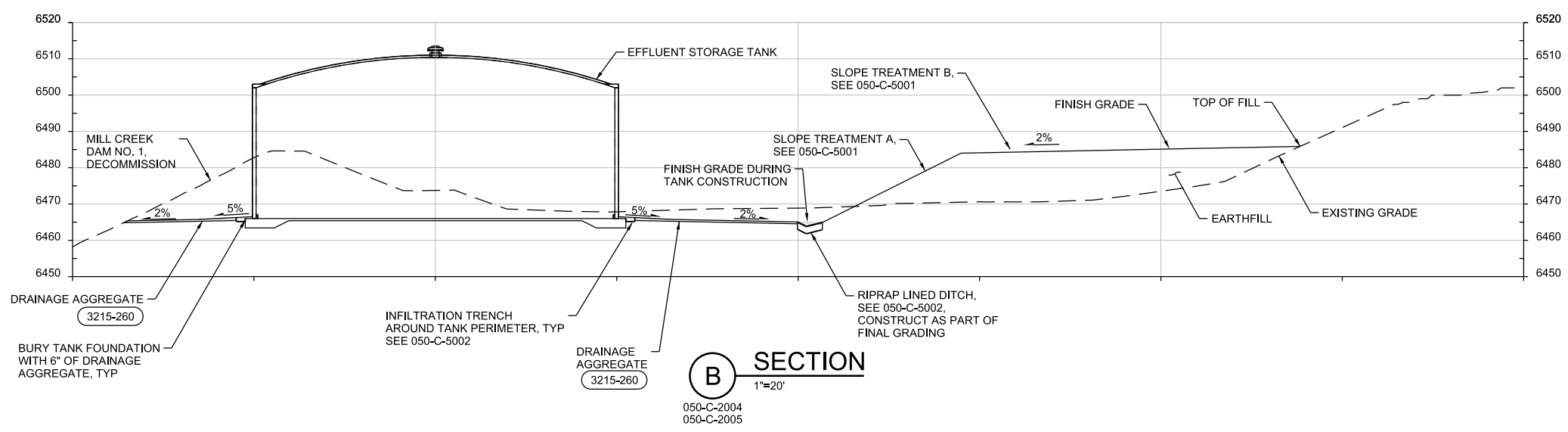
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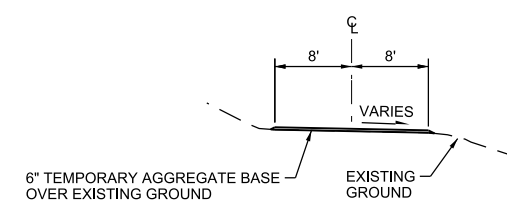
A
B
C
D



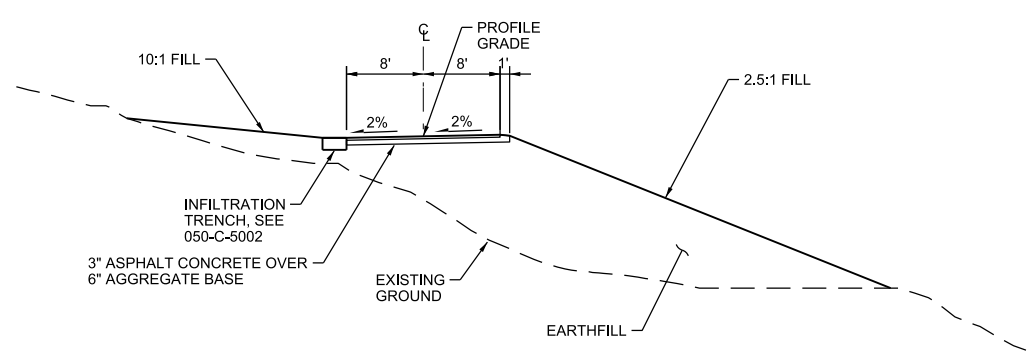
A SECTION
1"=20'
050-C-2004
050-C-2005



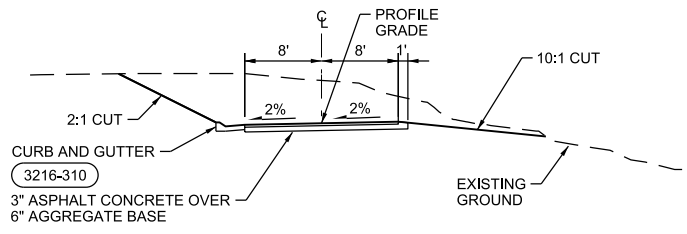
B SECTION
1"=20'
050-C-2004
050-C-2005



STA 11+00 TO 14+50
TYPICAL SECTION 1 - ACCESS ROAD
NTS



STA 14+50 TO 16+60
TYPICAL SECTION 2 - ACCESS ROAD
NTS



STA 16+60 TO 18+50
TYPICAL SECTION 3 - ACCESS ROAD
NTS

REGISTERED PROFESSIONAL ENGINEER
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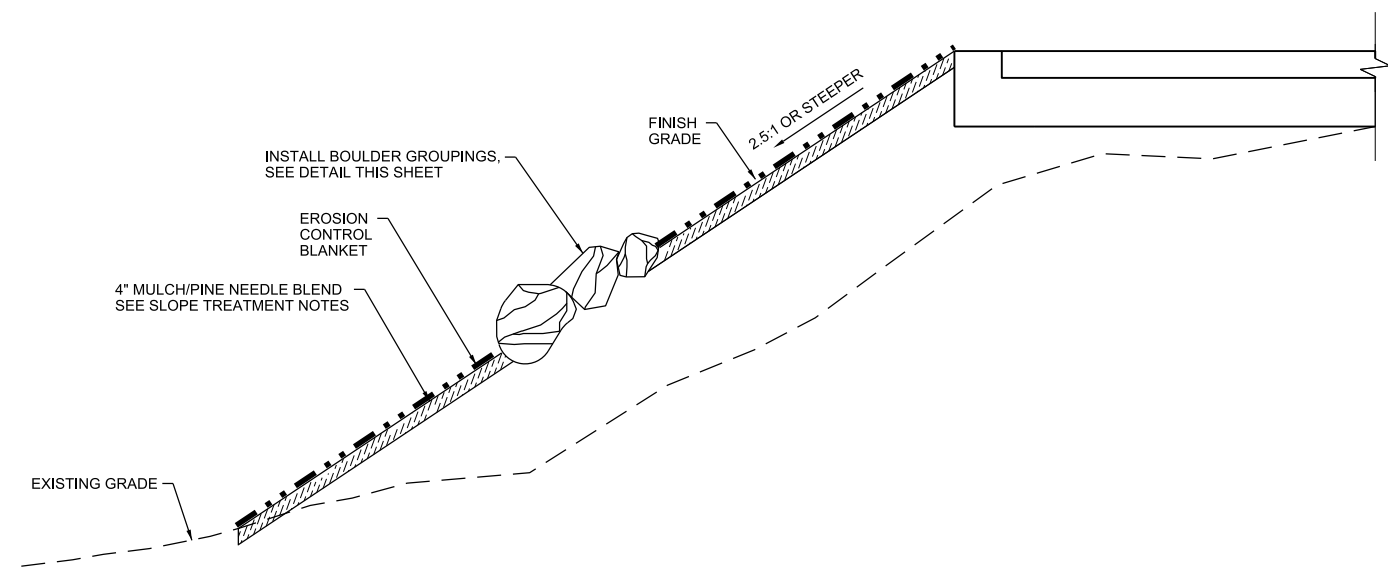
NO.	DATE	DR	CHK	REVISION	BY	APVD

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EFFLUENT STORAGE TANK GRADING SECTIONS

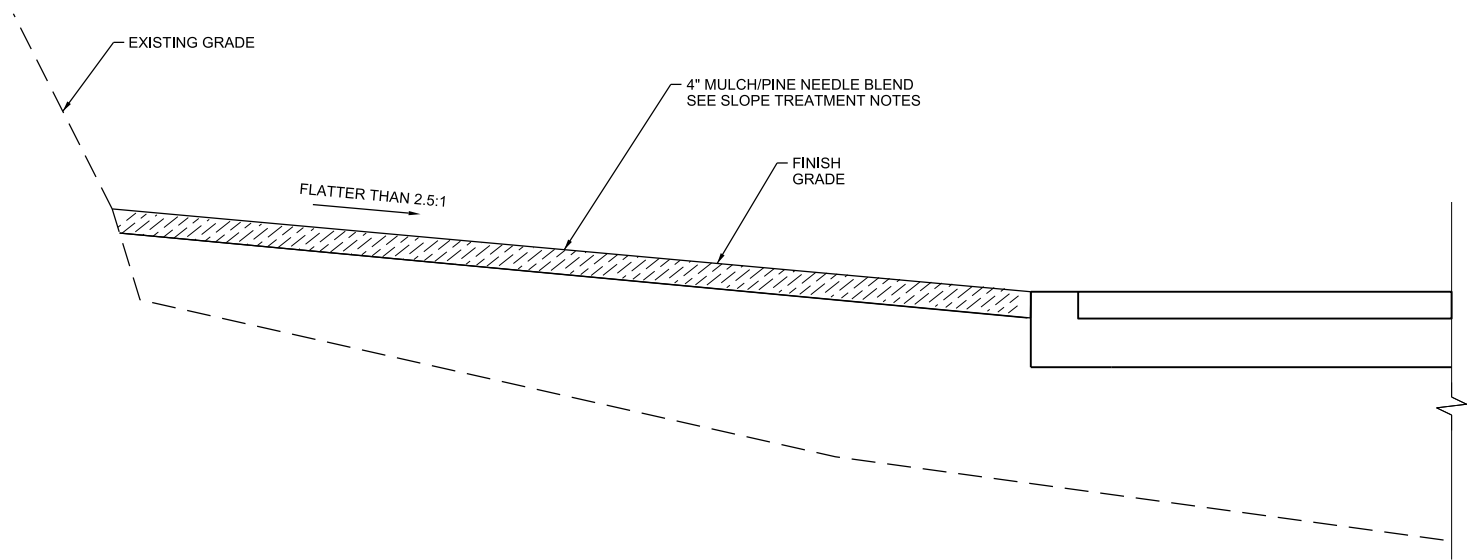
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DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-3001
SHEET	16 of 43

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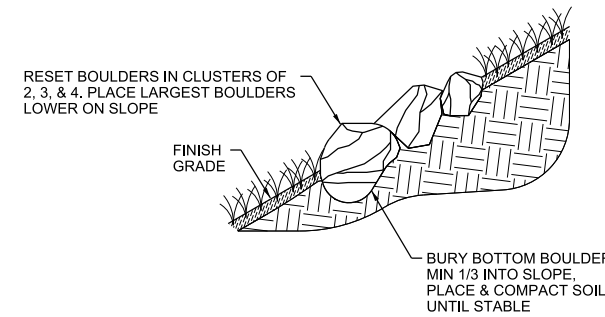
A
B
C
D



SLOPE TREATMENT A
NTS



SLOPE TREATMENT B
NTS



NOTES:

- 1. LOCATION AND QUANTITY OF BOULDERS SHOWN ON PLANS IS APPROXIMATE. ACTUAL QUANTITY WILL VARY. WORK WITH ENGINEER IN FIELD TO DETERMINE FINAL LOCATION.
- 2. USE BOULDERS SALVAGED ONSITE.
- 3. TRIM EROSION CONTROL BLANKET WHERE IN CONFLICT WITH BOULDERS.

BOULDER GROUPING
NTS

SLOPE TREATMENT NOTES:

- 1. WHERE SLOPES ARE 2.5:1 OR STEEPER, PLACE EROSION CONTROL BLANKET OVER MULCH/PINE NEEDLE BLEND.
- 2. MULCH/PINE NEEDLE BLEND SHALL CONSIST OF WOOD CHIPS, PINE NEEDLES, PINE CONES AND TUB GRINDINGS.
- 3. PROCESS WOOD CHIPS FROM CONIFERS LOCATED WITHIN THE PROJECT. ADDITIONAL WOOD CHIPS SHALL CONSIST OF MATERIAL CHIPPED FROM NON-DISEASED TREES GROWN IN THE TAHOE BASIN AND SHALL BE TRPA APPROVED.
- 4. PINE NEEDLES AND ASSOCIATED DUFF MATERIAL BROUGHT TO THE SITE SHALL ORIGINATE FROM WITHIN THE TAHOE BASIN AND SHALL CONTAIN LESS THAN 20 PERCENT IMPURITIES BY VOLUME.

REGISTERED PROFESSIONAL ENGINEER
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STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	BY
		T HOWARD	A STEED	A KELLOGG
			B CHELONIS	APVD
			APVD	APVD

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

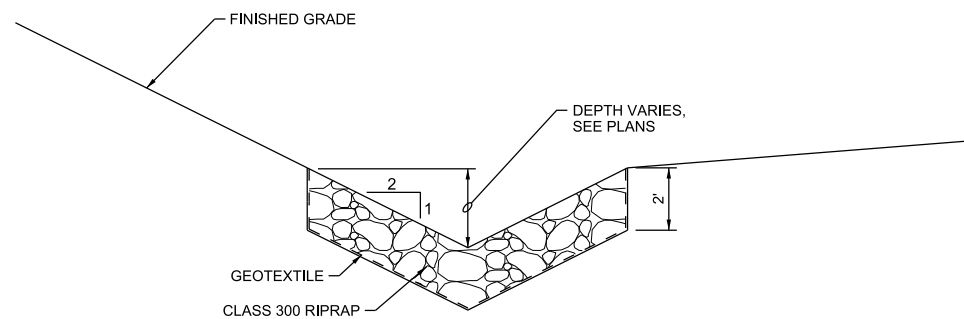
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CIVIL
SLOPE STABILIZATION DETAILS

VERIFY SCALE	
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DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-5001
SHEET	17 of 43

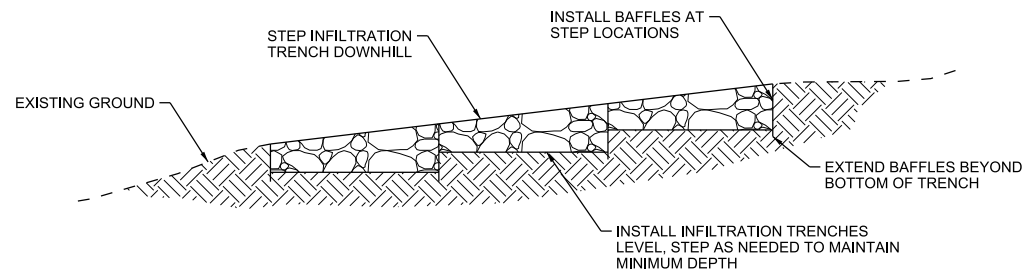
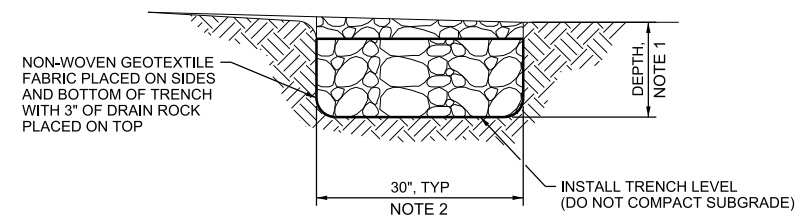
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A
B
C
D

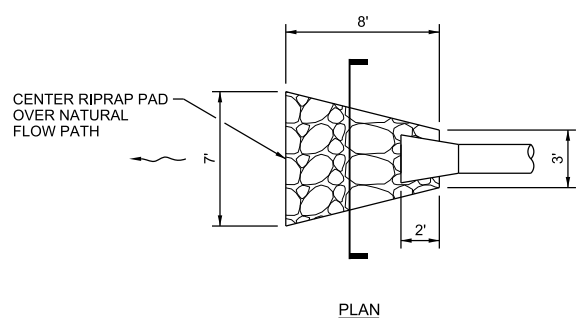


RIPRAP LINED DITCH
NTS

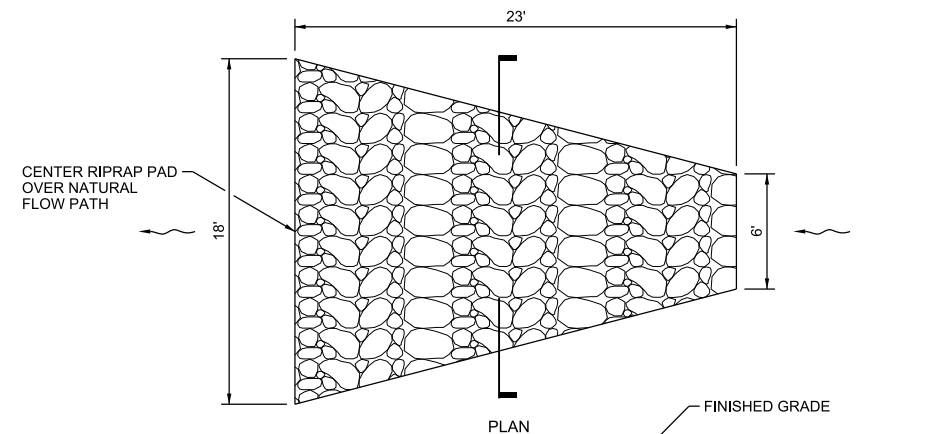


- NOTES:**
1. DEPTH = 10-INCHES AROUND TANK. MINIMUM DEPTH ALONG ROADS = 15-INCHES. DEPTH WILL VARY BASED ON LENGTH OF STEPS USED TO ACHIEVE A LEVEL BOTTOM.
 2. WIDTH IS 30-INCHES UNLESS SHOWN OTHERWISE ON PLANS.

INFILTRATION TRENCH
NTS



RIPRAP ENERGY DISSIPATER TYPE A
NTS



RIPRAP ENERGY DISSIPATER TYPE B
NTS

REGISTERED PROFESSIONAL ENGINEER
TRAVIS J. HOWARD
CIVIL
LICENSE NO. 021924
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	APVD	BY	APVD
		T HOWARD	A STEED	B CHELONIS		A KELLOGG

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

Jacobs
CIVIL
DRAINAGE DETAILS

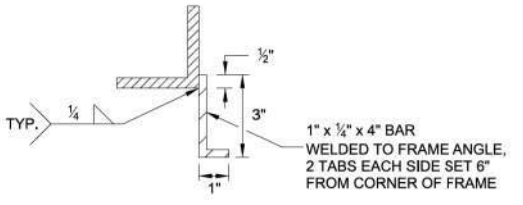
VERIFY SCALE
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DATE	FEBRUARY 2023
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DWG	050-C-5002
SHEET	18 of 43

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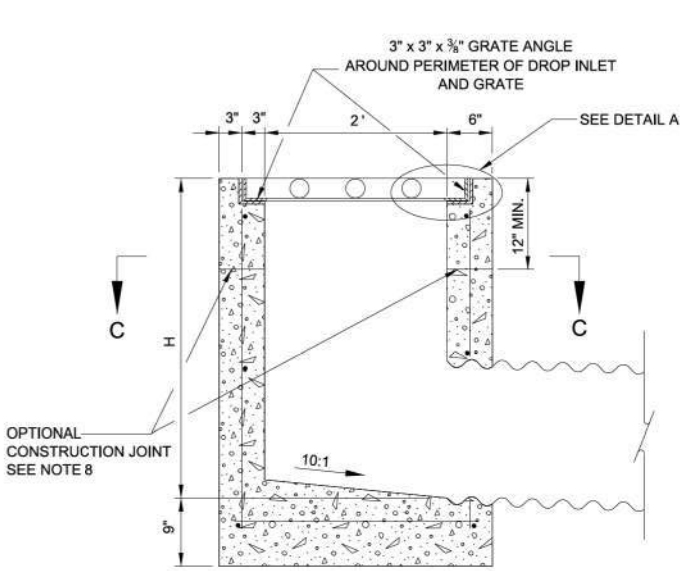
R C P	PIPE SIZE INCH	A	H MIN. FT.	CONCRETE CU. YD.		REINFORCING LB.		STRUCTURAL STEEL LB.
				BASE QUAN. H MIN.	ADD RATE CU. YD./FT.	BASE QUAN. H MIN.	ADD RATE LB./FT.	
H	15"	2'	2.50	0.71	0.19	36	10	214
D	18"	2' - 6"	3.00	0.89	0.20	40	10	235
P	24"	3'	3.50	1.08	0.22	58	12	256
E	30"	3' - 6"	4.00	1.28	0.24	63	12	278
C	36"	4'	4.50	1.50	0.26	67	13	299
M	42"	4' - 6"	5.00	1.71	0.28	90	15	320
P	48"	5'	5.50	1.94	0.30	95	15	341

THE CONCRETE AND REINFORCING QUANTITIES ARE BASED ON THE H MIN. SHOWN, INCREASE THE CONCRETE AND REINFORCING BASE QUANTITY BY THE CORRESPONDING ADD RATE PER FOOT OF INCREASED H IF THE H SPECIFIED IS LARGER THAN H MIN

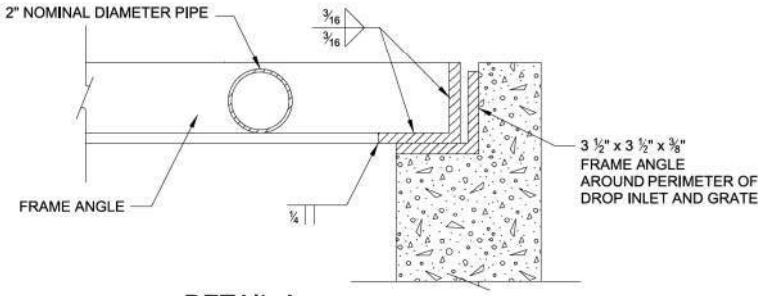


TAB DETAIL

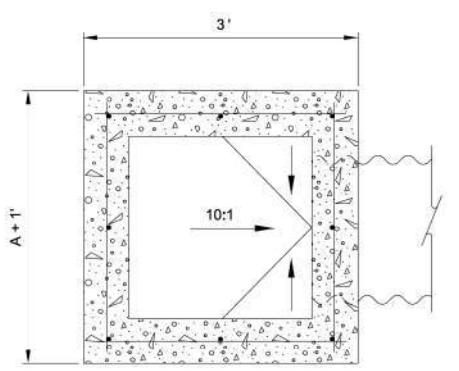
- NOTES:
- All concrete shall be class A or AA.
 - Reinforcing steel shall be No. 4 bars with maximum spacing at 18-inches on center, wired tightly at all intersections and embedded 2-inches clear of all concrete surfaces.
 - Exposed edges of concrete shall be chamfered 1-inch.
 - Structural steel weight includes the 2-inch normal diameter pipe standard weight and frame angles, 3" x 3" x 3/8", and, 3 1/2" x 3 1/2" x 3/8".
 - For 2-inch nominal diameter pipes, see ASTM A53.
 - See detail DS-27 for details if connecting HDPE pipe.
 - Slope catch basin floors 10:1 from all directions toward outlet pipe. If basin is used as a junction, shape flow line(s) to outlet pipe and provide a 10:1 slope to flow line(s).
 - Run rebar continuous thru construction joint. Joint must be a minimum 3-inches from horizontal bars.
 - Additional pipe penetrations may be placed in any wall.
 - Contractor to verify "H" values as approved by the Engineer.
 - Grates are not rated for traffic and should not be located in areas where they will see traffic loads.



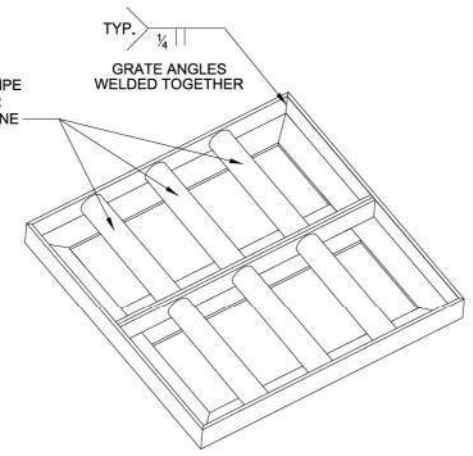
SECTION A-A



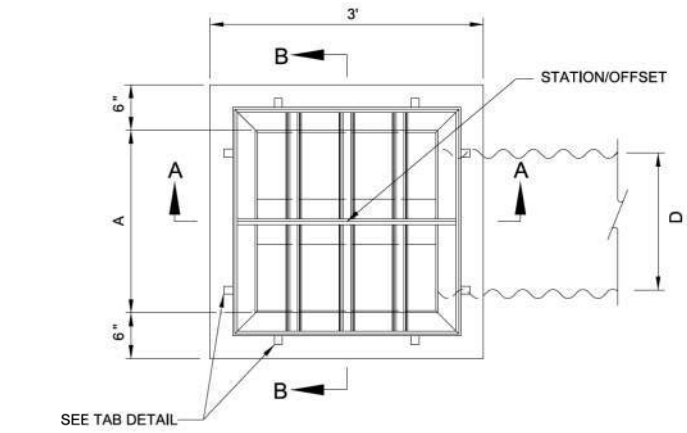
DETAIL A



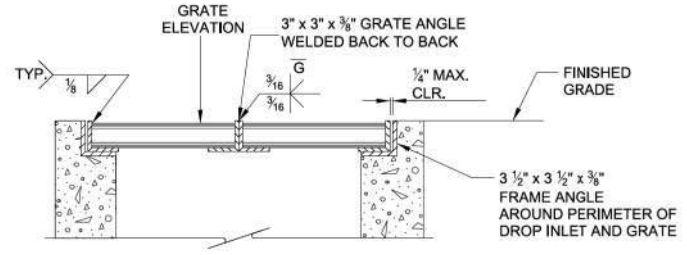
SECTION C-C



GRATE DETAIL



PLAN



SECTION B-B

NEVADA DEPARTMENT OF TRANSPORTATION
 CHIEF HYDRAULICS ENGR.
 SIGNED ORIGINAL ON FILE
 ADOPTED 11/1970
 REVISED 10/2015
 DROP INLET TYPE 2A
 SPEC. # 609
 DETAIL NUMBER DS-33

REGISTERED PROFESSIONAL ENGINEER
 TRAVIS J. HOWARD
 CIVIL
 LICENSE NO. 021924
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

Jacobs
 CIVIL
 DRAINAGE DETAILS

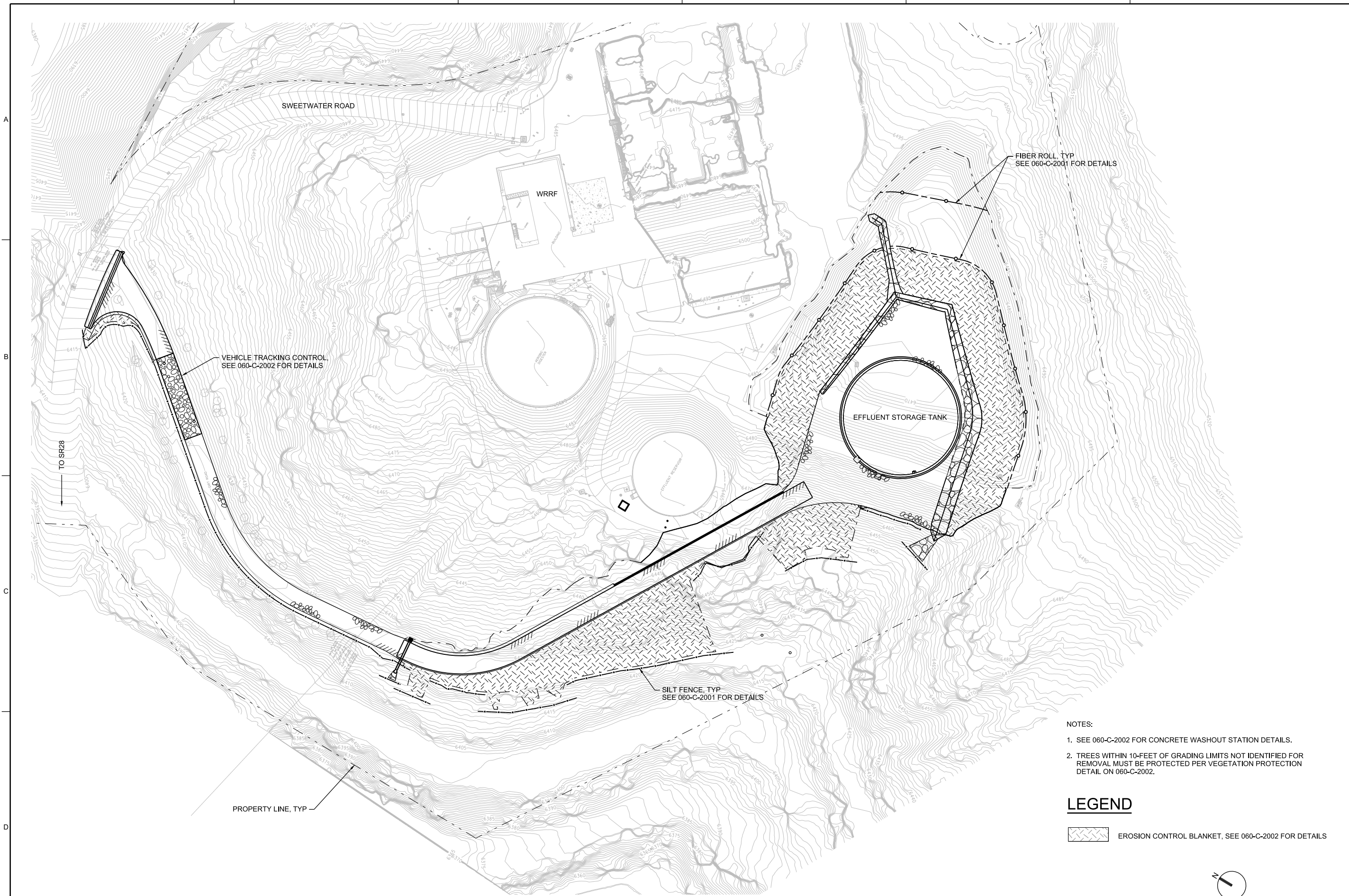
VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	050-C-5003
SHEET	19 of 43

90% DESIGN - NOT FOR CONSTRUCTION

1 2 3 4 5 6

A
 B
 C
 D

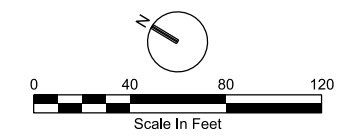


PLAN
1"=40'

- NOTES:
- SEE 060-C-2002 FOR CONCRETE WASHOUT STATION DETAILS.
 - TREES WITHIN 10-FOET OF GRADING LIMITS NOT IDENTIFIED FOR REMOVAL MUST BE PROTECTED PER VEGETATION PROTECTION DETAIL ON 060-C-2002.

LEGEND

EROSION CONTROL BLANKET, SEE 060-C-2002 FOR DETAILS



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TRAVIS J. HOWARD
CIVIL
LICENSE NO. 021924
STATE OF NEVADA
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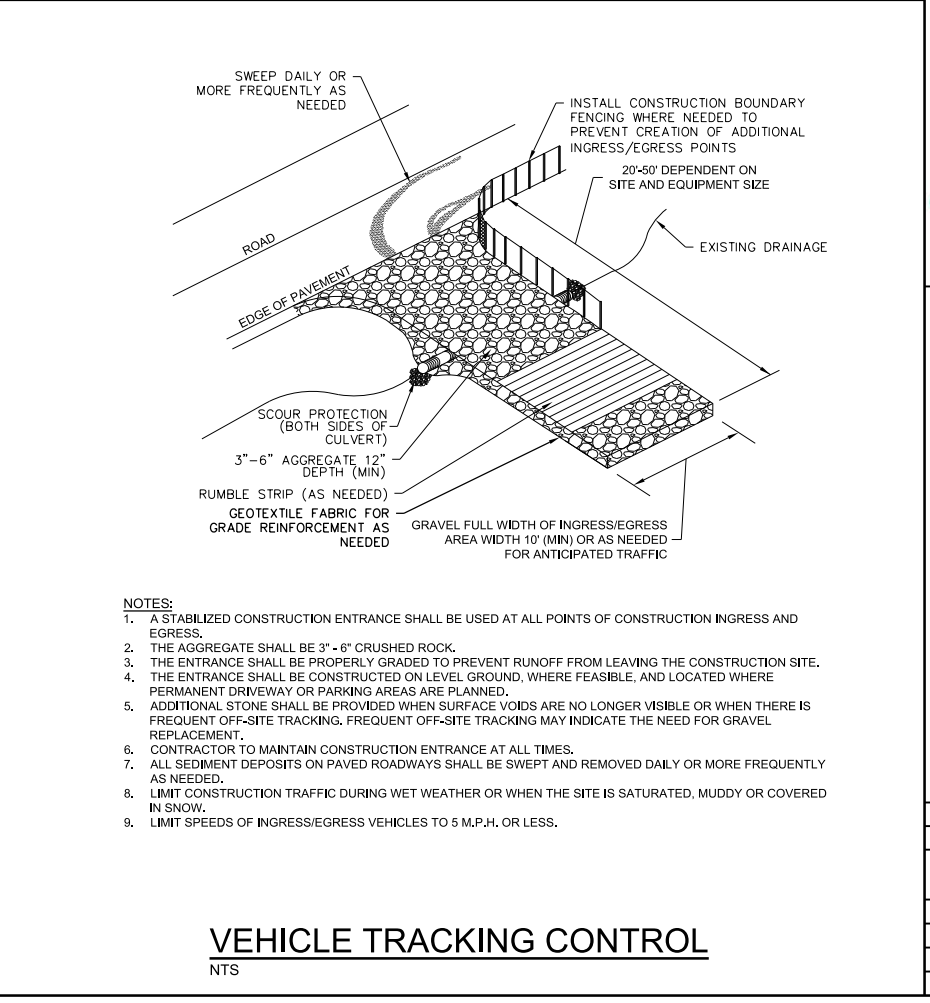
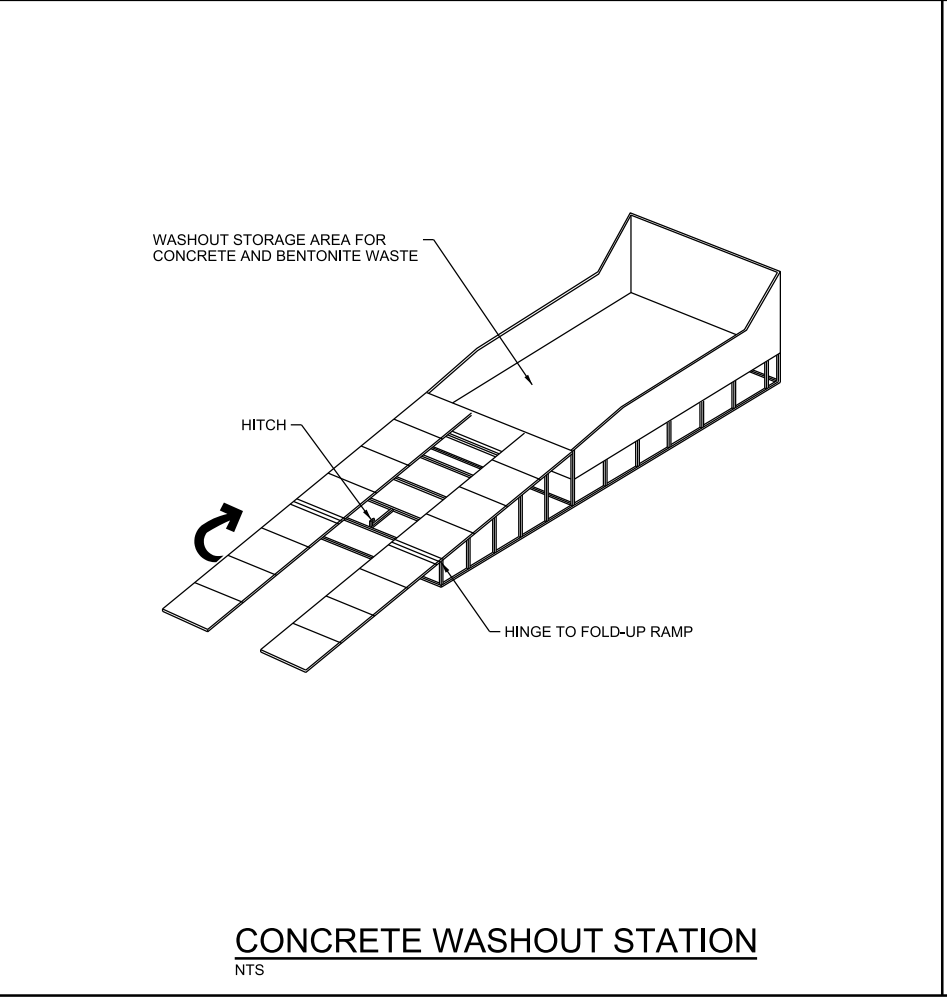
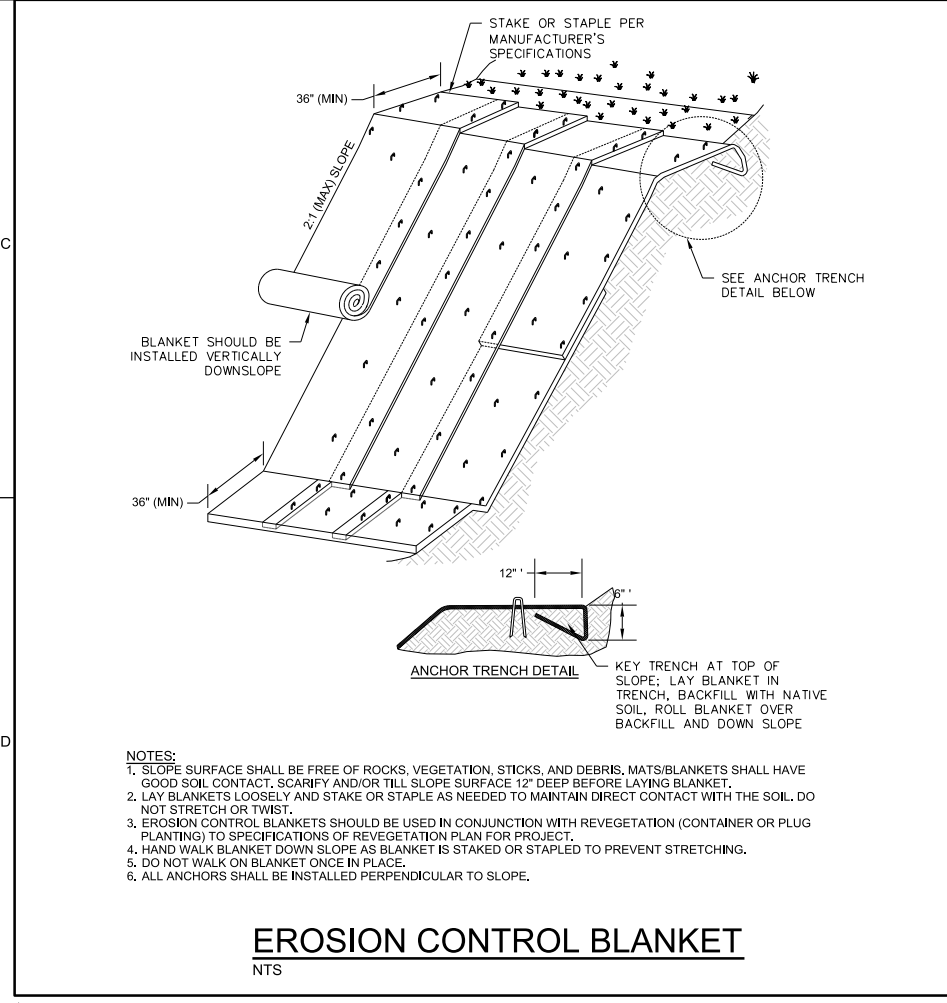
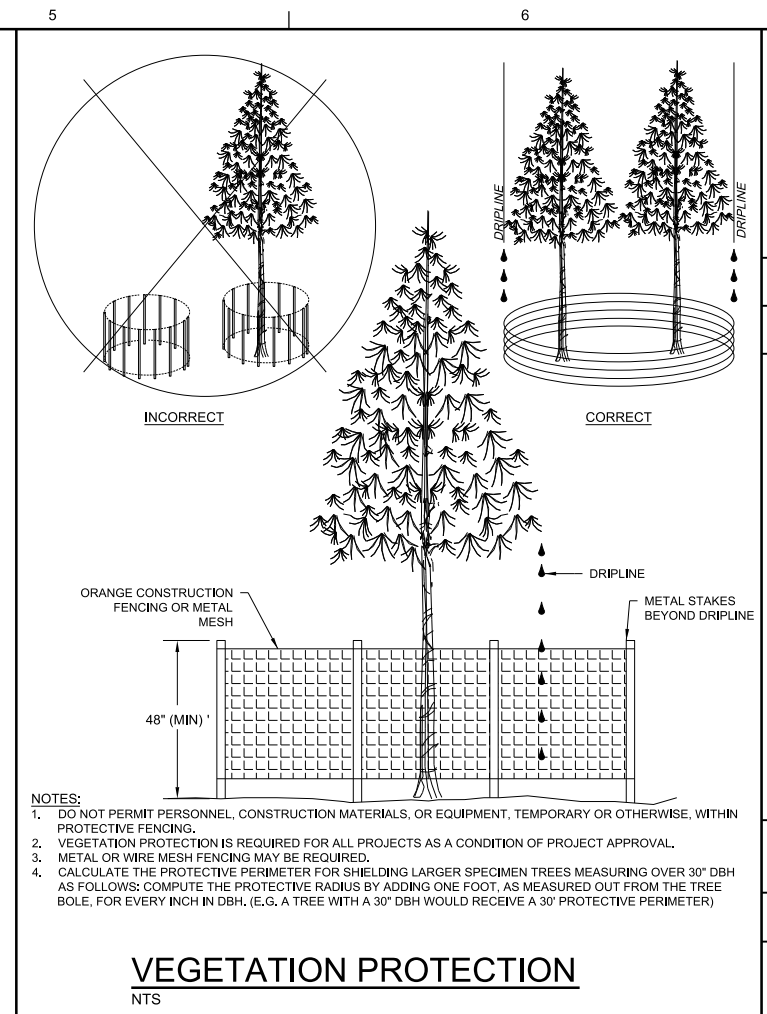
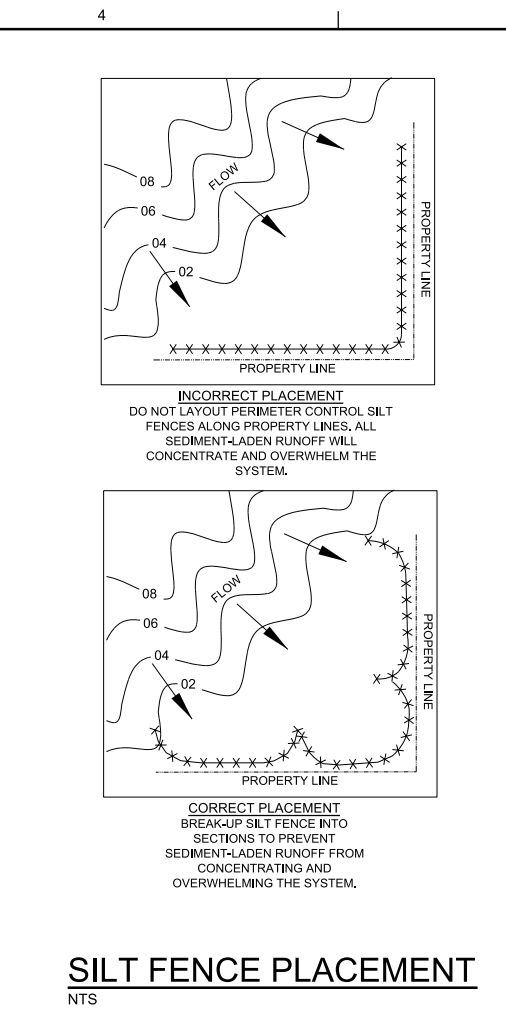
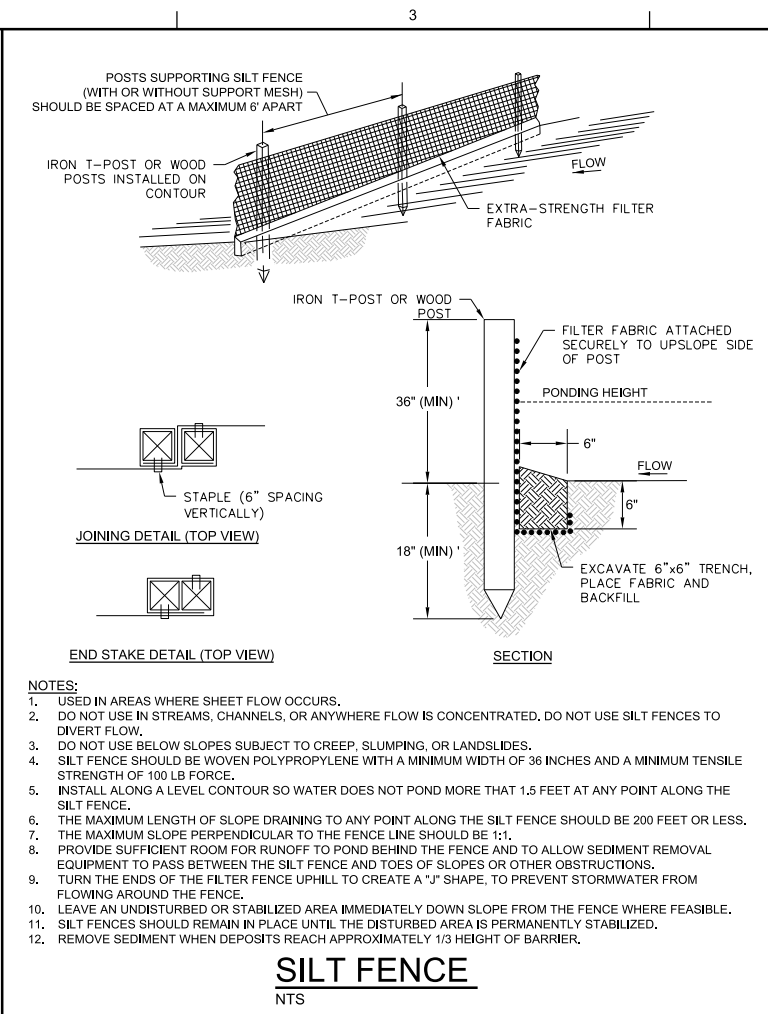
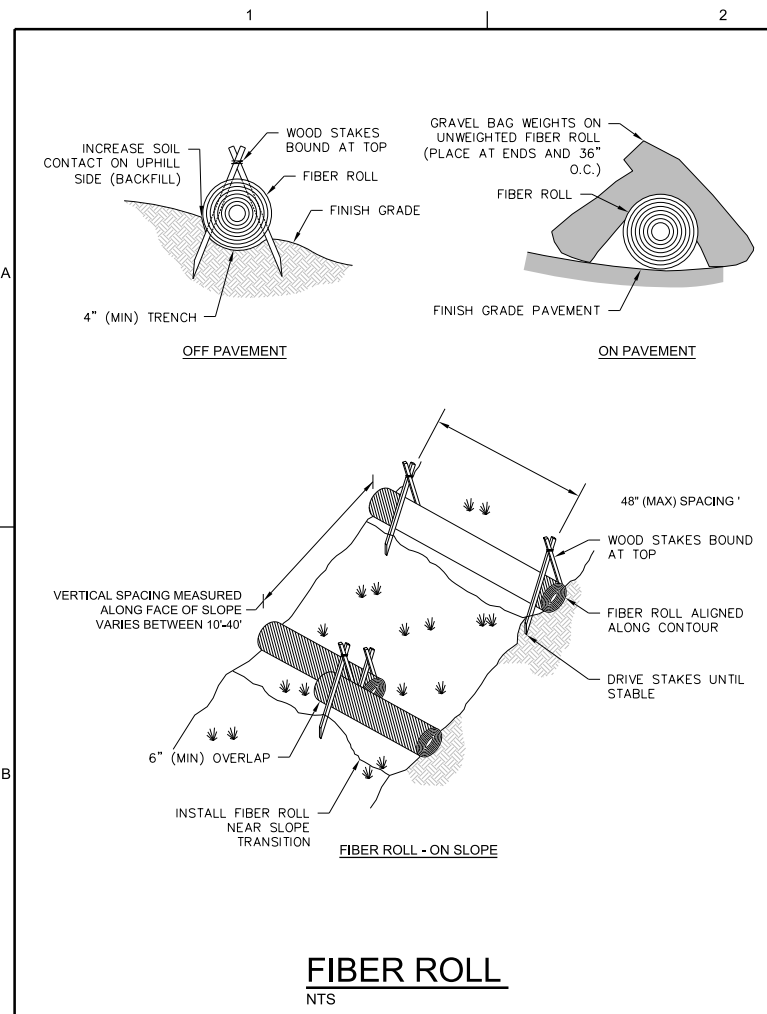
NO.	DATE	DR	CHK	REVISION	APVD	BY	APVD

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

Jacobs
CIVIL
TEMPORARY
EROSION CONTROL PLAN

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.	
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SHEET	20 of 43

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REGISTERED PROFESSIONAL ENGINEER
 TRAVIS J. HOWARD
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 LICENSE NO. 021924
 STATE OF NEVADA
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NO.	DATE	DR	THOMAS	APVD	A. KELLOGG
REVISION	CHK	B. CHELONIS	APVD	BY	APVD

JACOBS
 CIVIL
 TEMPORARY EROSION CONTROL DETAILS

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 0 1'

DATE: FEBRUARY 2023
 PROJ: W8Y12900
 DWG: 060-C-2002
 SHEET: 21 of 43

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GENERAL SHEET NOTES

1. REFER TO SPEC SECTION 02 41 00 DEMOLITION FOR ADDITIONAL REQUIREMENTS.

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 JORDAN VAZQUEZ
 CIVIL
 LICENSE NO. 029431
 STATE OF NEVADA
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NO.	DATE	DR	CHK	REVISION	BY
		J. VAZQUEZ	J. MINOR		APVD
					A. KELLOGG



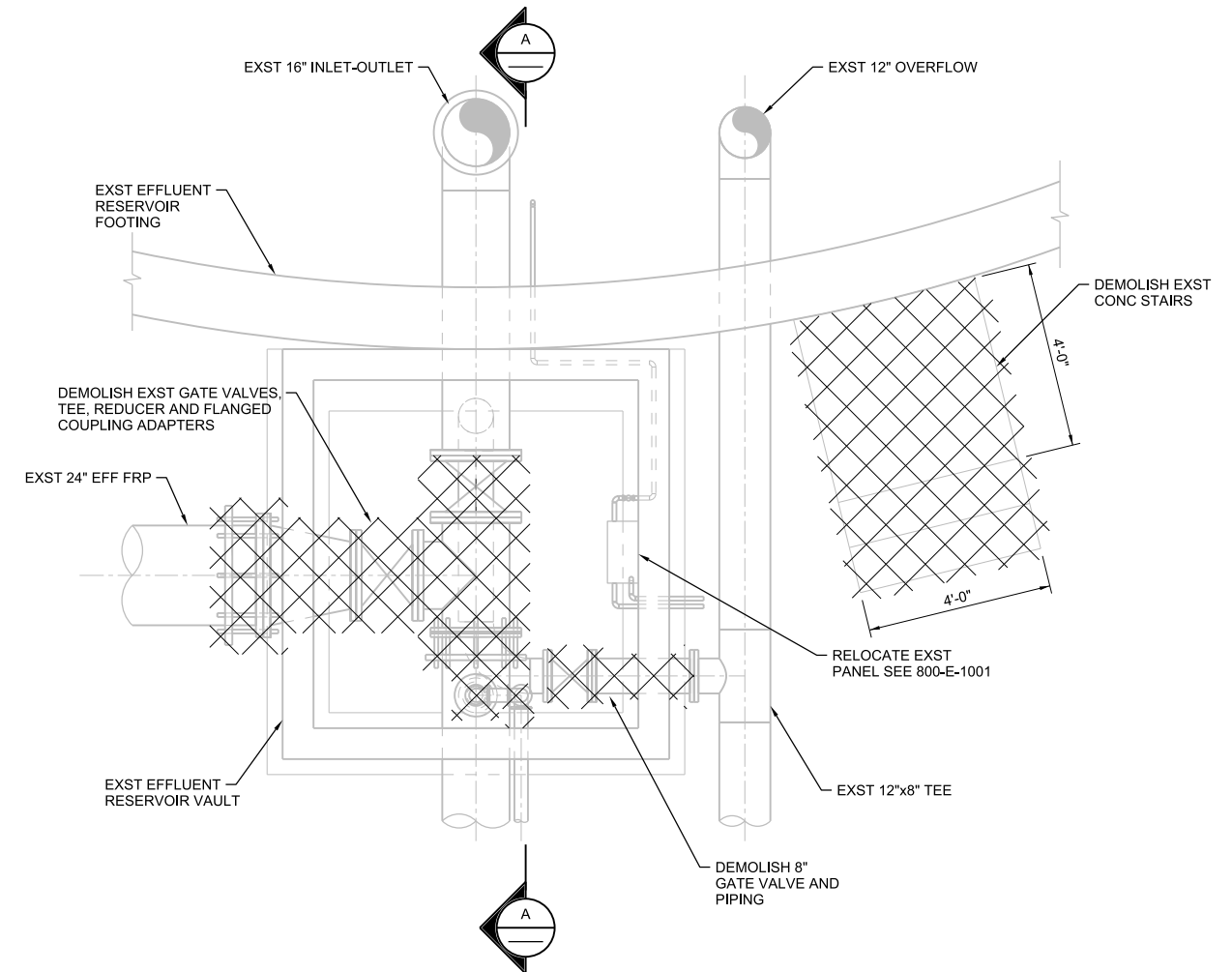
INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT
 ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT



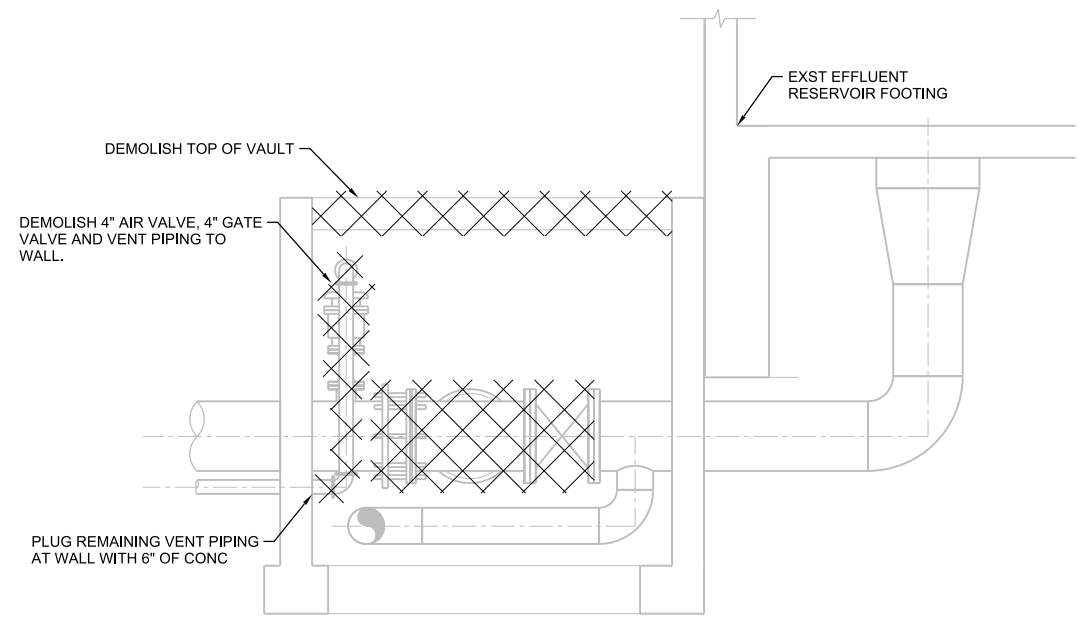
JACOBS
 MECHANICAL / YARD PIPING
 EXISTING EFFLUENT RESERVOIR
 VAULT DEMOLITION
 PLAN AND SECTION

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	080-SM-2001
SHEET	22 of 43

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VAULT DEMOLITION PLAN
 1/2"=1'-0"



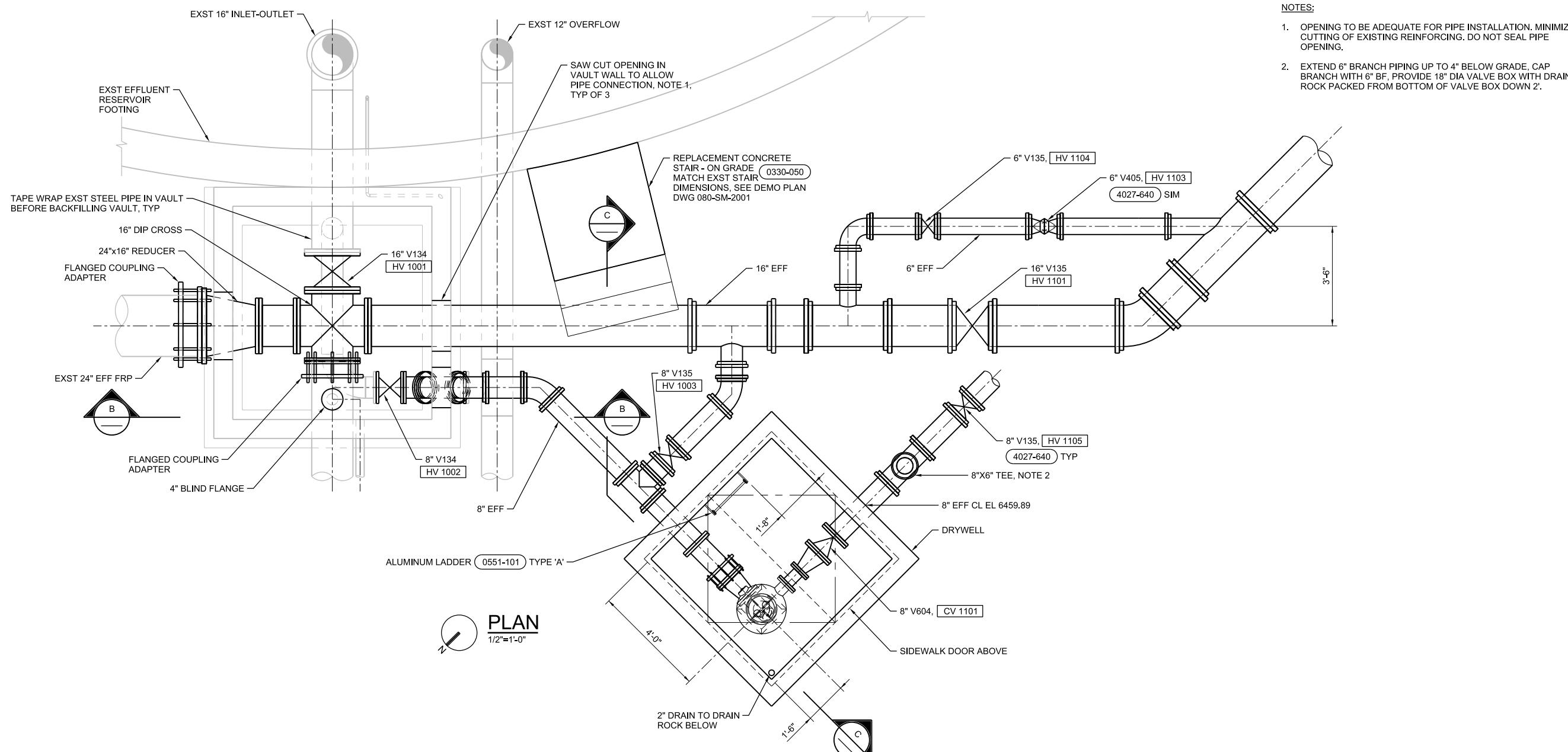
SECTION A
 1/2"=1'-0"

1 2 3 4 5 6

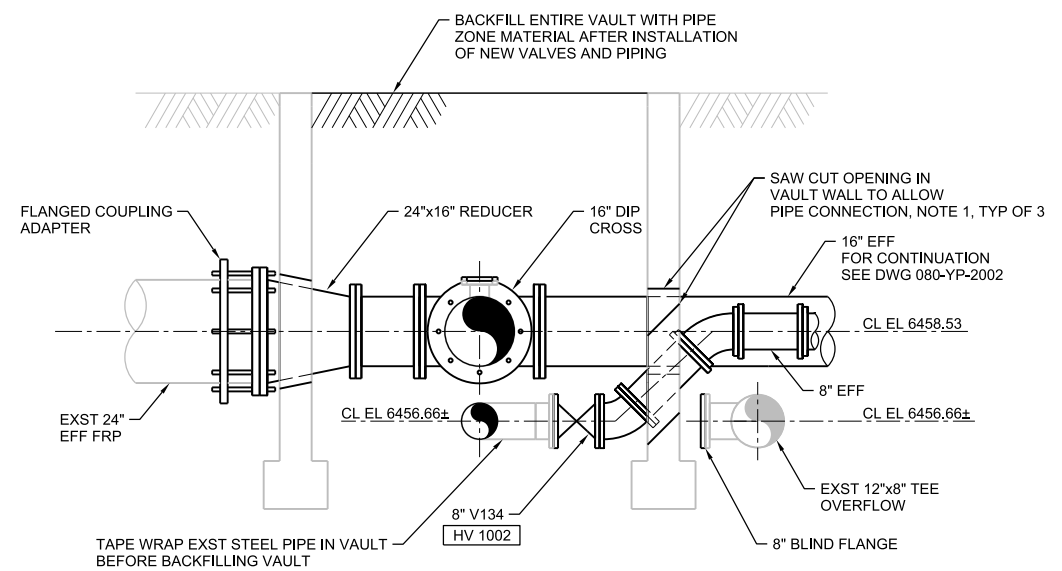
A
B
C
D

NOTES:

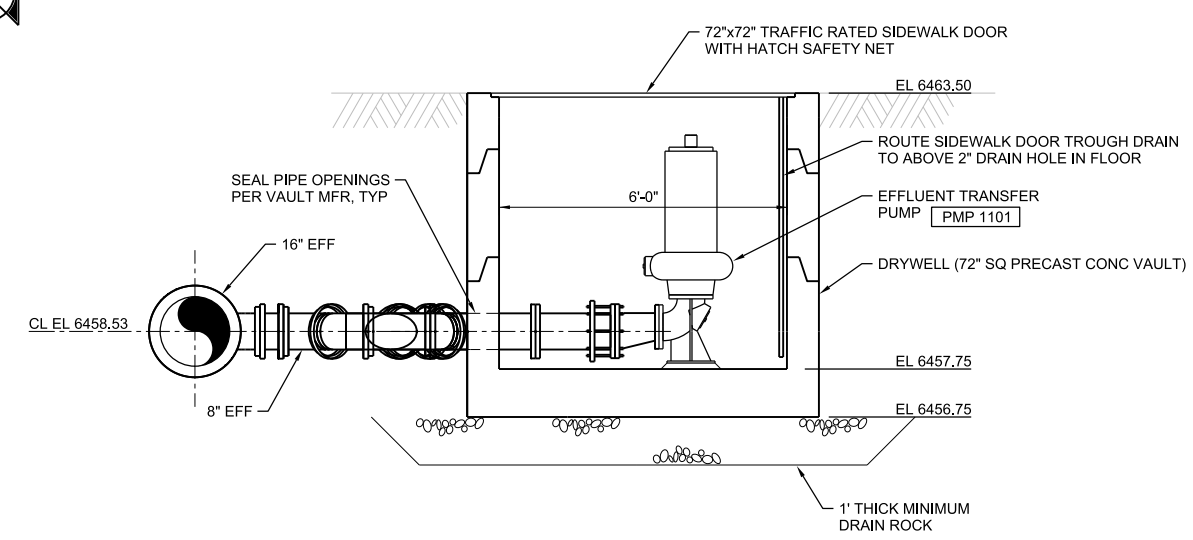
1. OPENING TO BE ADEQUATE FOR PIPE INSTALLATION. MINIMIZE CUTTING OF EXISTING REINFORCING. DO NOT SEAL PIPE OPENING.
2. EXTEND 6" BRANCH PIPING UP TO 4" BELOW GRADE, CAP BRANCH WITH 6" BF, PROVIDE 18" DIA VALVE BOX WITH DRAIN ROCK PACKED FROM BOTTOM OF VALVE BOX DOWN 2'.



PLAN
1/2"=1'-0"



B SECTION
1/2"=1'-0"



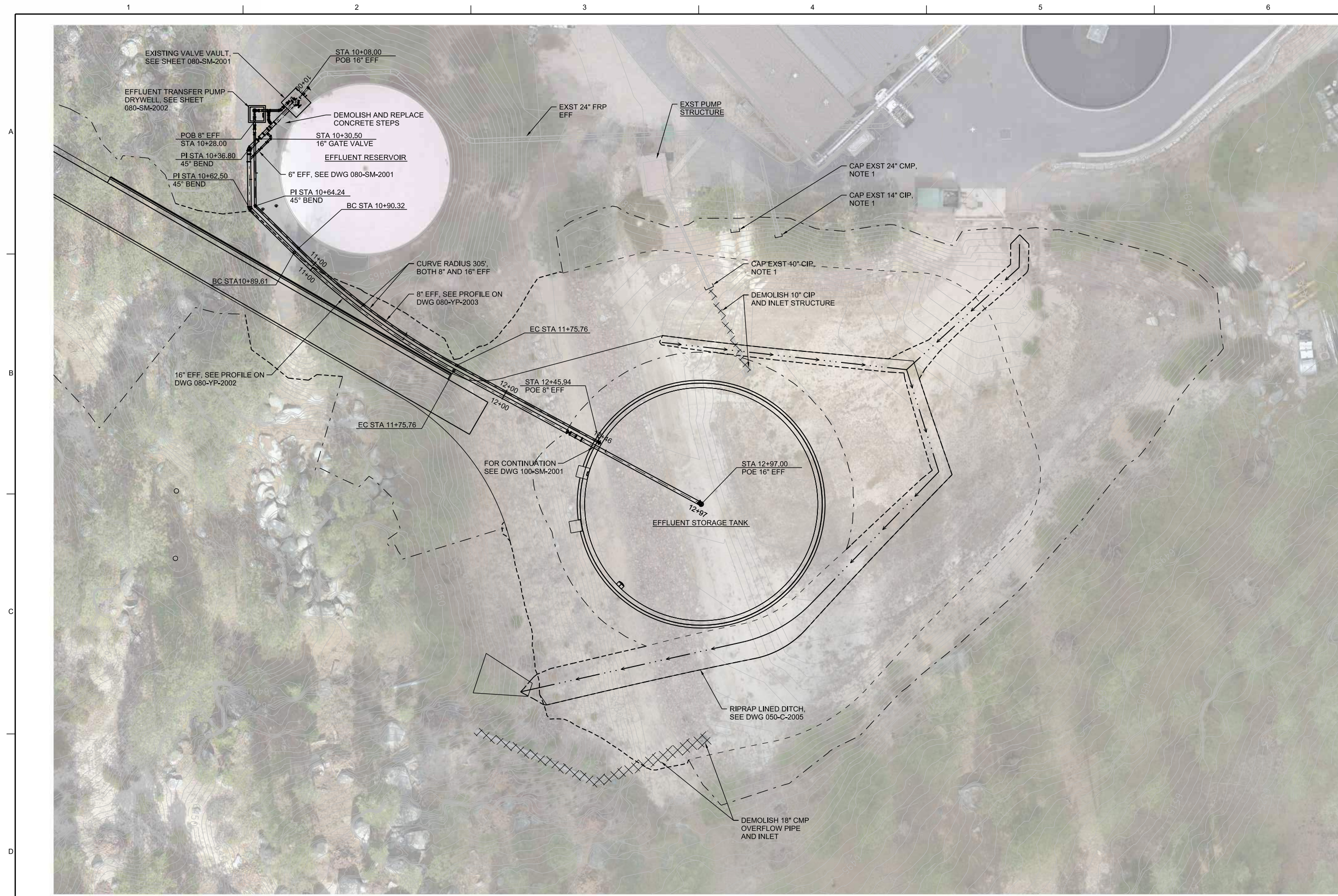
C SECTION
1/2"=1'-0"



Jacobs
MECHANICAL / YARD PIPING
EXISTING EFFLUENT RESERVOIR VAULT PLAN AND SECTIONS

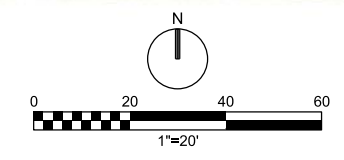
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	080-SM-2002
SHEET	23 of 43

REGISTERED PROFESSIONAL ENGINEER
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 CIVIL
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 STATE OF NEVADA
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PLAN
1"=20'

- NOTE:**
- SEAL PIPE WITH CONCRETE PLUG A MINIMUM OF 3 FEET FROM OUTLET.



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**INCLINE
VILLAGE**
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT - ONE TEAM

EFFLUENT EXPORT POND LINING PROJECT

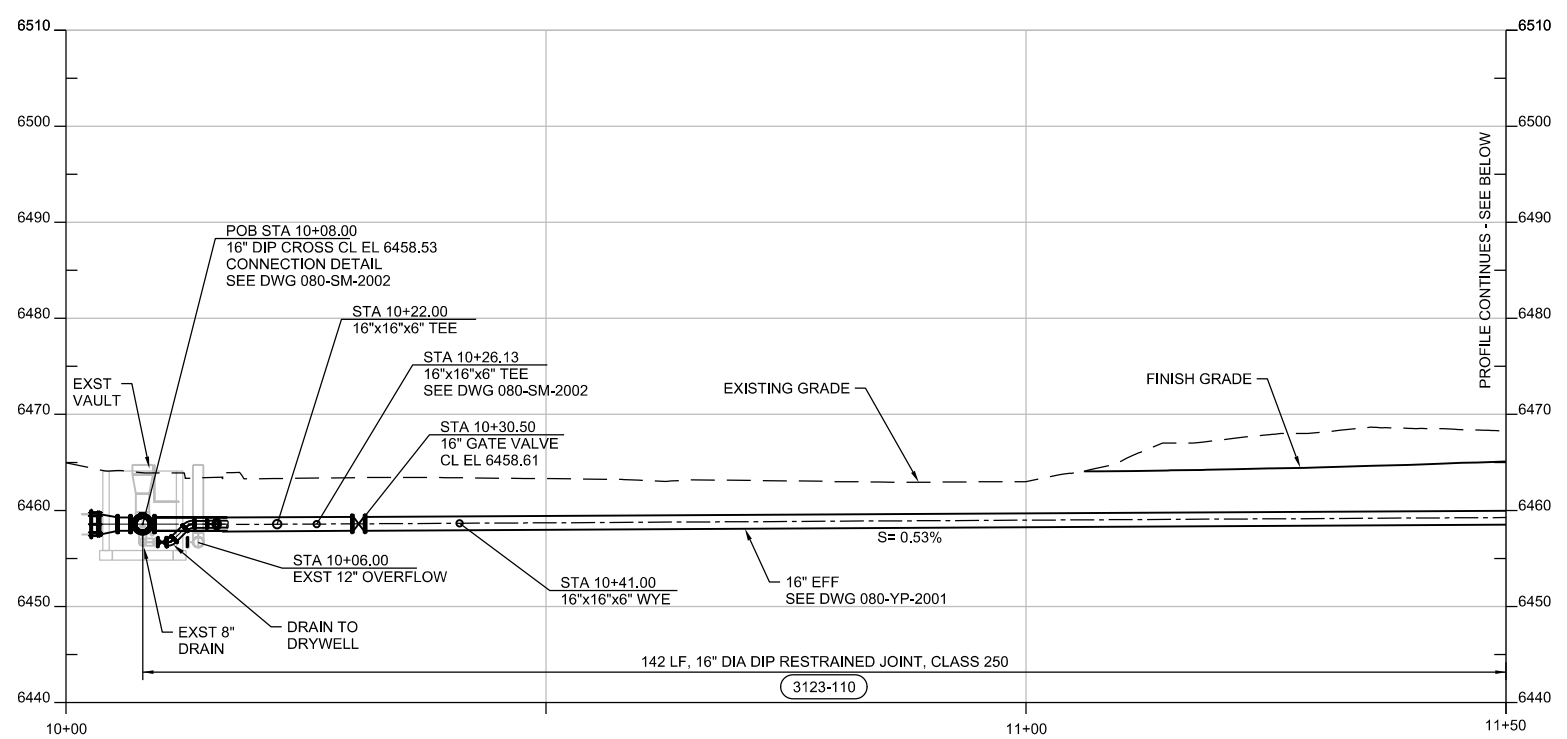
Jacobs
MECHANICAL / YARD PIPING
YARD PIPING PLAN

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	080-YP-2001
SHEET	24 of 43

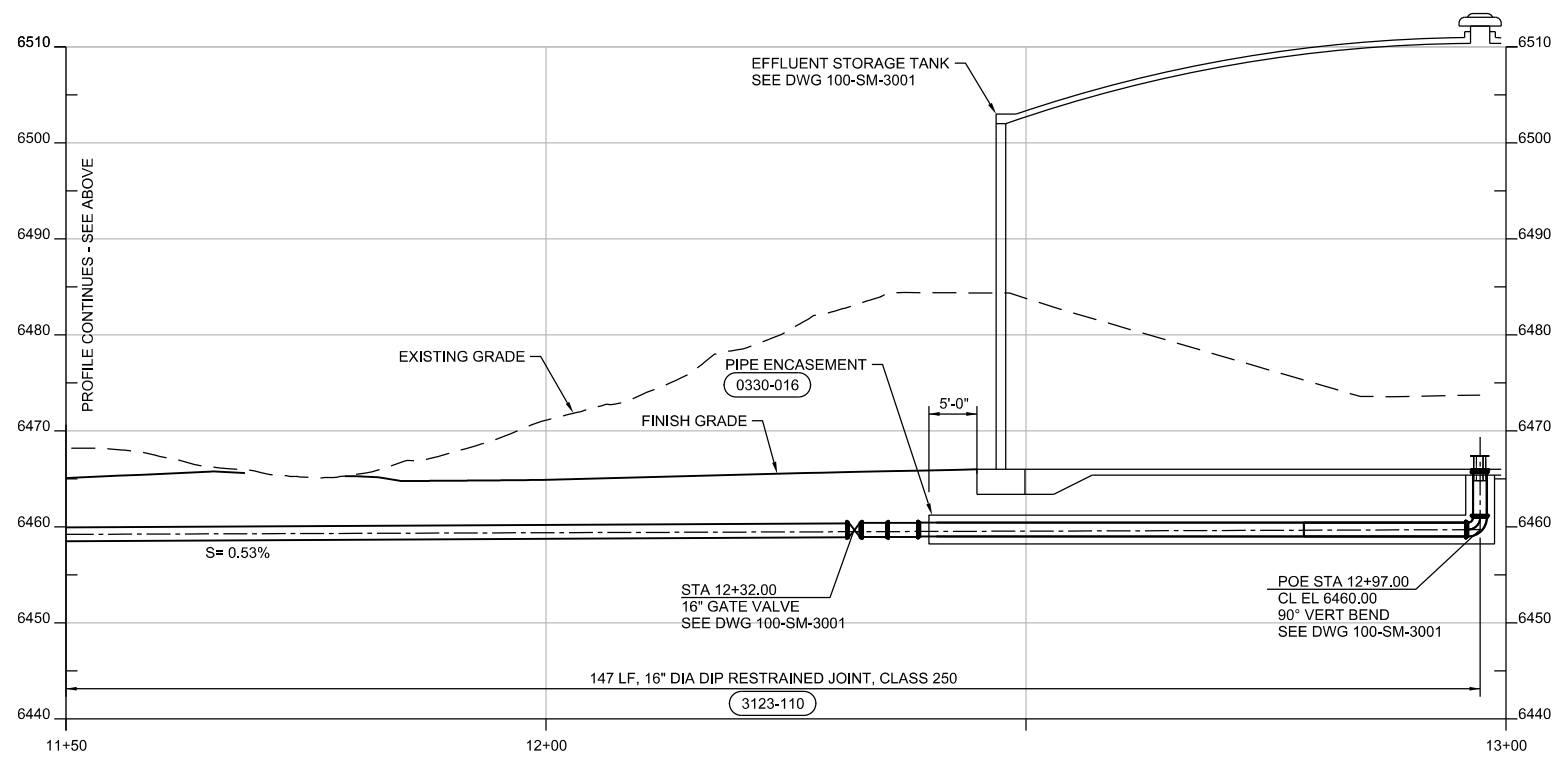
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A KELLOGG

A
B
C
D



PROFILE - 16" EFF
1"=10"



PROFILE - 16" EFF
1"=10"

REGISTERED PROFESSIONAL ENGINEER
JORDAN VAZQUEZ
CIVIL
LICENSE NO. 029431
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	REVISION	BY	APVD
				J MINOR			A KELLOGG
				J VAZQUEZ			J SIMONDS



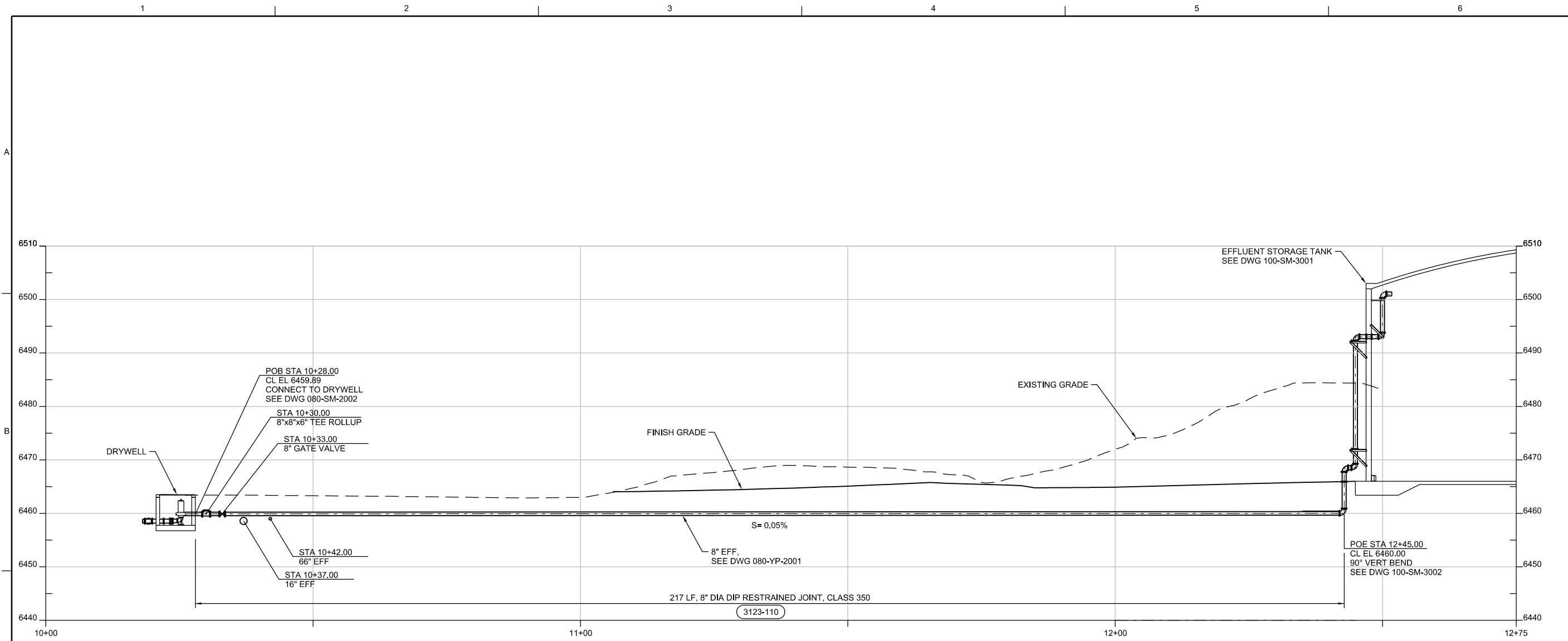
Jacobs
MECHANICAL / YARD PIPING
YARD PIPING PROFILE
16" EFFLUENT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	080-YP-2002
SHEET	25 of 43

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PROFILE - 8" EFF
1"=10'



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 STATE OF NEVADA
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NO.	DATE	DR	CHK	REVISION	APVD	BY	APVD
		J VAZQUEZ	J MINOR		J SIMONDS		A KELLOGG

Jacobs
 MECHANICAL / YARD PIPING
YARD PIPING PROFILES
 8" EFFLUENT

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	080-YP-2003
SHEET	26 of 43

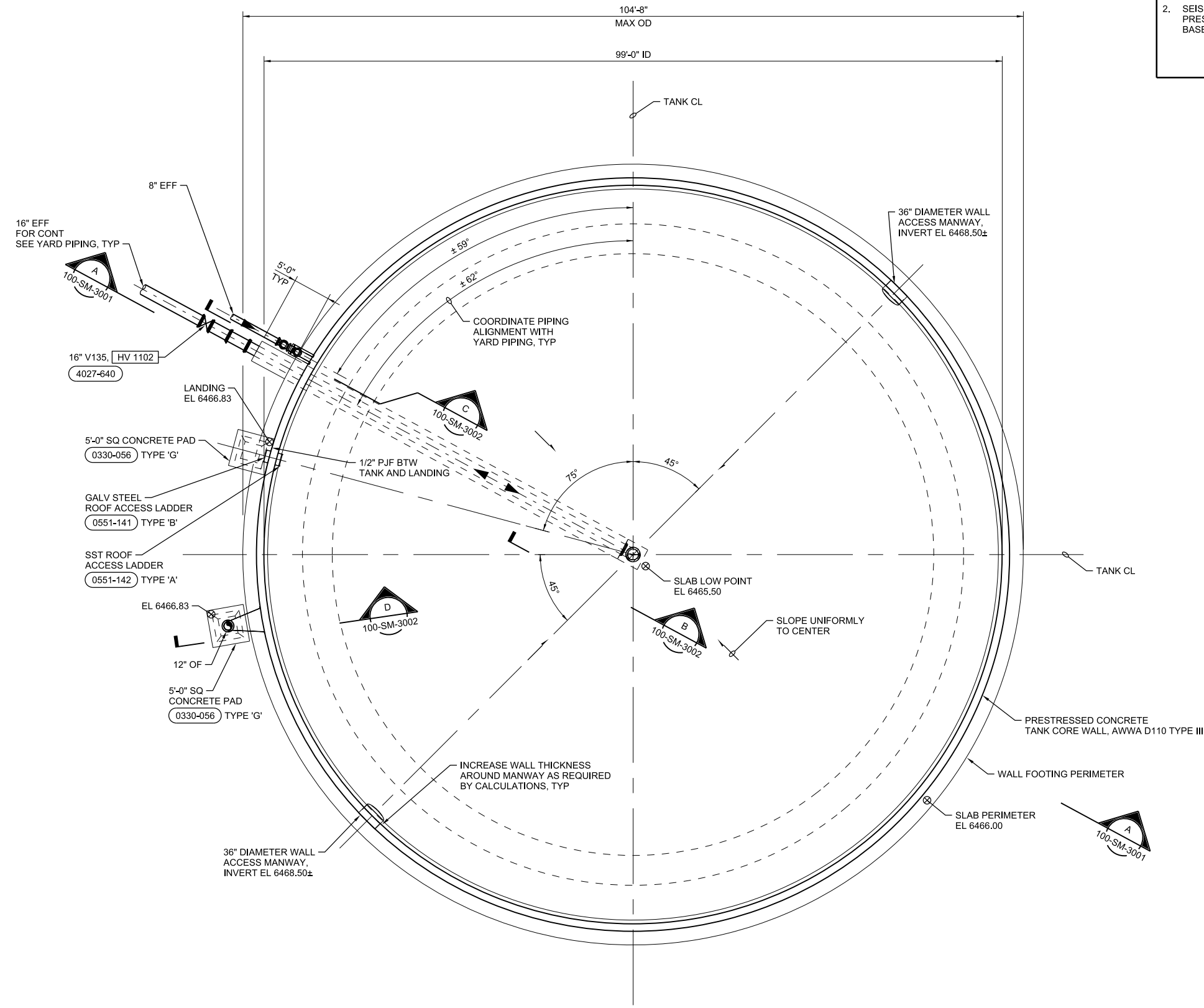
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GENERAL SHEET NOTES

- SEE DRAWING 001-G-0005 FOR GENERAL STRUCTURAL NOTES.
- SEISMIC FORCE RESISTING SYSTEM: PRESTRESSED CONCRETE ANCHORED FLEXIBLE BASE.

REGISTERED PROFESSIONAL ENGINEER
 JEREMY KELLOGG
 STRUCTURAL
 LICENSE NO. 027491
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
 JOHN SIMONDS
 MECHANICAL
 LICENSE NO. 027655
 STATE OF NEVADA
 NOT FOR CONSTRUCTION



PLAN
 1/8"=1'-0"

NO.	DATE	DR	CHK	REVISION	BY	APVD

KELLOGG / MISSLIN
 TROYAN / SIMONDS
 MINOR / CAVE
 A. KELLOGG



Jacobs
 STRUCTURAL / MECHANICAL
**EFFLUENT STORAGE TANK
 FOUNDATION PLAN**

AS NOTED	
VERIFY SCALE	
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GENERAL SHEET NOTES

1. SEE INSTRUMENT LIST FOR STANDARD DETAIL FOR ROOF PENETRATIONS. REFER TO 800-E-1001 FOR INSTRUMENT TAG NUMBERS.

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 STRUCTURAL
 LICENSE NO. 027491
 STATE OF NEVADA
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REGISTERED PROFESSIONAL ENGINEER
 JOHN SIMONDS
 MECHANICAL
 LICENSE NO. 027655
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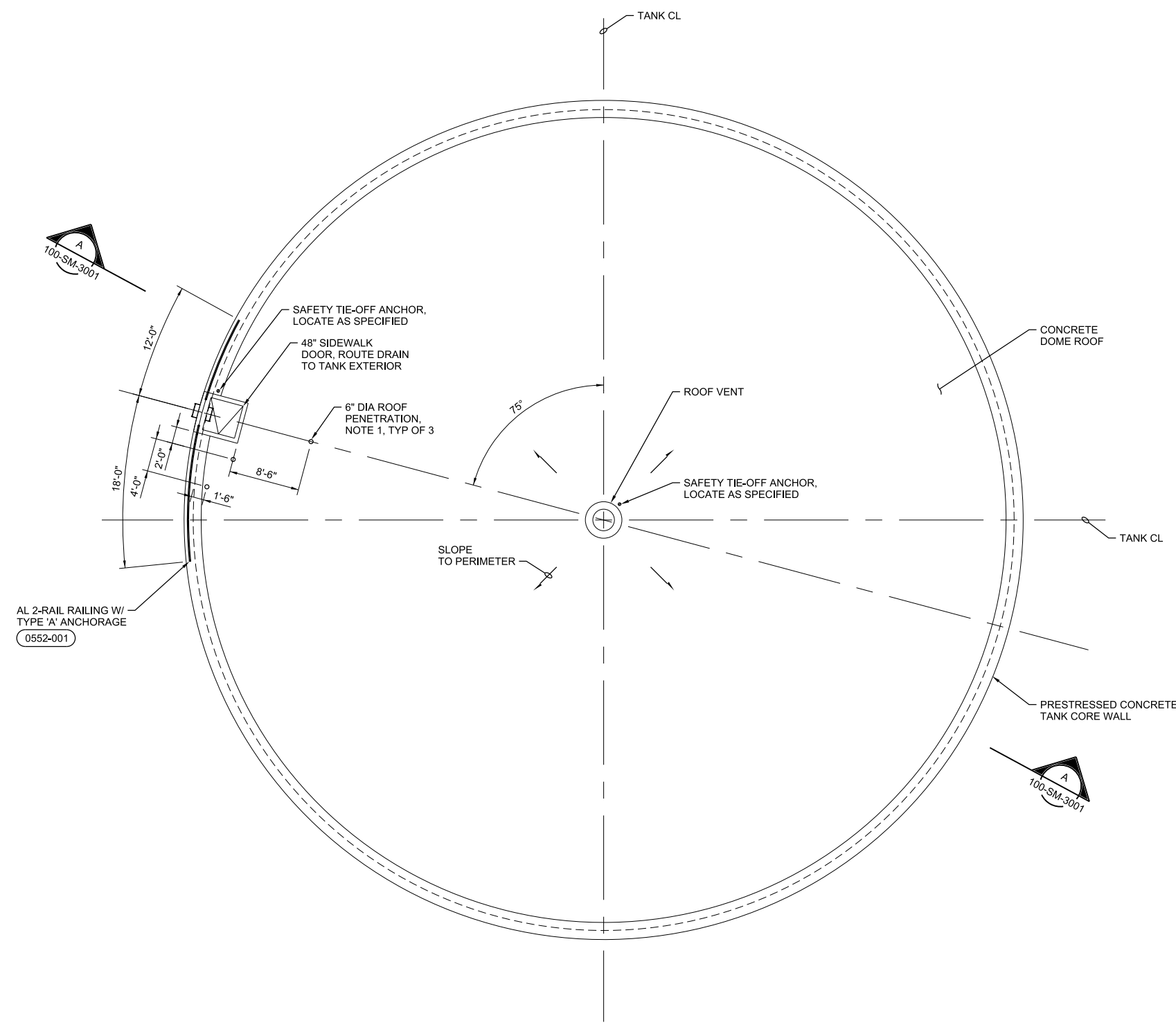
INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT
 ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

Jacobs
 STRUCTURAL / MECHANICAL
**EFFLUENT STORAGE TANK
 ROOF PLAN**

AS NOTED
 VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE: FEBRUARY 2023
 PROJ: W8Y12900
 DWG: 100-SM-2002
 SHEET: 28 of 43

PLAN
 1/8"=1'-0"



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1 2 3 4 5 6

A
B
C
D

REGISTERED PROFESSIONAL ENGINEER
JEREMY KELLOGG
STRUCTURAL
LICENSE NO. 027491
STATE OF NEVADA
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
JOHN SIMONDS
MECHANICAL
LICENSE NO. 027655
STATE OF NEVADA
NOT FOR CONSTRUCTION

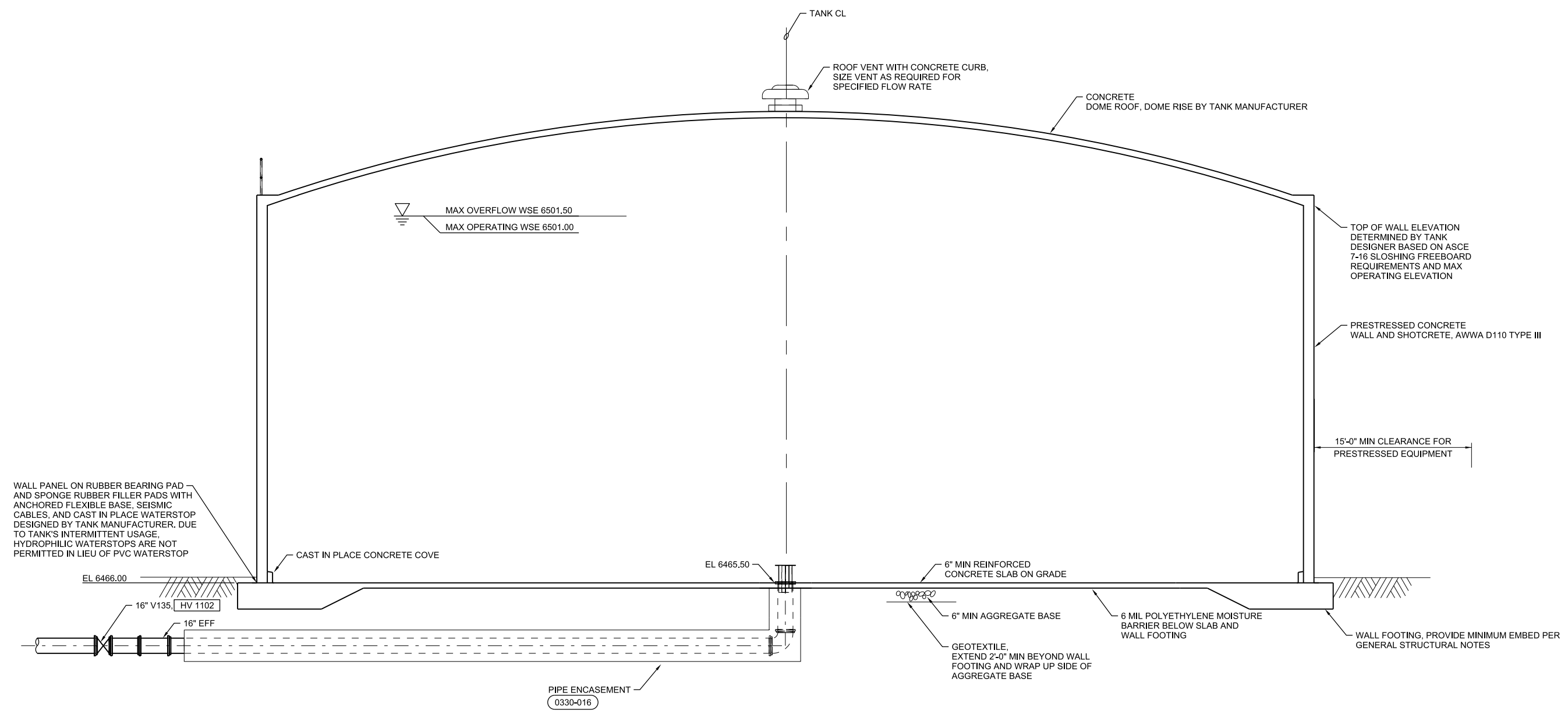
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INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

JACOBS
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EFFLUENT STORAGE TANK
SECTION

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DWG 100-SM-3001
SHEET 29 of 43



A SECTION
3/16"=1'-0"
100-SM-2001
100-SM-2002

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GENERAL SHEET NOTES

- PIPE SUPPORTS SHOWN MUST BE DESIGNED BY THE TANK MANUFACTURER. IN LIEU OF INTERIOR PIPE SUPPORTS, THE INTERIOR PIPING MAY BE MOVED CLOSER TO THE WALL AND CAST INTO THE WALL PANEL AT THE DISCRETION OF THE TANK MANUFACTURER.

REGISTERED PROFESSIONAL ENGINEER
 JEREMY KELLOGG
 STRUCTURAL
 LICENSE NO. 027491
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
 JOHN SIMONDS
 MECHANICAL
 LICENSE NO. 027655
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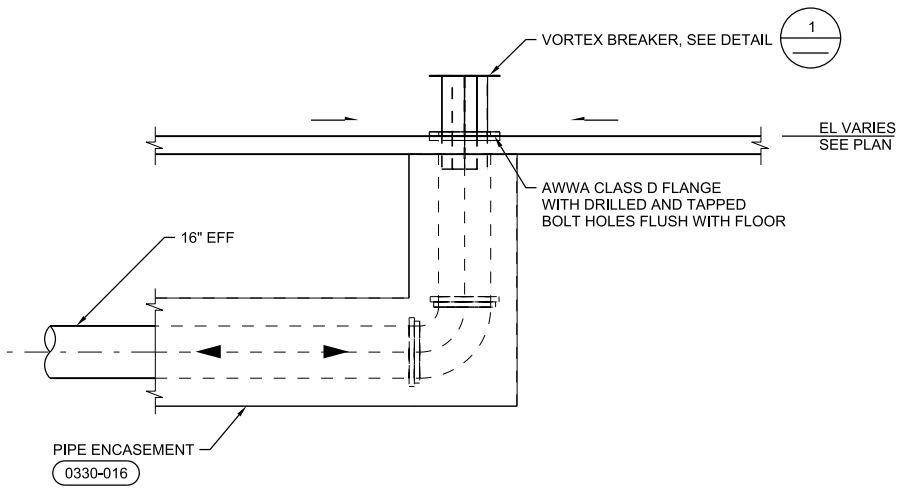
NO.	DATE	DR	MINOR / CAVE	TROYAN / SIMONDS	APVD	BY	APVD
							A. KELLOGG

INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

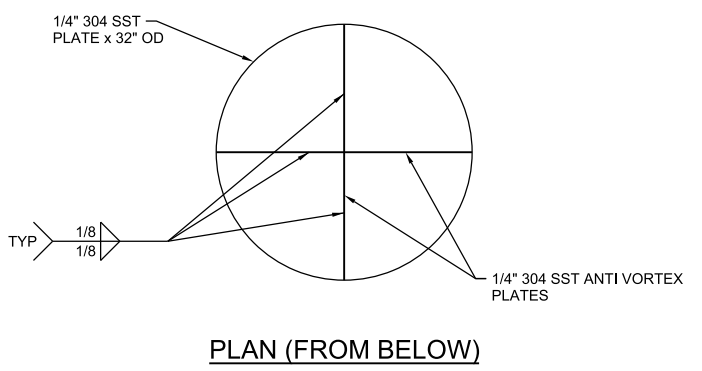
Jacobs
 STRUCTURAL / MECHANICAL
 EFFLUENT STORAGE TANK SECTIONS

AS NOTED
 VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 DATE: FEBRUARY 2023
 PROJ: W8Y12900
 DWG: 100-SM-3002
 SHEET: 30 of 43

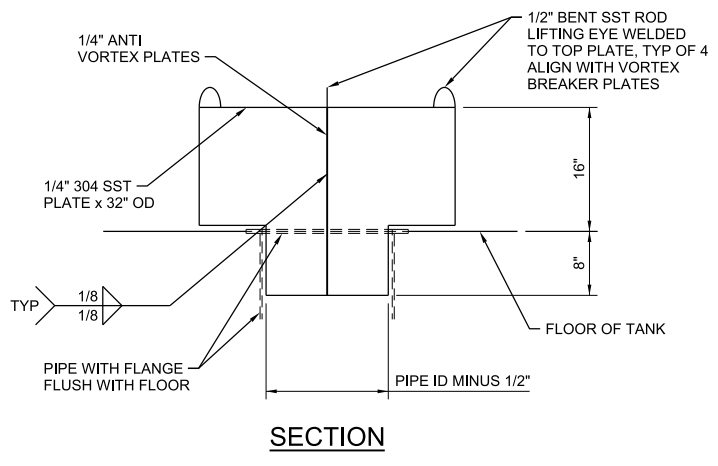
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B SECTION
 3/8"=1'-0"
 100-SM-2001

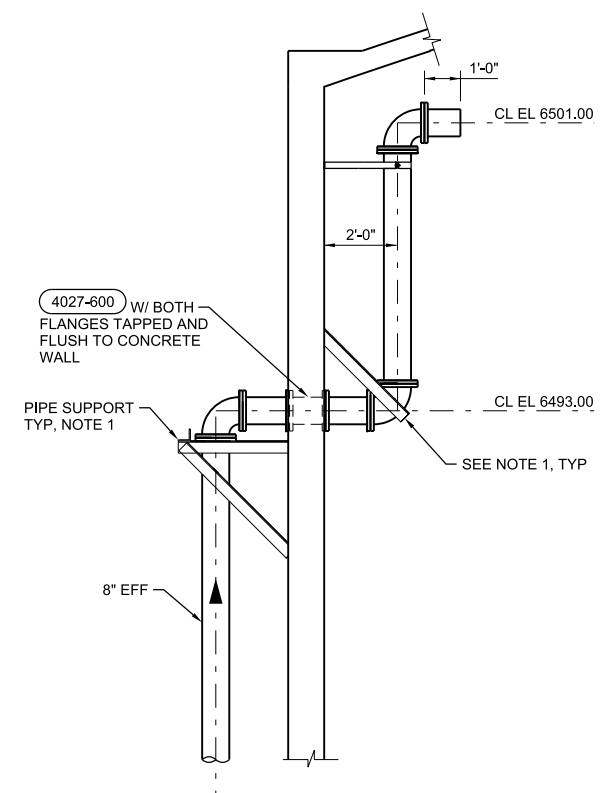


PLAN (FROM BELOW)

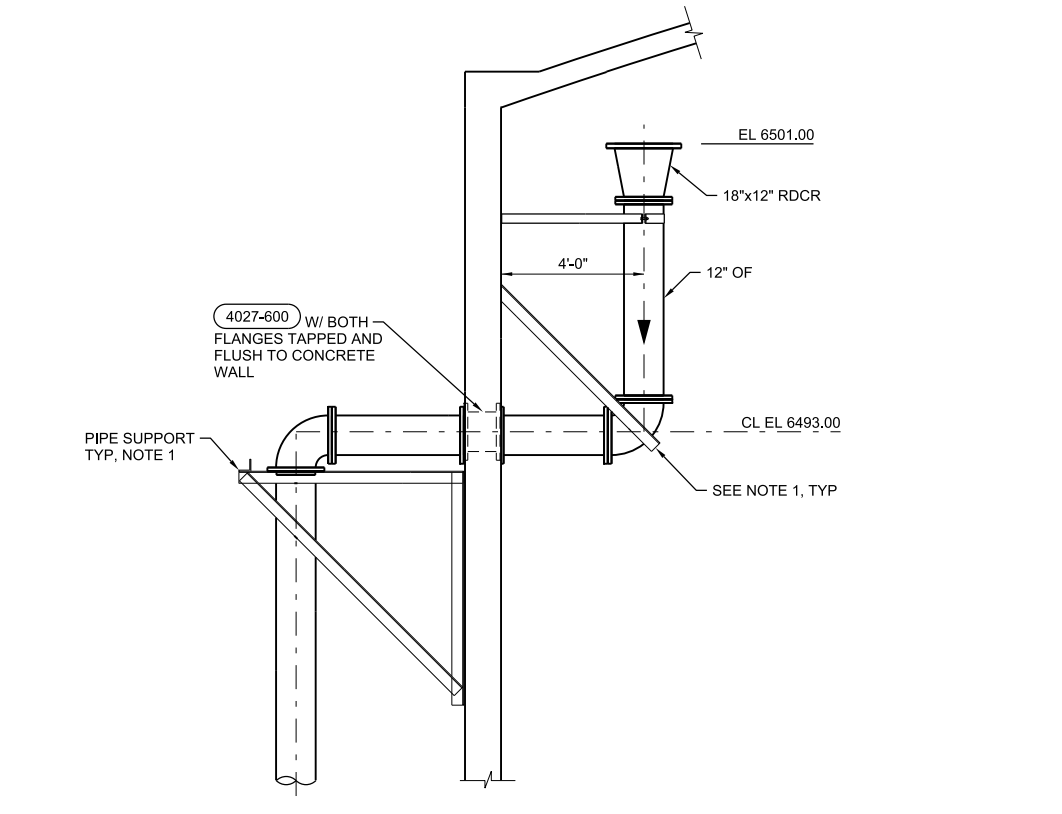


SECTION

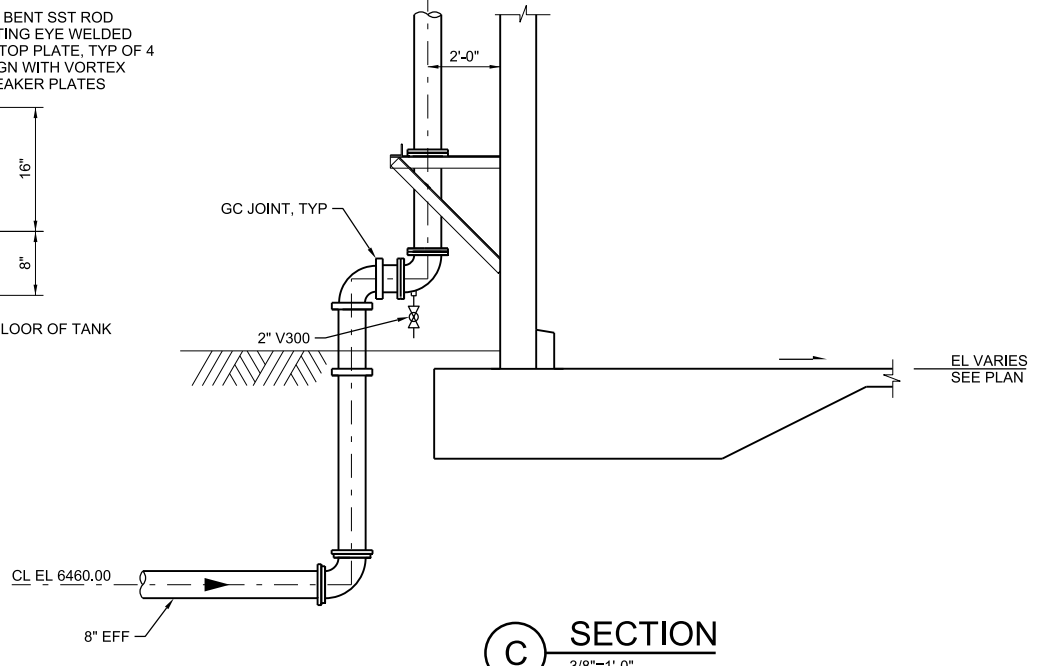
1 VORTEX BREAKER
 NTS



C SECTION
 3/8"=1'-0"
 100-SM-2001



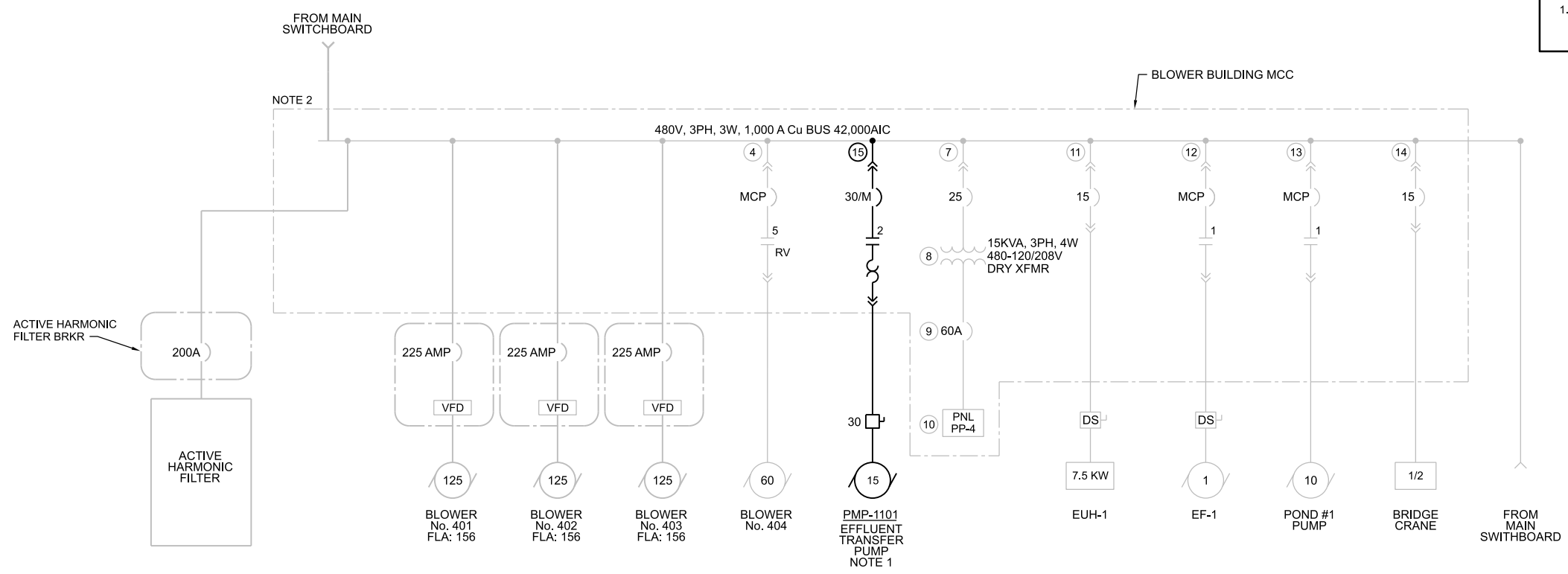
D SECTION
 3/8"=1'-0"
 100-SM-2001



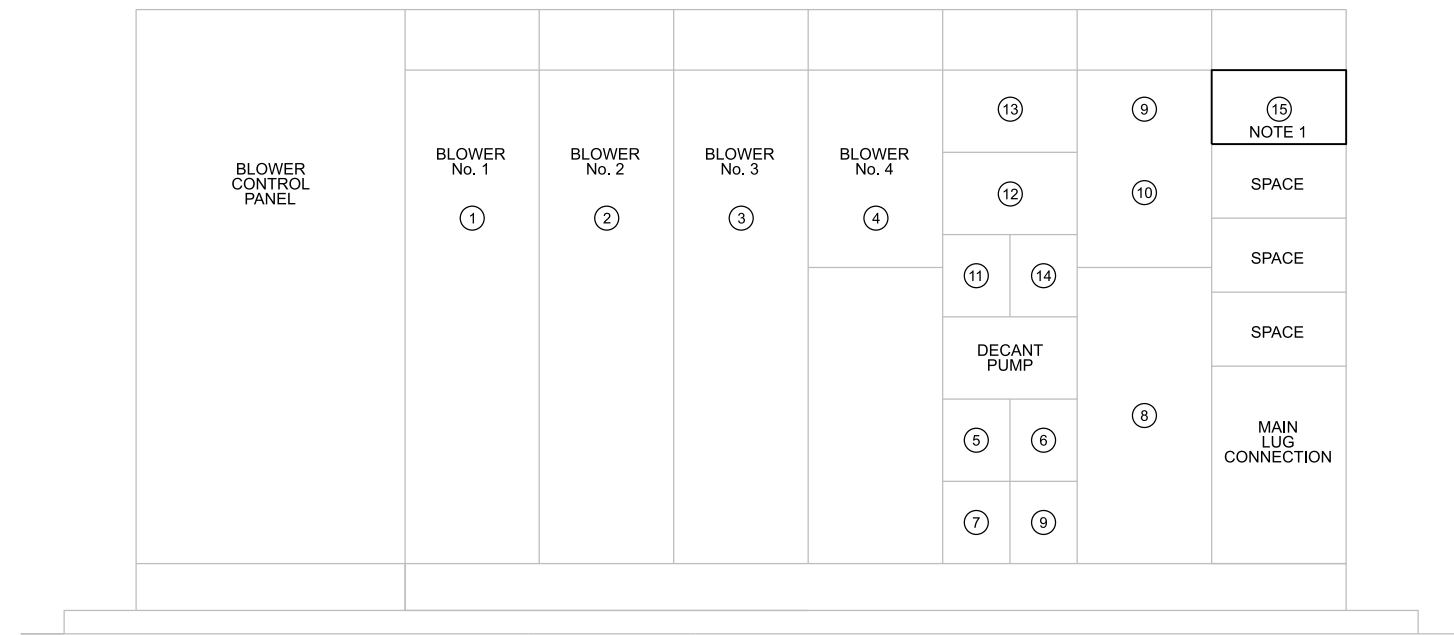
SHEET NOTES

- INSTALL NEW MOTOR STARTER IN EMPTY CUBICLE.

REGISTERED PROFESSIONAL ENGINEER
 CRAIG M. CUSWORTH
 ELECTRICAL
 LICENSE NO. 022425
 STATE OF NEVADA
 NOT FOR CONSTRUCTION



BLOWER BUILDING MCC ONE LINE DIAGRAM
 NTS



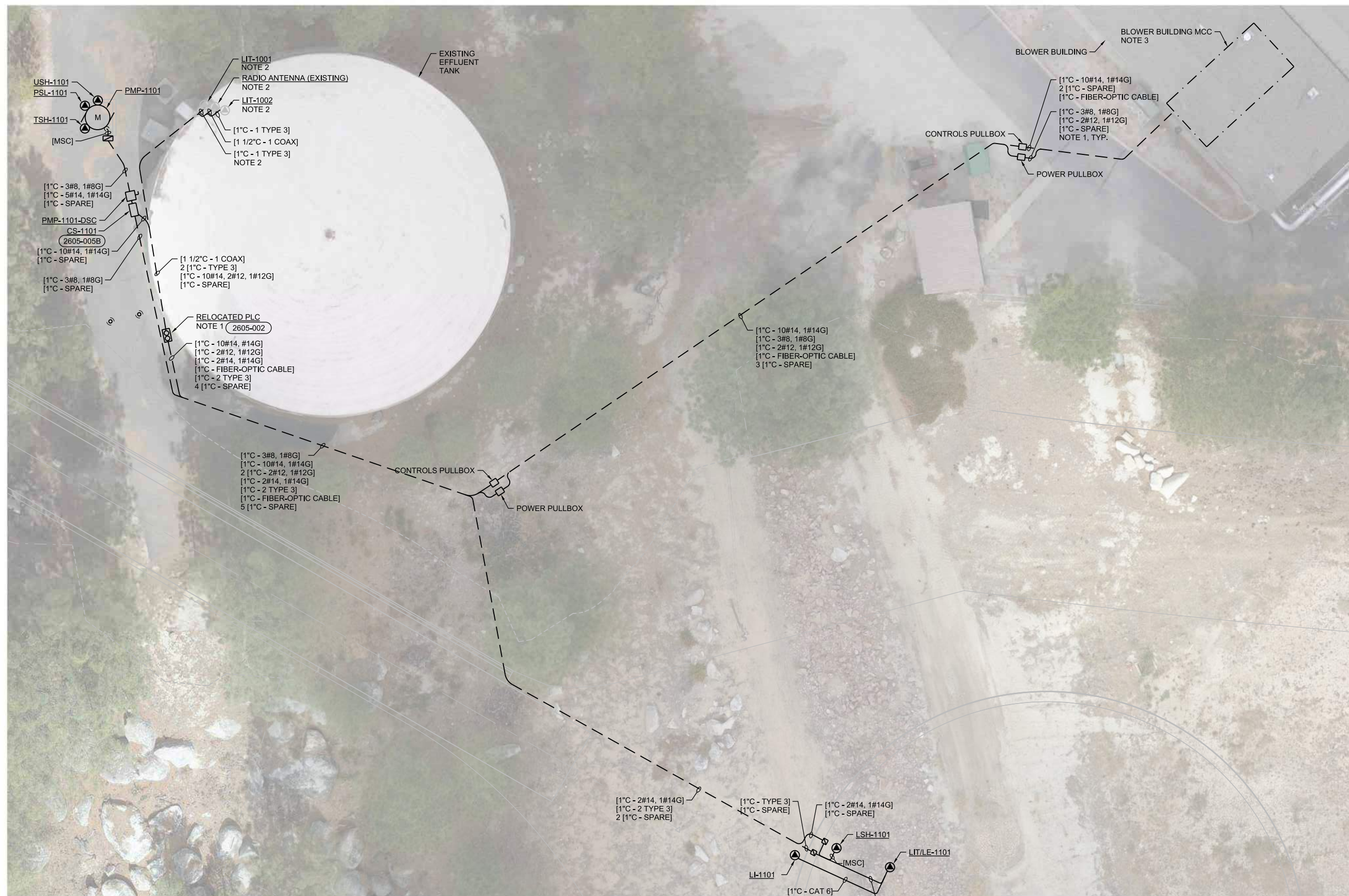
BLOWER BUILDING MCC ELEVATION
 NTS

NO.	DATE	DR	CHK	APVD
		J. ABSHIER	J. ABSHIER	C. CUSWORTH
				A. KELLOGG

Jacobs
 ELECTRICAL
ONE LINE DIAGRAM

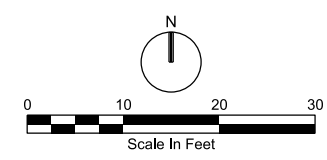
VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	800-E-0001
SHEET	31 of 43

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- NOTES:
1. STUB UP AND CAP SPARE CONDUITS AT BOTH ENDS.
 2. RELOCATE PLC PANEL AS SHOWN. RE-CONNECT EXISTING INSTRUMENTS TO PLC PANEL AT NEW LOCATION.
 3. ELECTRICAL ROOM AND MCC LOCATION IS APPROXIMATE. COORDINATE FINAL ROUTING OF CONDUIT INTO BUILDING AND MCC WITH OWNER.

PLAN
1"=10'-0"

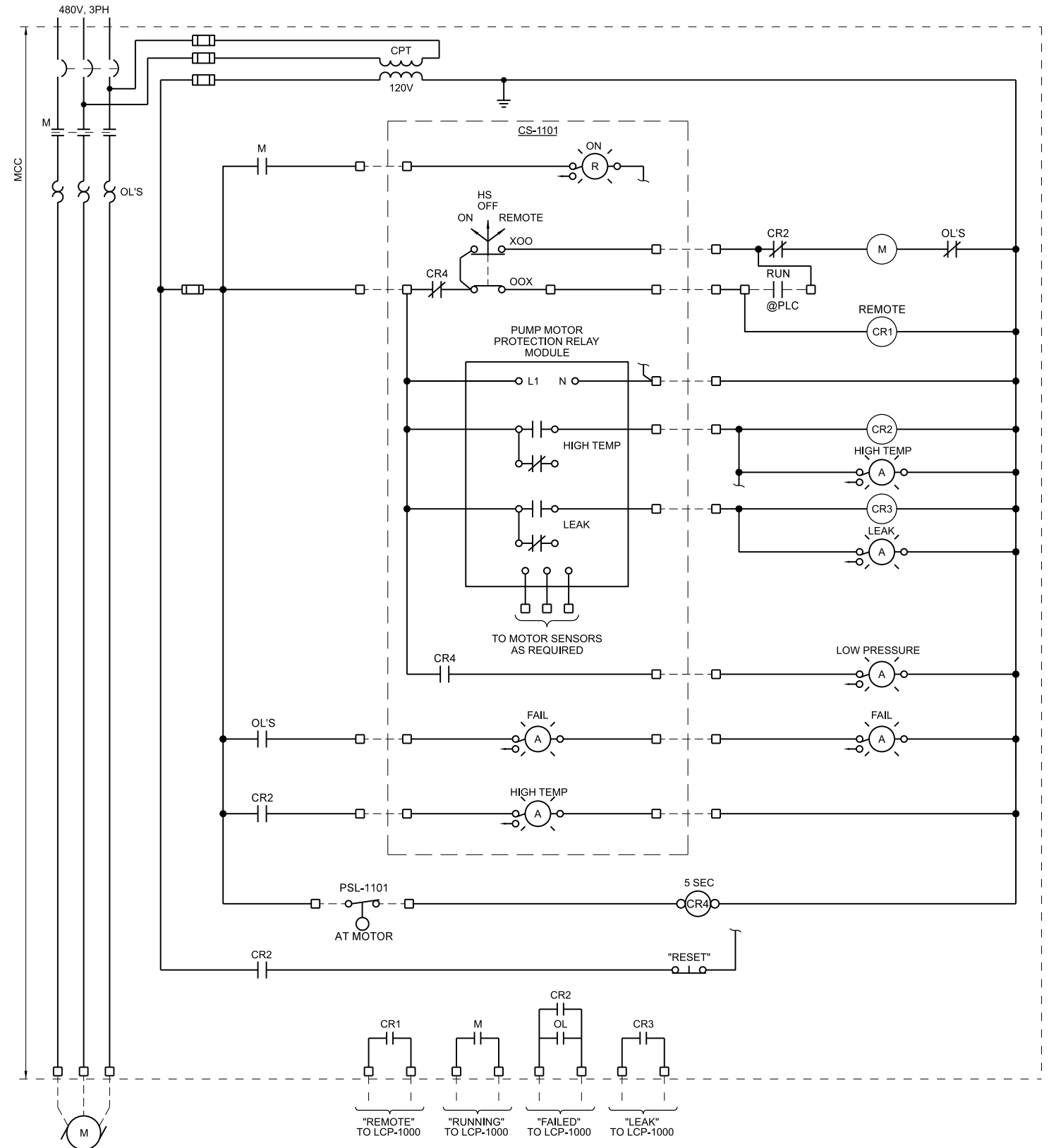


NO.	DATE	DR	CHK	REVISION	BY	APVD
		J. ABBSHIER				A. KELLOGG
		J. ABBSHIER				C. CUSWORTH

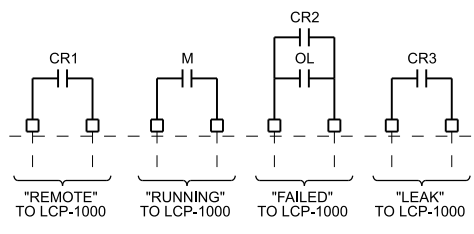
<p>JACOBS ELECTRICAL</p>	OVERALL SITE PLAN
	VERIFY SCALE
	BAR IS ONE INCH ON ORIGINAL DRAWING.
	DATE FEBRUARY 2023 PROJ W8Y12900 DWG 800-E-1001 SHEET 32 of 43

90% DESIGN - NOT FOR CONSTRUCTION

A
B
C
D



PMP-1101 PUMP CONTROL DIAGRAM
NTS



REGISTERED PROFESSIONAL ENGINEER
CRAIG M. CUSWORTH
ELECTRICAL
LICENSE NO. 022425
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	REVISION	BY	APVD
		J. JABSHIER				A. KELLOGG
		J. JABSHIER				C. CUSWORTH



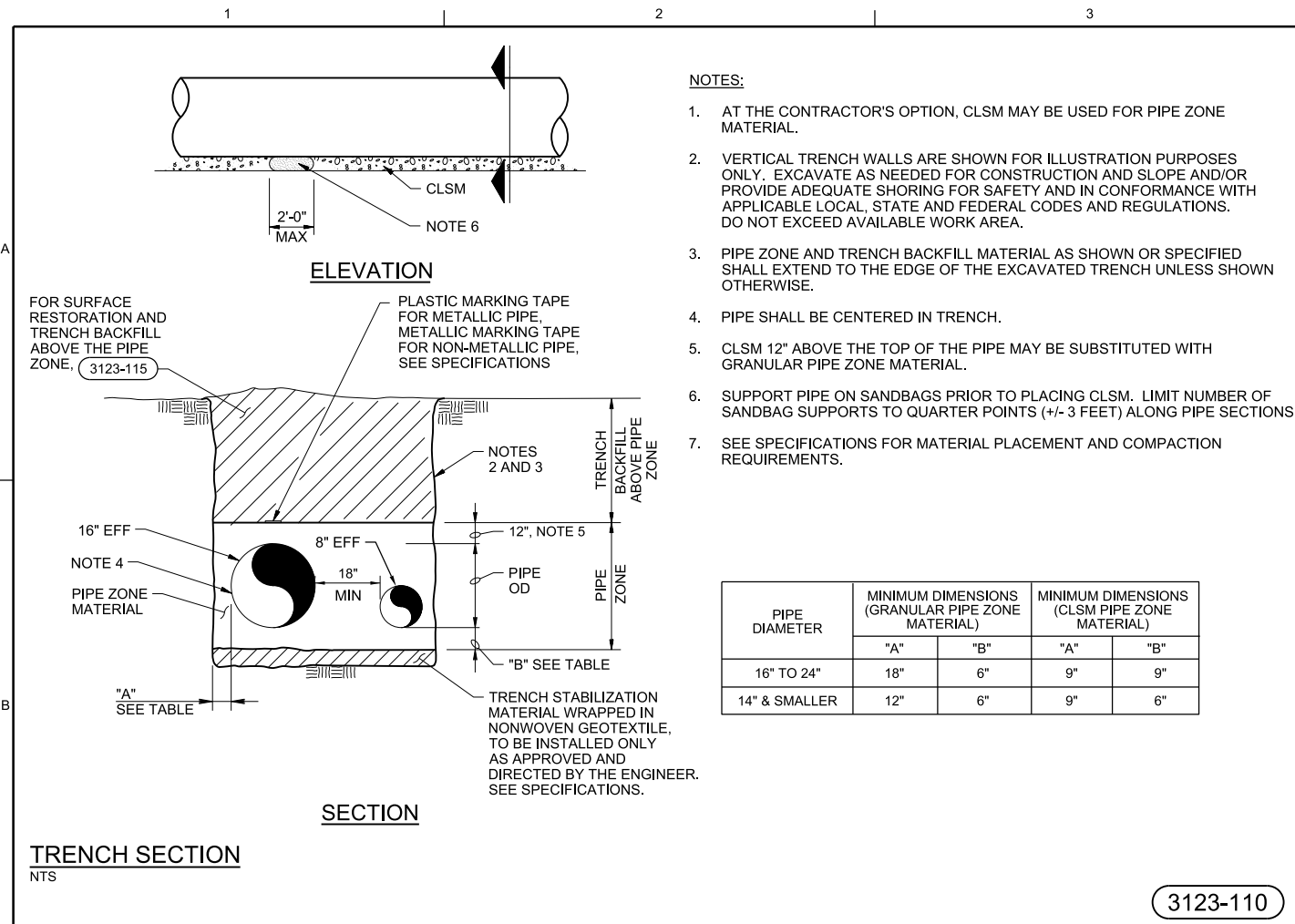
Jacobs
ELECTRICAL

MOTOR CONTROL DIAGRAM

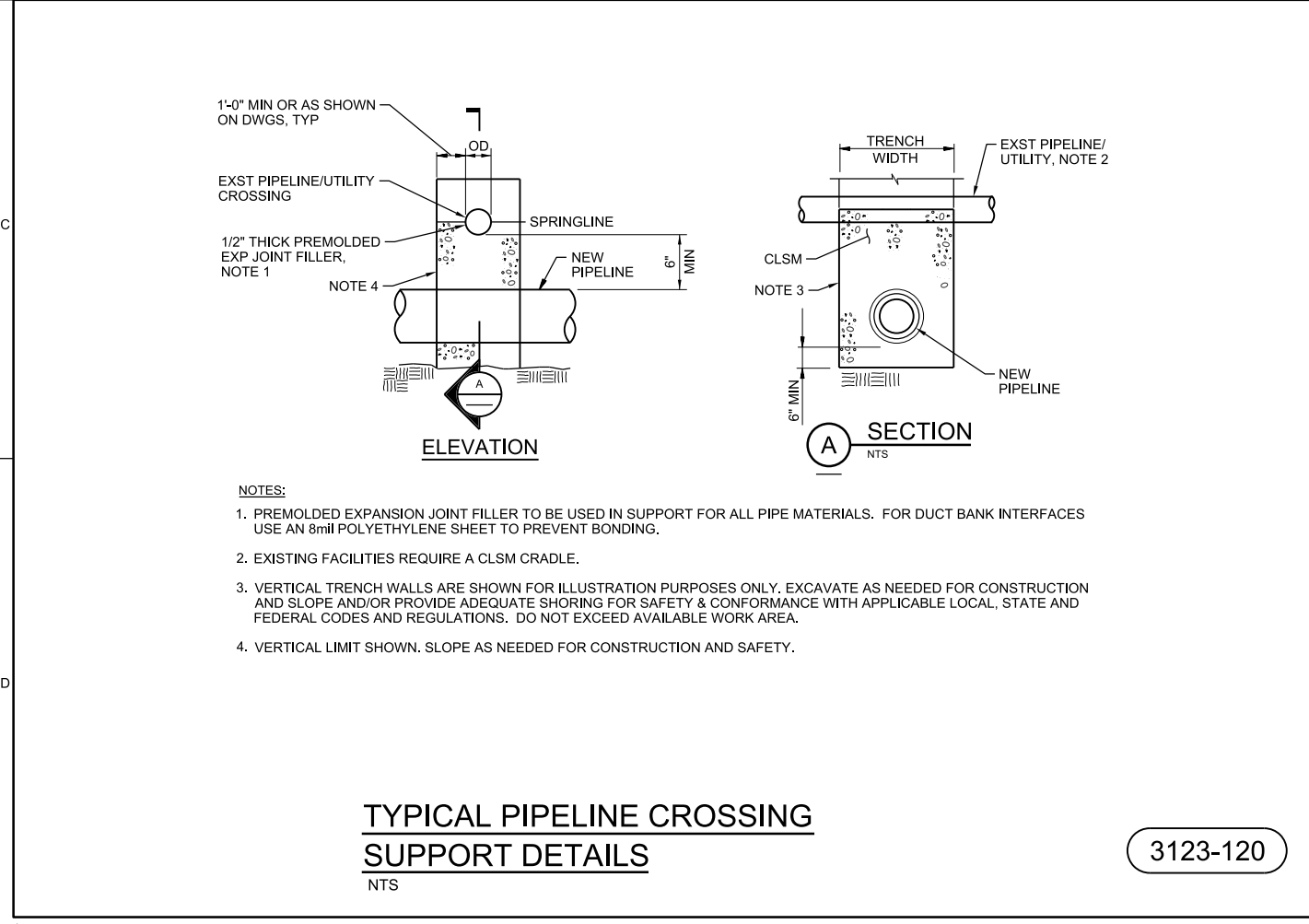
VERIFY SCALE
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DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	800-E-3001
SHEET	33 of 43

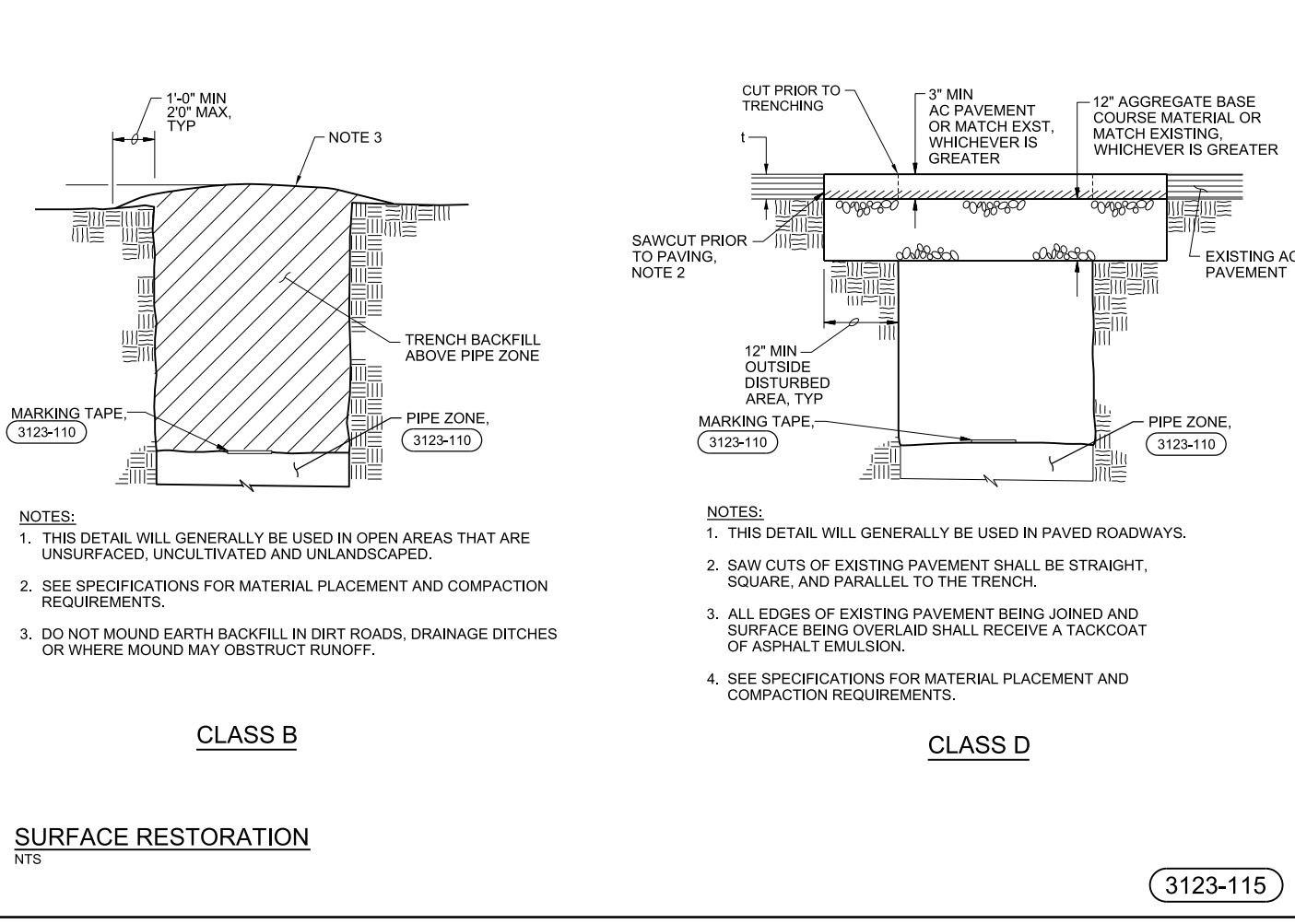
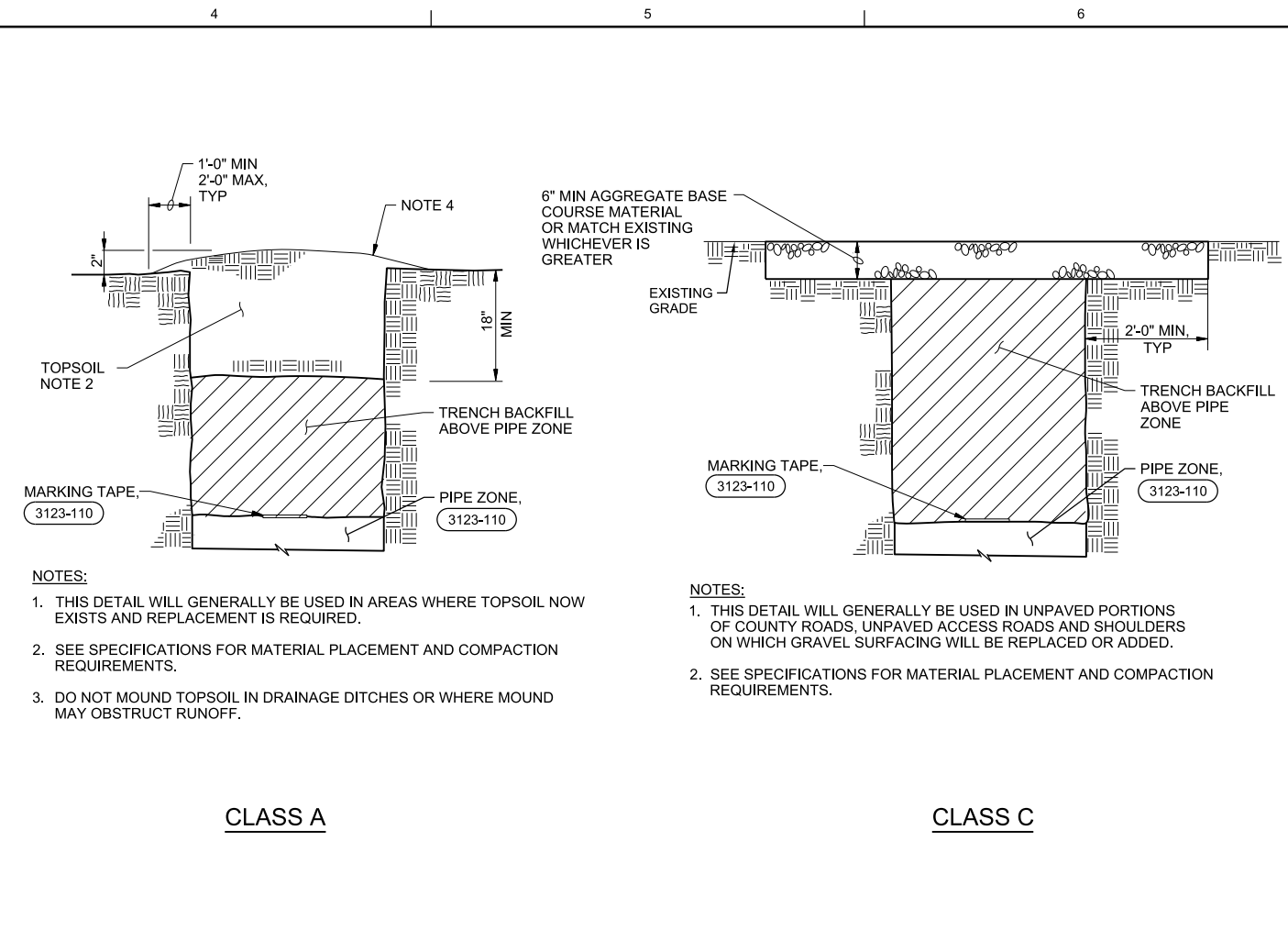
90% DESIGN - NOT FOR CONSTRUCTION



3123-110



3123-120



SURFACE RESTORATION
NTS

3123-115

REGISTERED PROFESSIONAL ENGINEER
TRAVIS J. HOWARD
CIVIL
LICENSE NO. 021924
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	REVISION	BY	APVD

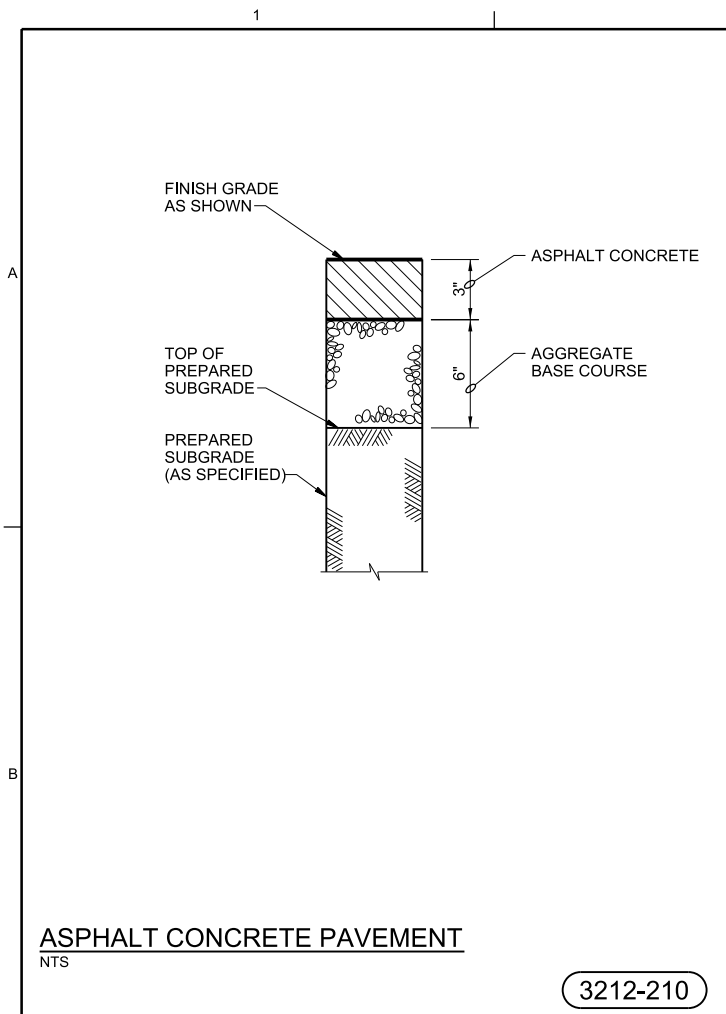
J. CHELONIS
B. CHELONIS
A. KELLOGG

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

JACOBS
CIVIL
STANDARD DETAILS

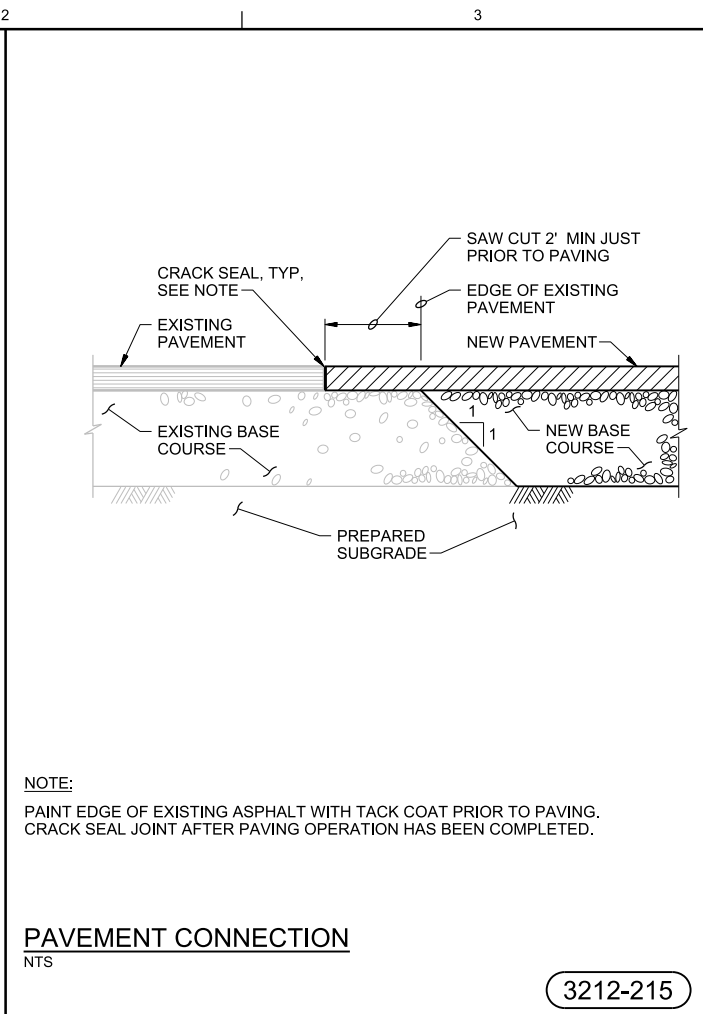
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE FEBRUARY 2023
PROJ W8Y12900
DWG 900-SD-0001
SHEET 34 of 43

90% DESIGN - NOT FOR CONSTRUCTION



ASPHALT CONCRETE PAVEMENT
NTS

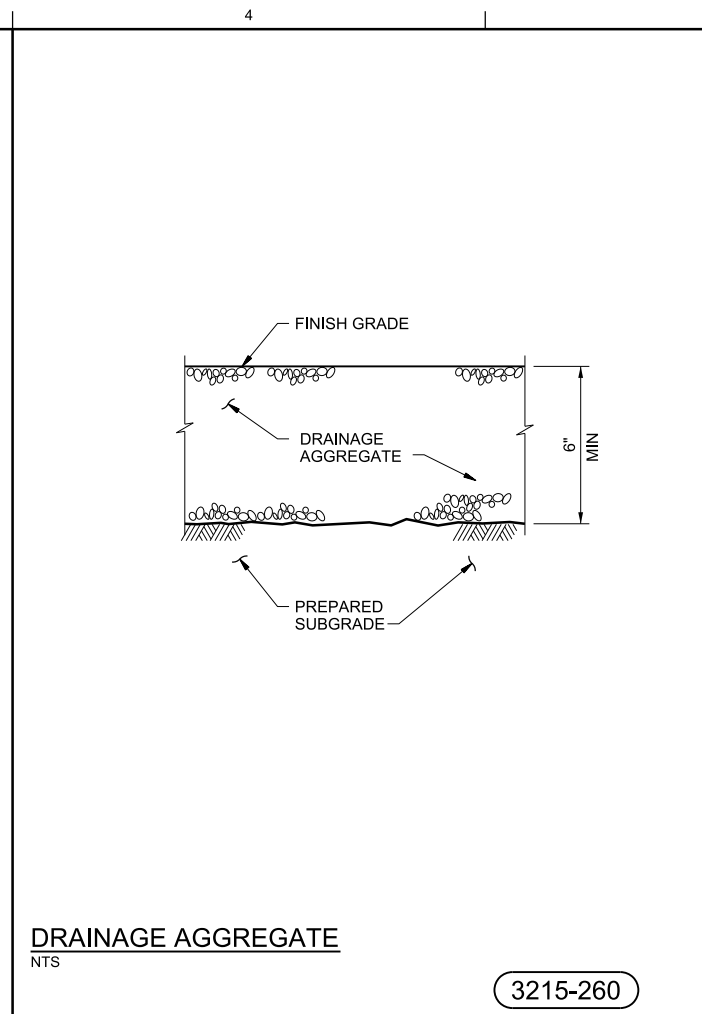
3212-210



NOTE:
PAINT EDGE OF EXISTING ASPHALT WITH TACK COAT PRIOR TO PAVING.
CRACK SEAL JOINT AFTER PAVING OPERATION HAS BEEN COMPLETED.

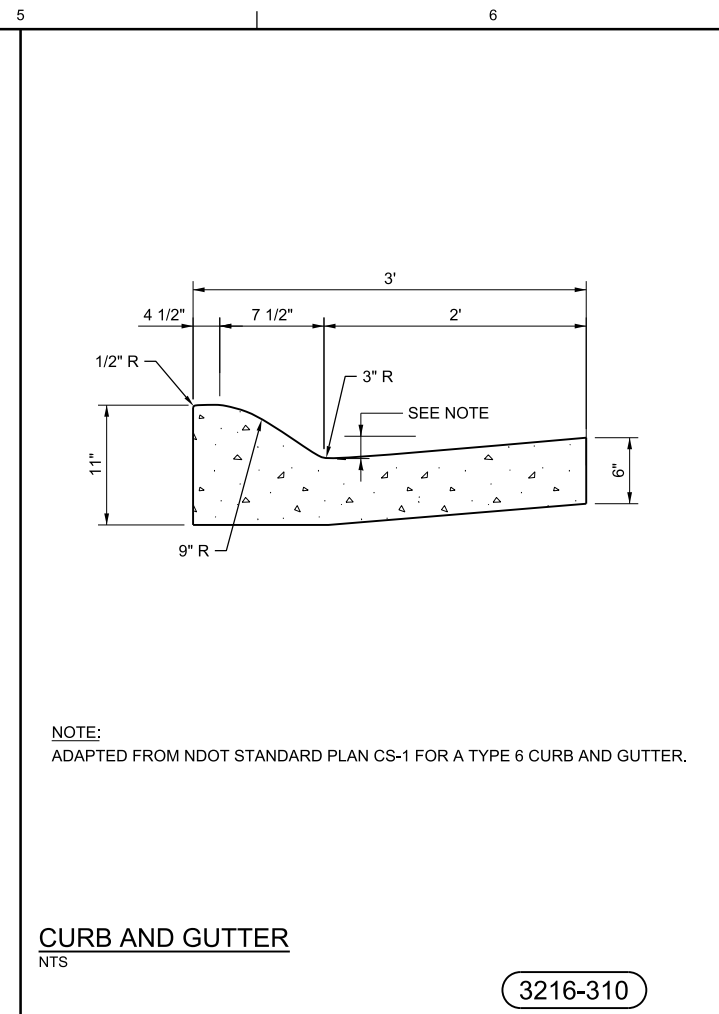
PAVEMENT CONNECTION
NTS

3212-215



DRAINAGE AGGREGATE
NTS

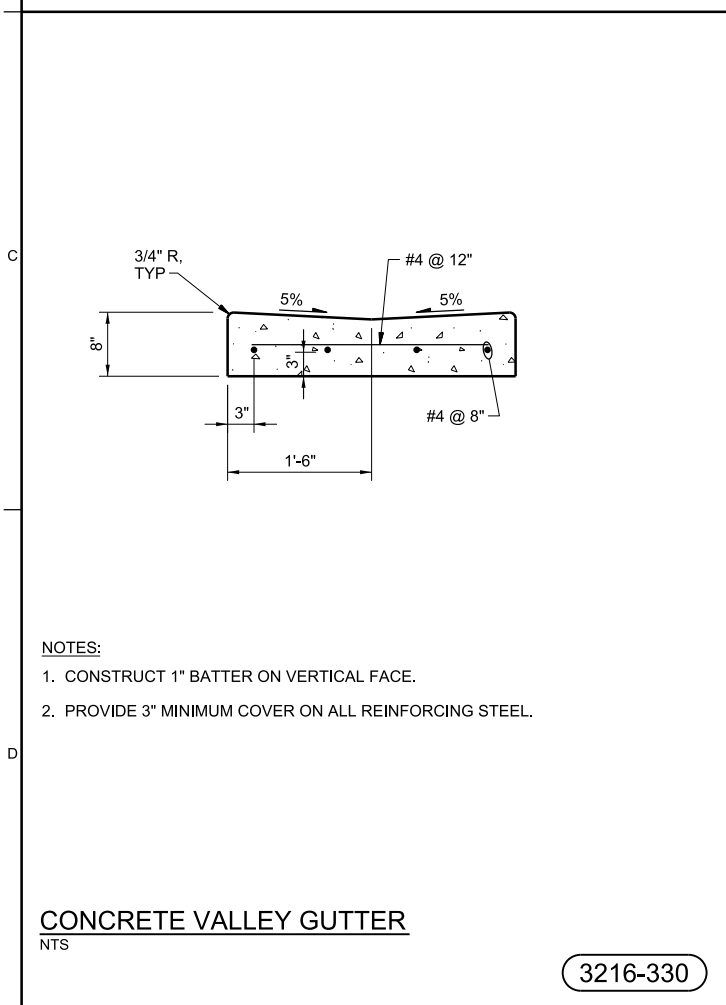
3215-260



NOTE:
ADAPTED FROM NDOT STANDARD PLAN CS-1 FOR A TYPE 6 CURB AND GUTTER.

CURB AND GUTTER
NTS

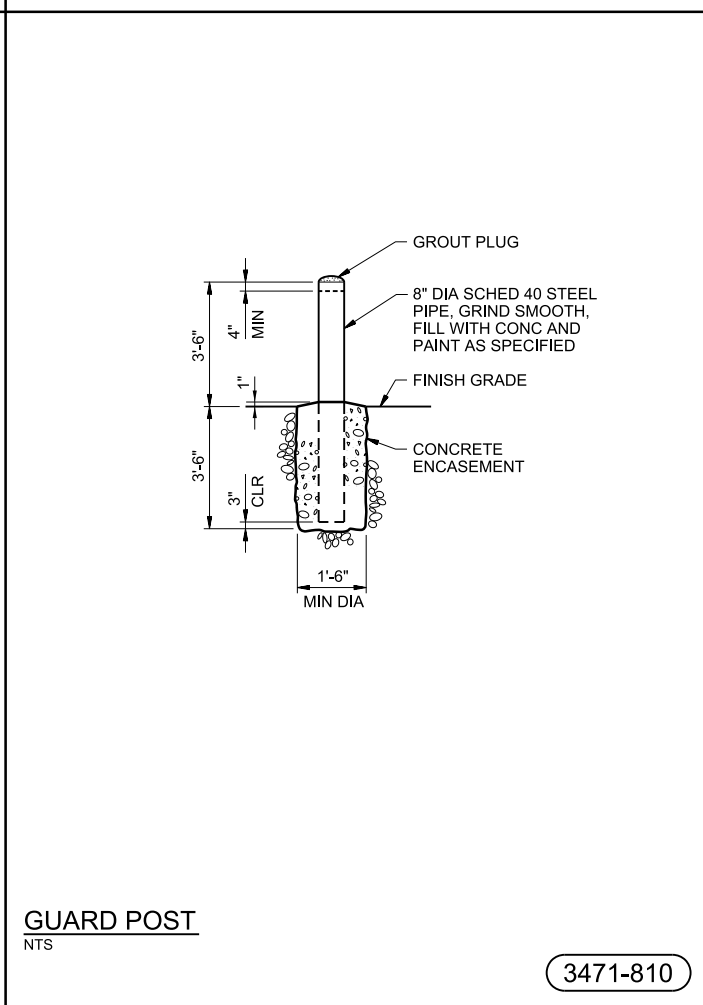
3216-310



NOTES:
1. CONSTRUCT 1" BATTER ON VERTICAL FACE.
2. PROVIDE 3" MINIMUM COVER ON ALL REINFORCING STEEL.

CONCRETE VALLEY GUTTER
NTS

3216-330



GUARD POST
NTS

3471-810

REGISTERED PROFESSIONAL ENGINEER TRAVIS J. HOWARD CIVIL LICENSE NO. 021924 STATE OF NEVADA NOT FOR CONSTRUCTION	
NO.	DATE
DR	T. HOWARD
REVISION	CHK
BY	APVD
APVD	A. KELLOGG
APVD	B. CHELONIS
APVD	J. CHELONIS

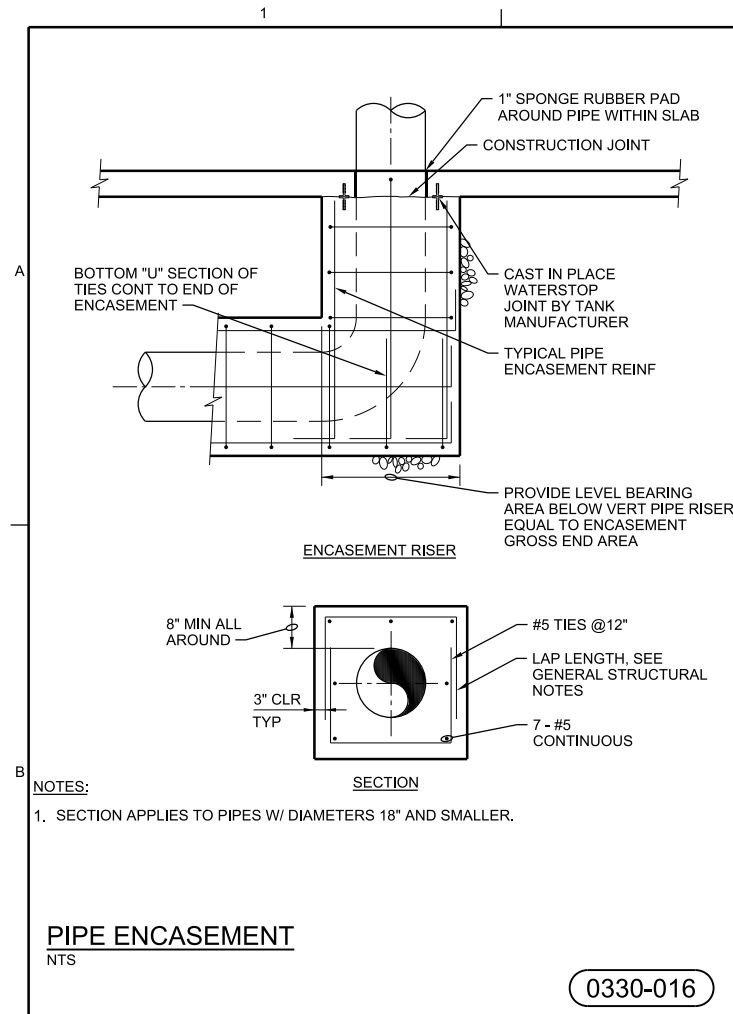
INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

Jacobs
CIVIL
STANDARD DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE: FEBRUARY 2023
PROJ: W8Y12900
DWG: 900-SD-0002
SHEET: 35 of 43

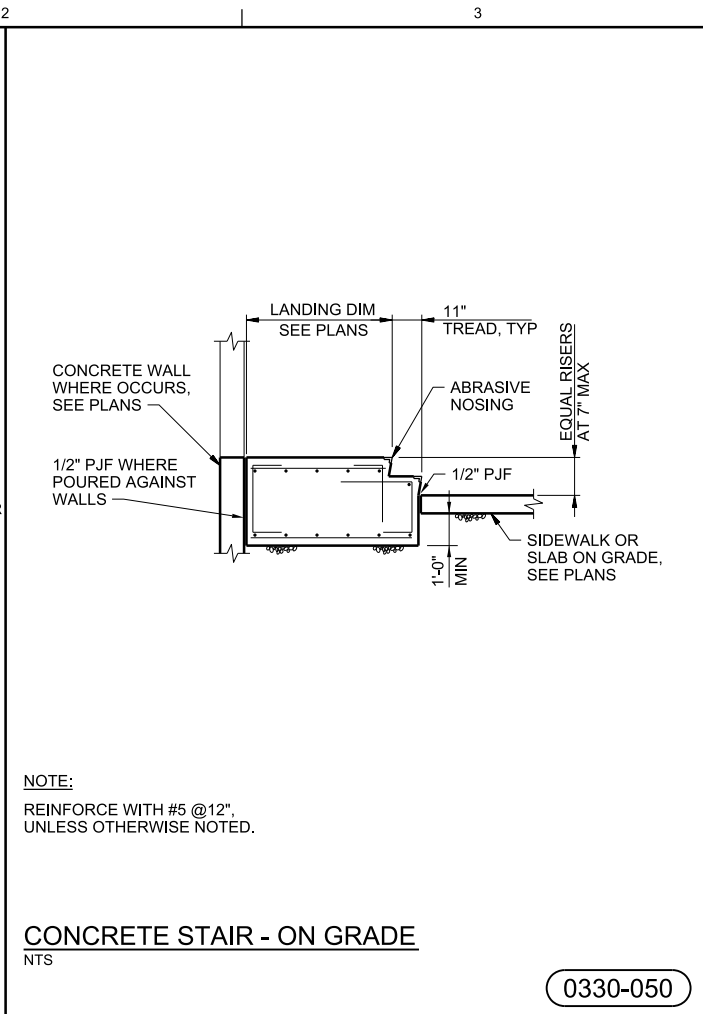
90% DESIGN - NOT FOR CONSTRUCTION



NOTES:
1. SECTION APPLIES TO PIPES W/ DIAMETERS 18" AND SMALLER.

PIPE ENCASEMENT
NTS

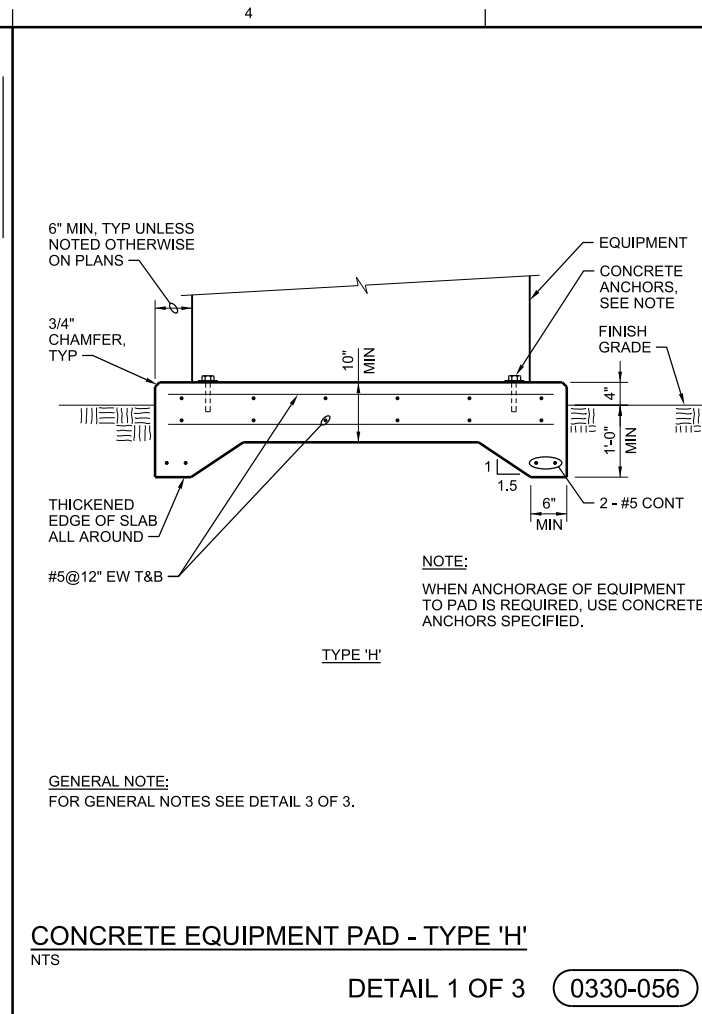
0330-016



NOTE:
REINFORCE WITH #5 @12", UNLESS OTHERWISE NOTED.

CONCRETE STAIR - ON GRADE
NTS

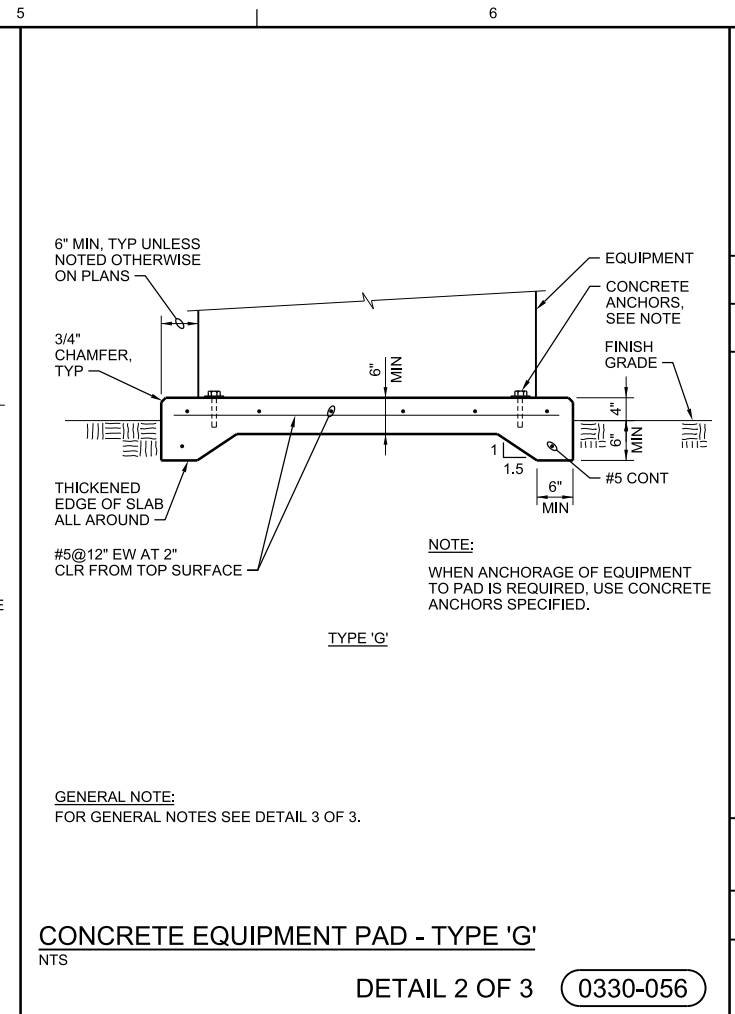
0330-050



GENERAL NOTE:
FOR GENERAL NOTES SEE DETAIL 3 OF 3.

CONCRETE EQUIPMENT PAD - TYPE 'H'
NTS

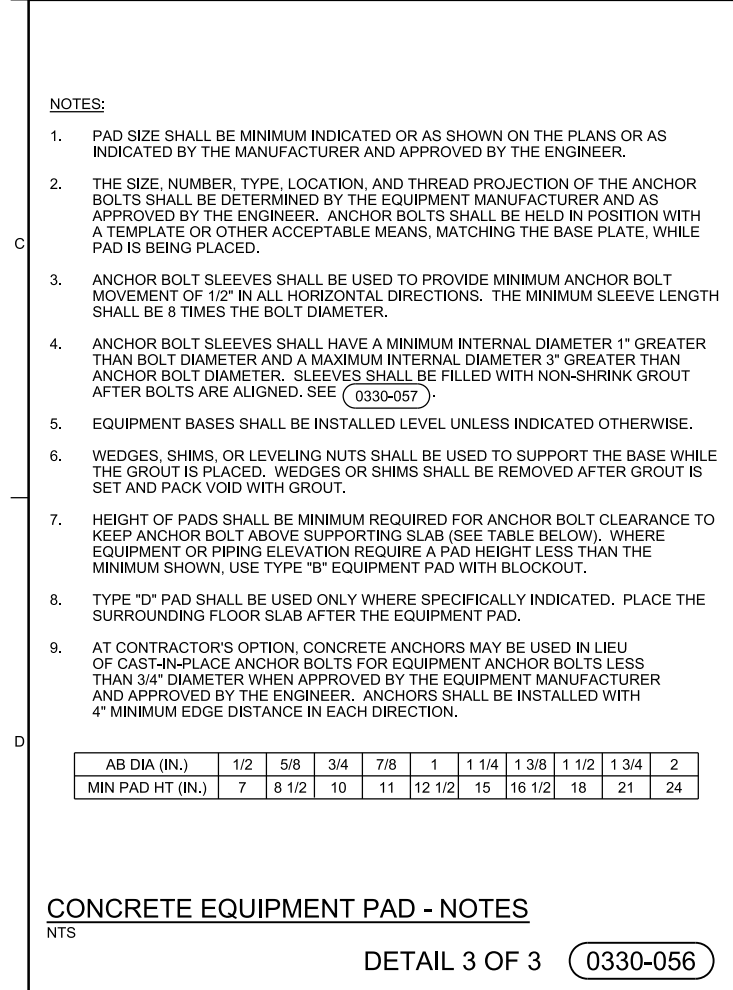
DETAIL 1 OF 3 0330-056



GENERAL NOTE:
FOR GENERAL NOTES SEE DETAIL 3 OF 3.

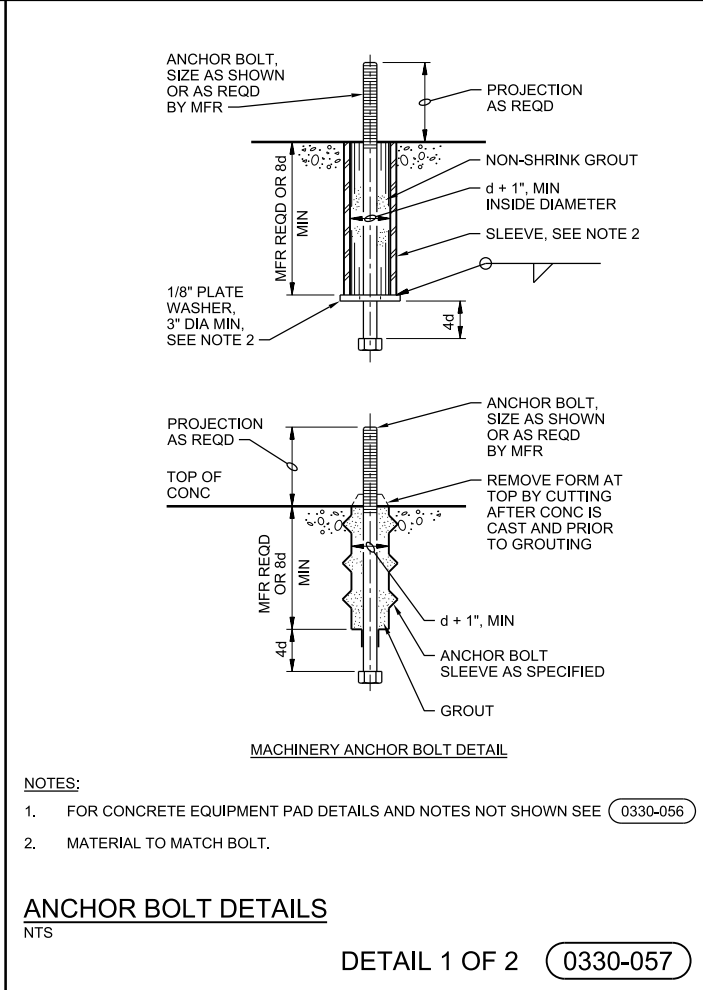
CONCRETE EQUIPMENT PAD - TYPE 'G'
NTS

DETAIL 2 OF 3 0330-056



CONCRETE EQUIPMENT PAD - NOTES
NTS

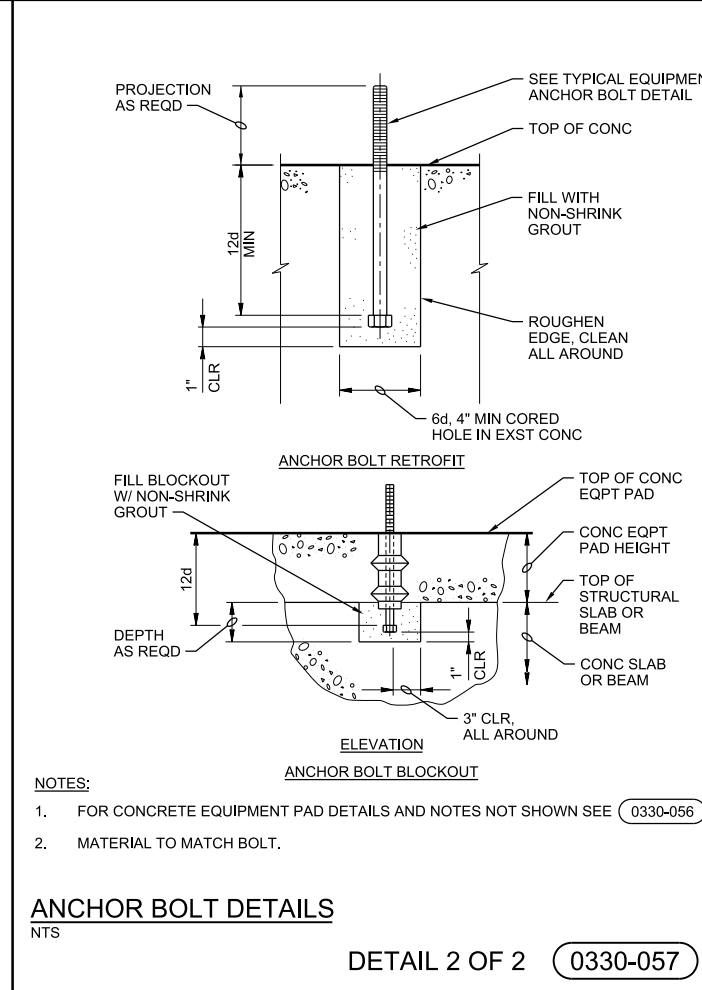
DETAIL 3 OF 3 0330-056



NOTES:
1. FOR CONCRETE EQUIPMENT PAD DETAILS AND NOTES NOT SHOWN SEE 0330-056
2. MATERIAL TO MATCH BOLT.

ANCHOR BOLT DETAILS
NTS

DETAIL 1 OF 2 0330-057



NOTES:
1. FOR CONCRETE EQUIPMENT PAD DETAILS AND NOTES NOT SHOWN SEE 0330-056
2. MATERIAL TO MATCH BOLT.

ANCHOR BOLT DETAILS
NTS

DETAIL 2 OF 2 0330-057



Jacobs
STRUCTURAL

STANDARD DETAILS

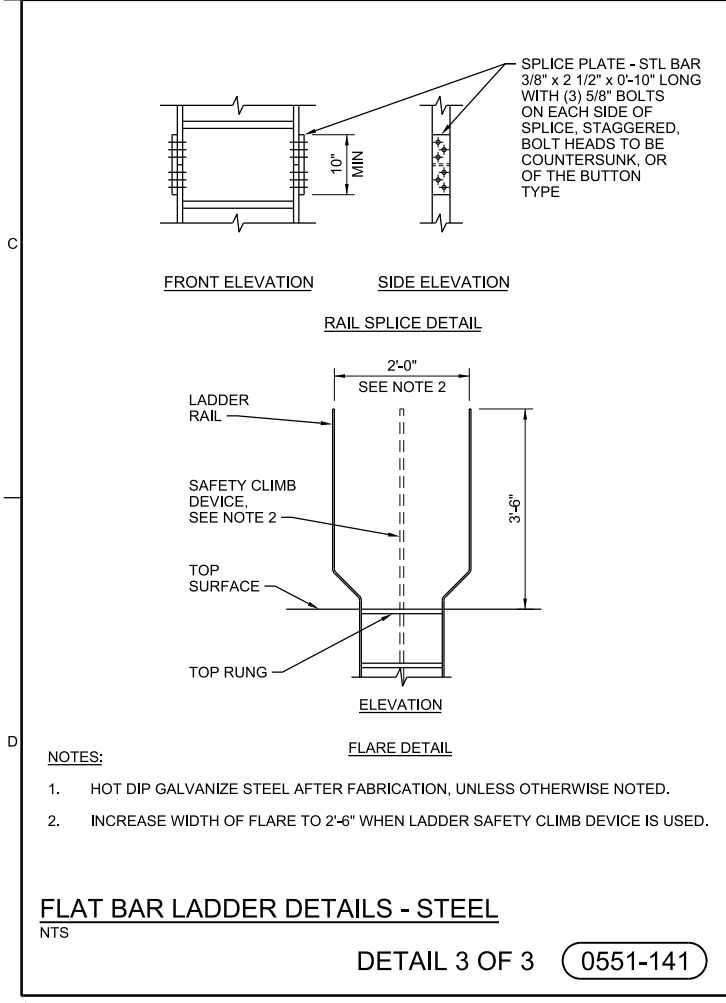
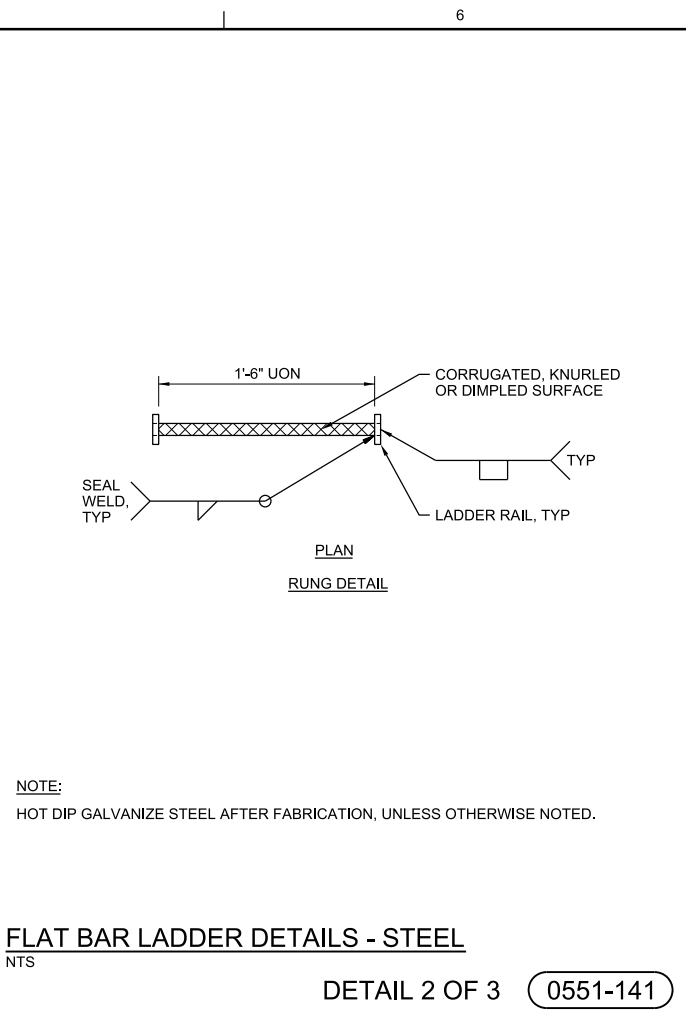
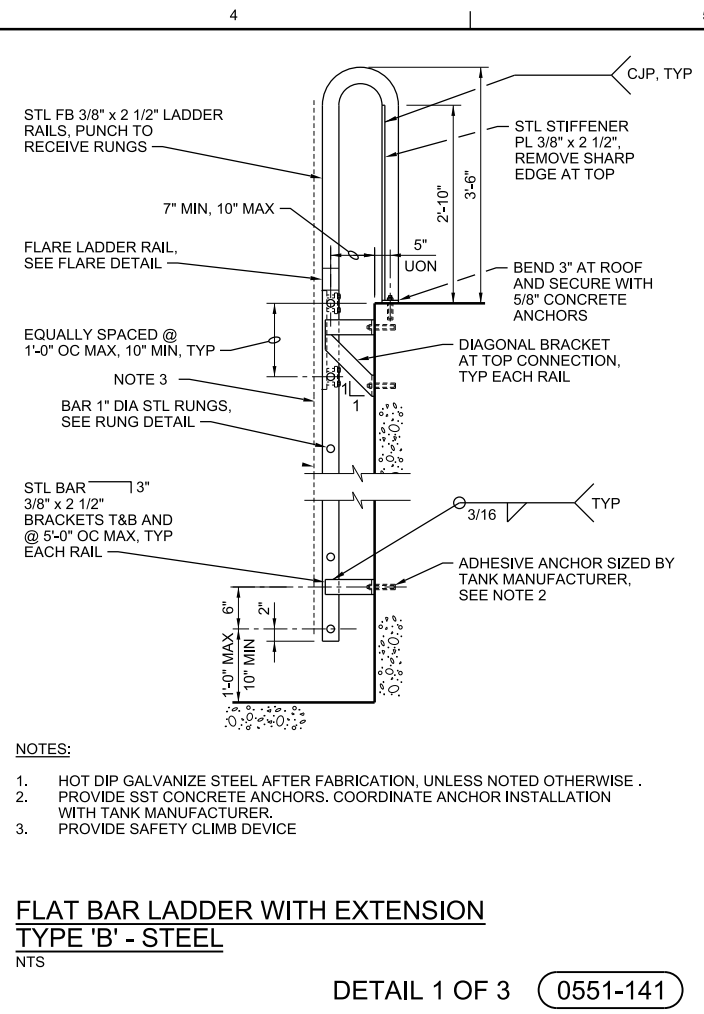
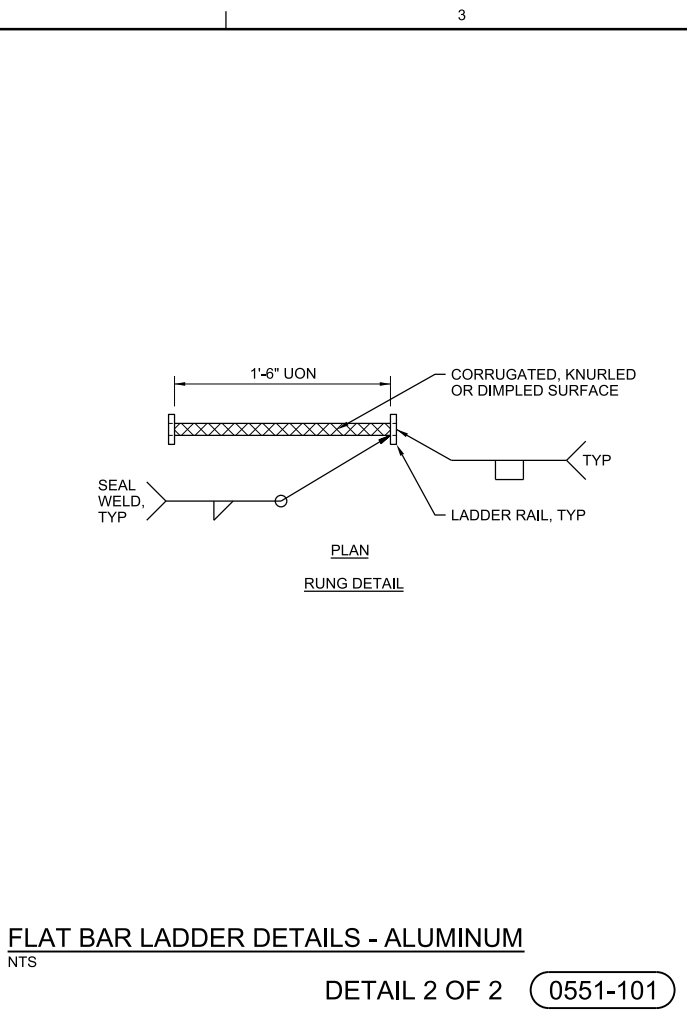
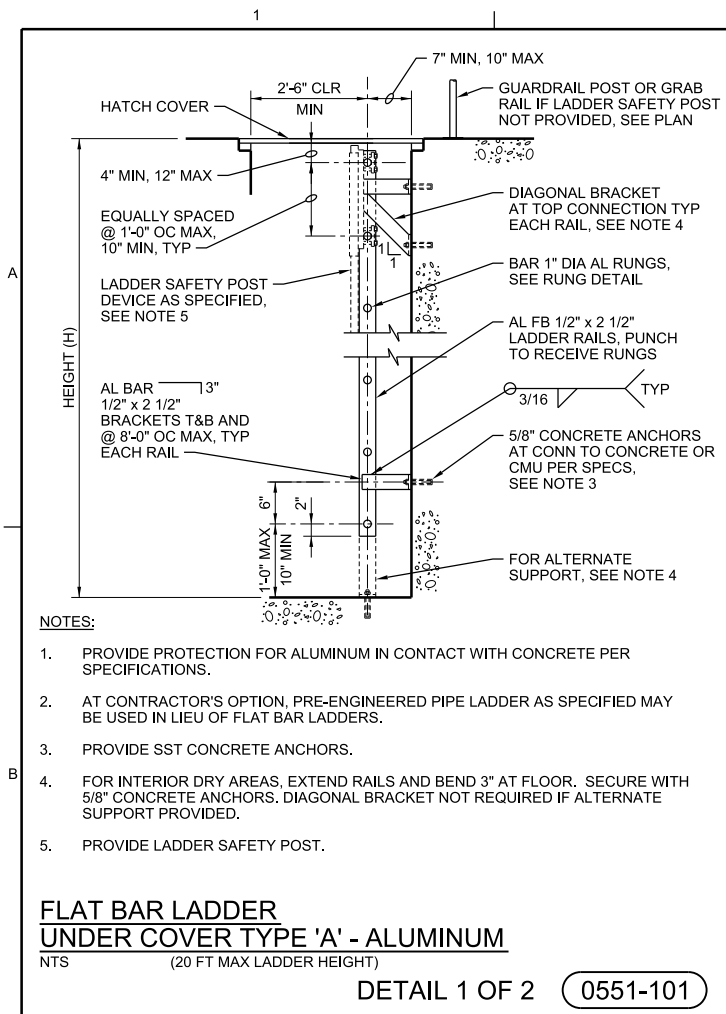
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	900-SD-0003
SHEET	36 of 43

REGISTERED PROFESSIONAL ENGINEER
JEREMY KELLOGG
STRUCTURAL
LICENSE NO. 027491
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	REVISION	BY
		S TROYAN	J KELLOGG	A KELLOGG
			CHK	

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REGISTERED PROFESSIONAL ENGINEER
 JEREMY KELLOGG
 STRUCTURAL
 LICENSE NO. 027491
 STATE OF NEVADA
 NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	APVD	BY	APVD
		S. TROVIAN	J. MINOR	J. KELLOGG	A. KELLOGG	

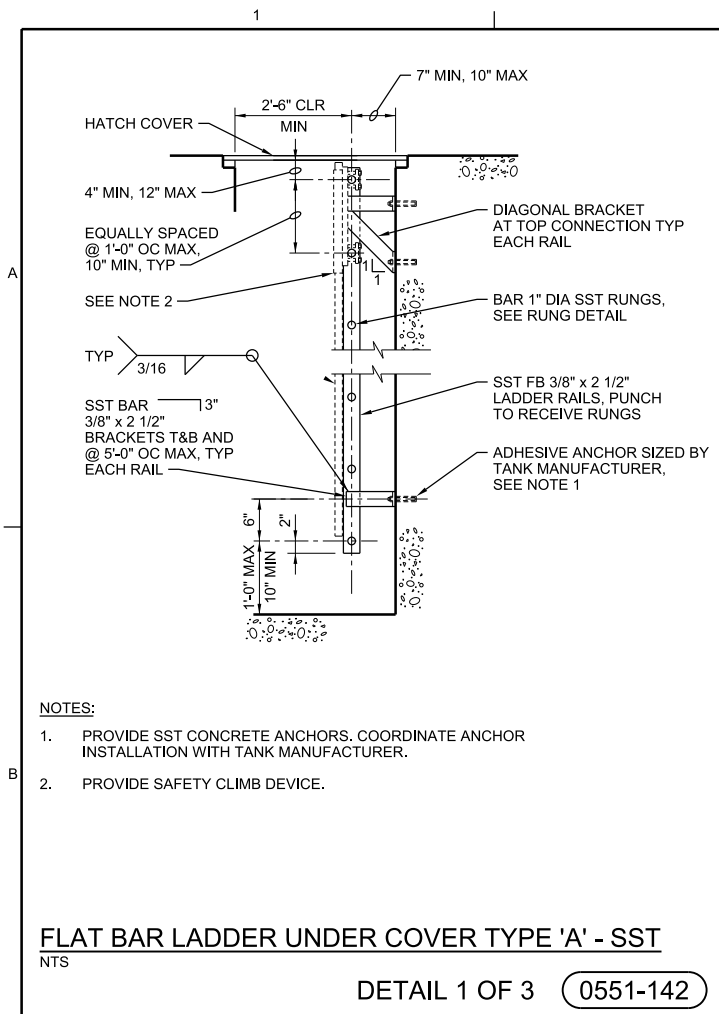
INCLINE VILLAGE
 GENERAL IMPROVEMENT DISTRICT
 ONE DISTRICT - ONE TEAM
 EFFLUENT EXPORT POND LINING PROJECT

Jacobs
 STRUCTURAL
 STANDARD DETAILS

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.

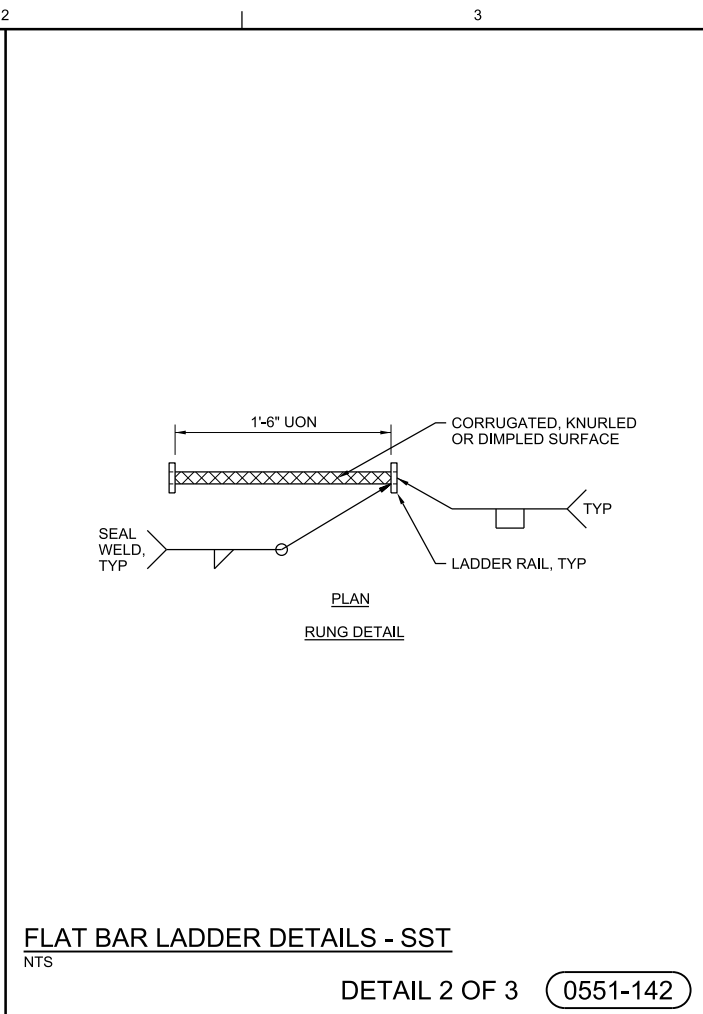
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	900-SD-0004
SHEET	37 of 43

90% DESIGN - NOT FOR CONSTRUCTION

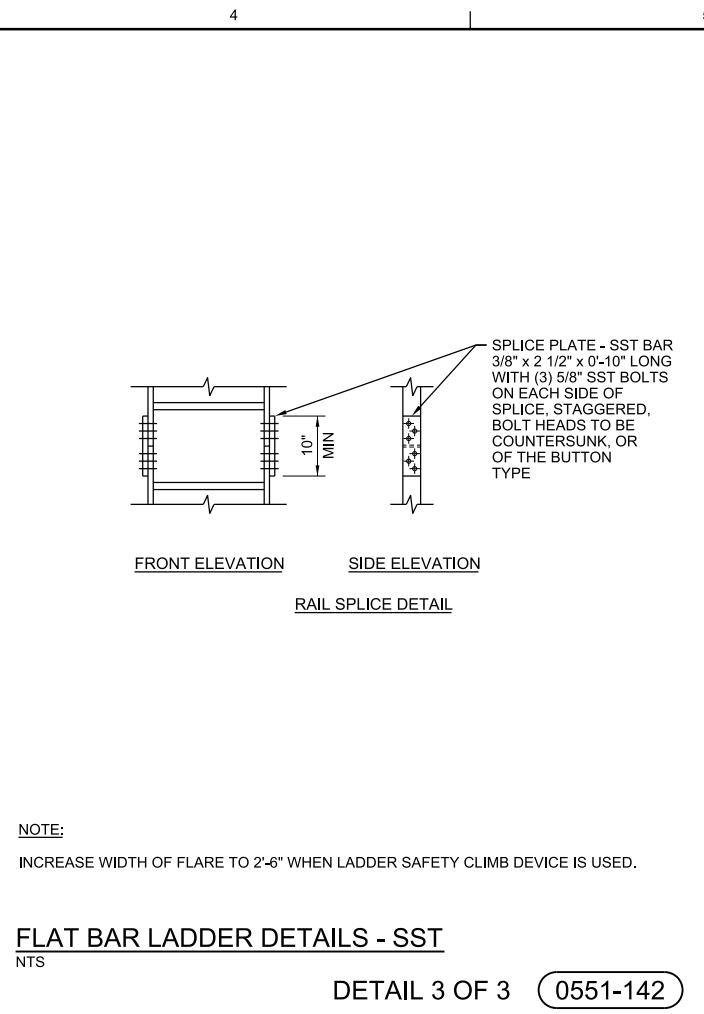


- NOTES:
1. PROVIDE SST CONCRETE ANCHORS. COORDINATE ANCHOR INSTALLATION WITH TANK MANUFACTURER.
 2. PROVIDE SAFETY CLIMB DEVICE.

FLAT BAR LADDER UNDER COVER TYPE 'A' - SST
NTS
DETAIL 1 OF 3 (0551-142)

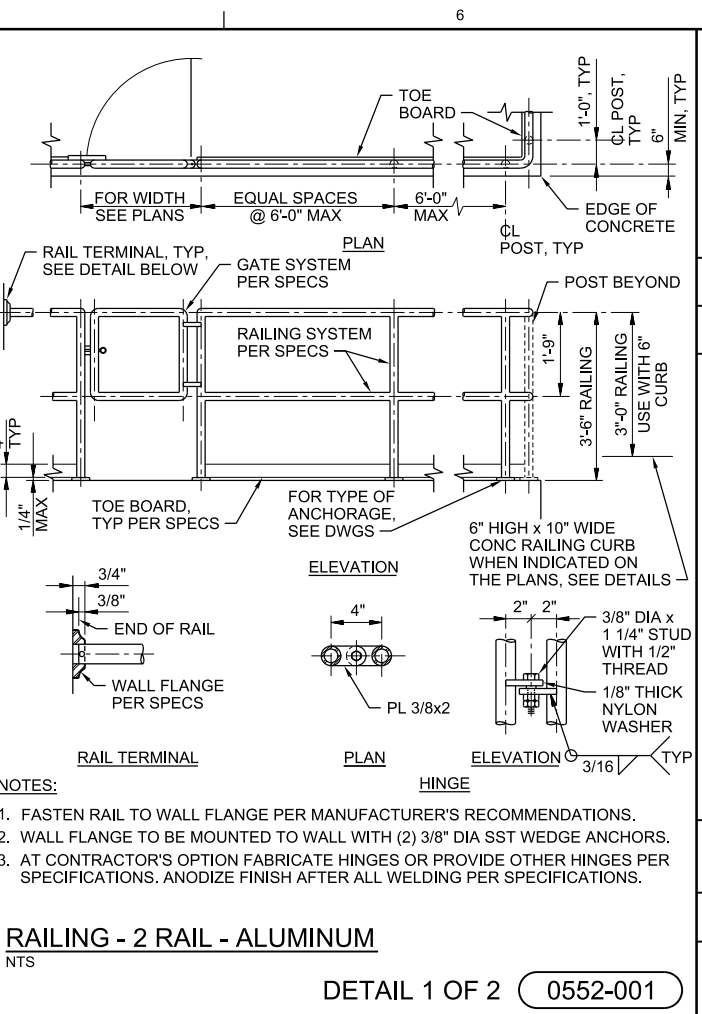


FLAT BAR LADDER DETAILS - SST
NTS
DETAIL 2 OF 3 (0551-142)



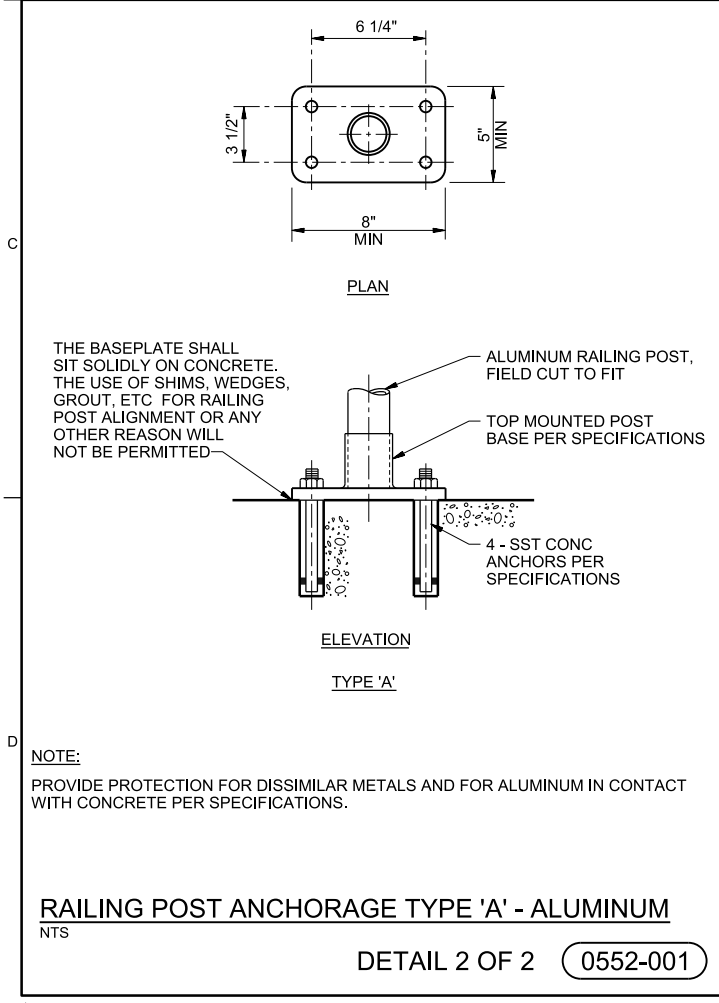
- NOTE:
INCREASE WIDTH OF FLARE TO 2'-6" WHEN LADDER SAFETY CLIMB DEVICE IS USED.

FLAT BAR LADDER DETAILS - SST
NTS
DETAIL 3 OF 3 (0551-142)



- NOTES:
1. FASTEN RAIL TO WALL FLANGE PER MANUFACTURER'S RECOMMENDATIONS.
 2. WALL FLANGE TO BE MOUNTED TO WALL WITH (2) 3/8" DIA SST WEDGE ANCHORS.
 3. AT CONTRACTOR'S OPTION FABRICATE HINGES OR PROVIDE OTHER HINGES PER SPECIFICATIONS. ANODIZE FINISH AFTER ALL WELDING PER SPECIFICATIONS.

RAILING - 2 RAIL - ALUMINUM
NTS
DETAIL 1 OF 2 (0552-001)



- NOTE:
PROVIDE PROTECTION FOR DISSIMILAR METALS AND FOR ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.

RAILING POST ANCHORAGE TYPE 'A' - ALUMINUM
NTS
DETAIL 2 OF 2 (0552-001)

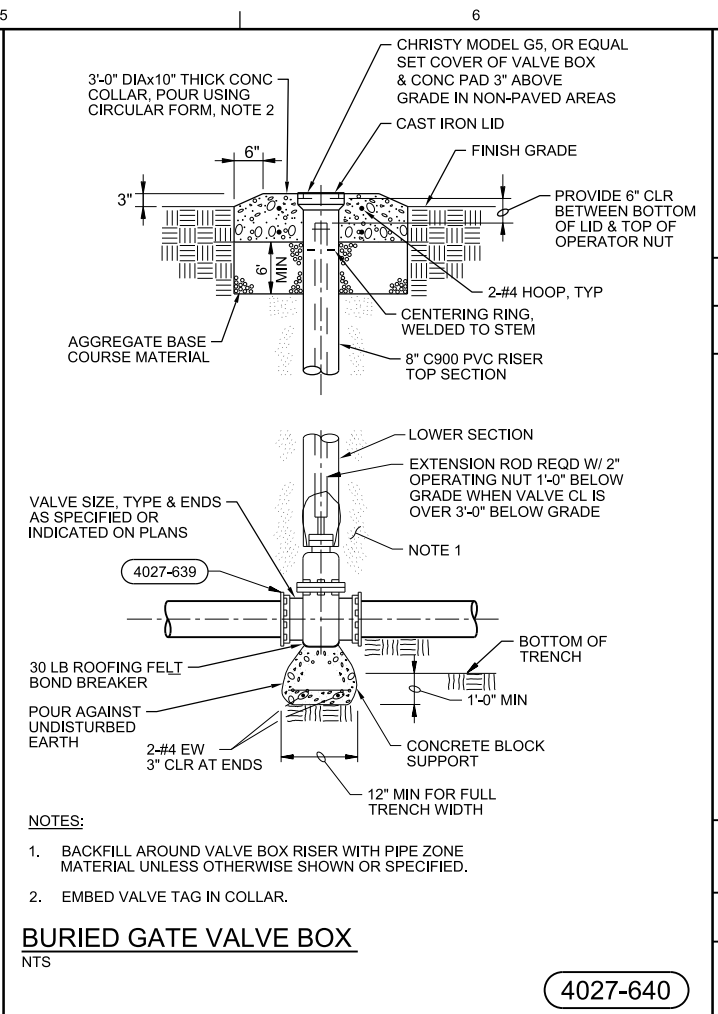
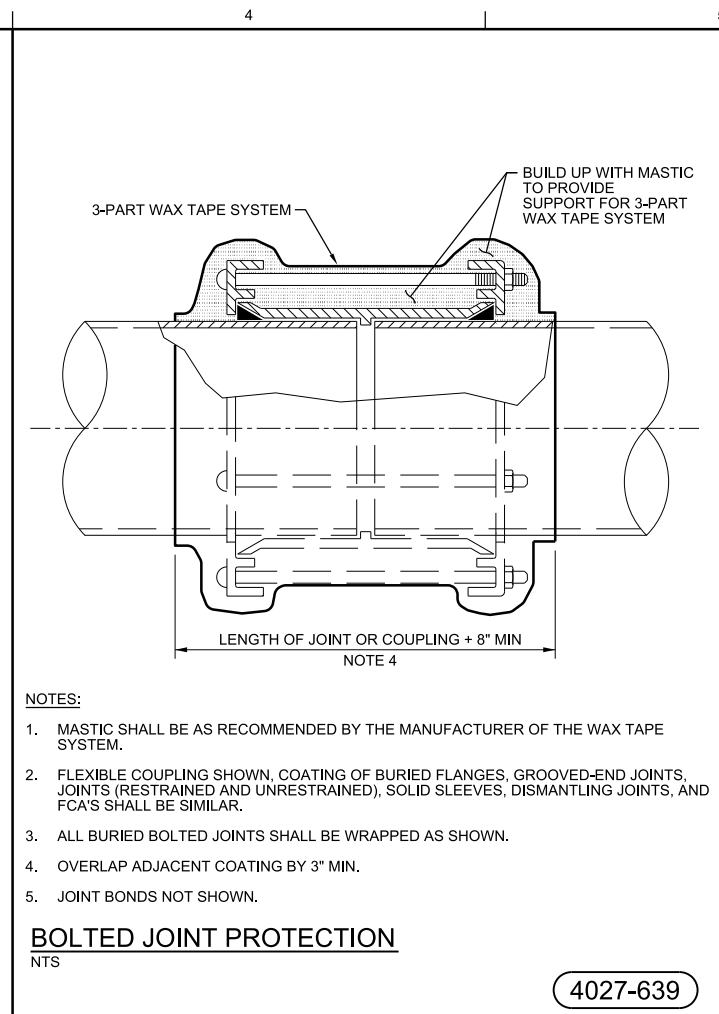
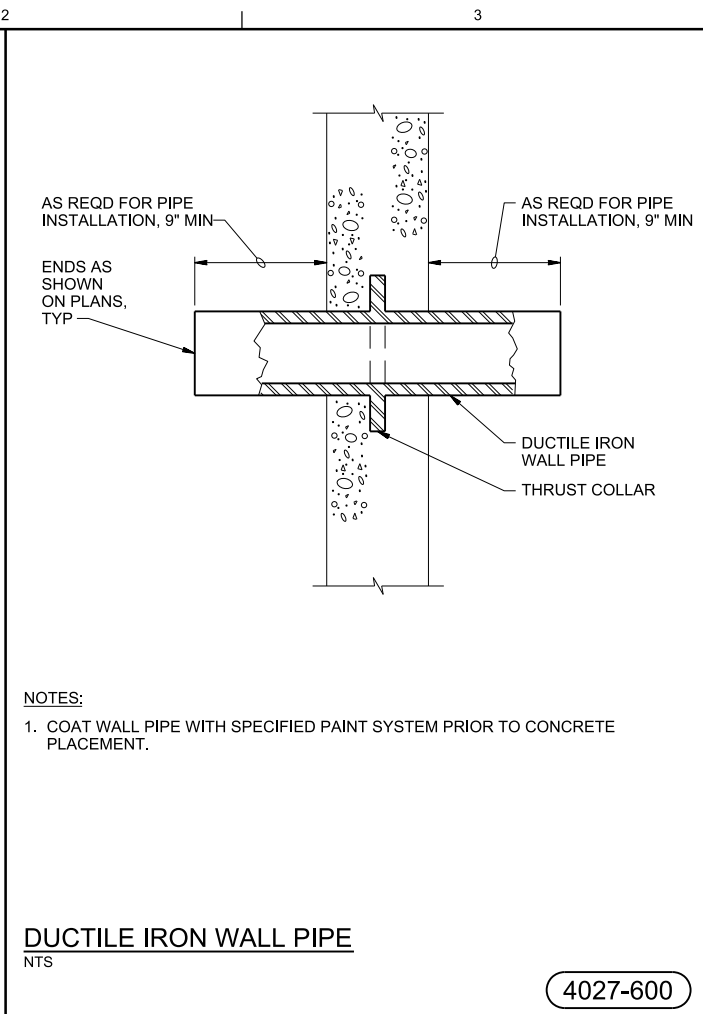
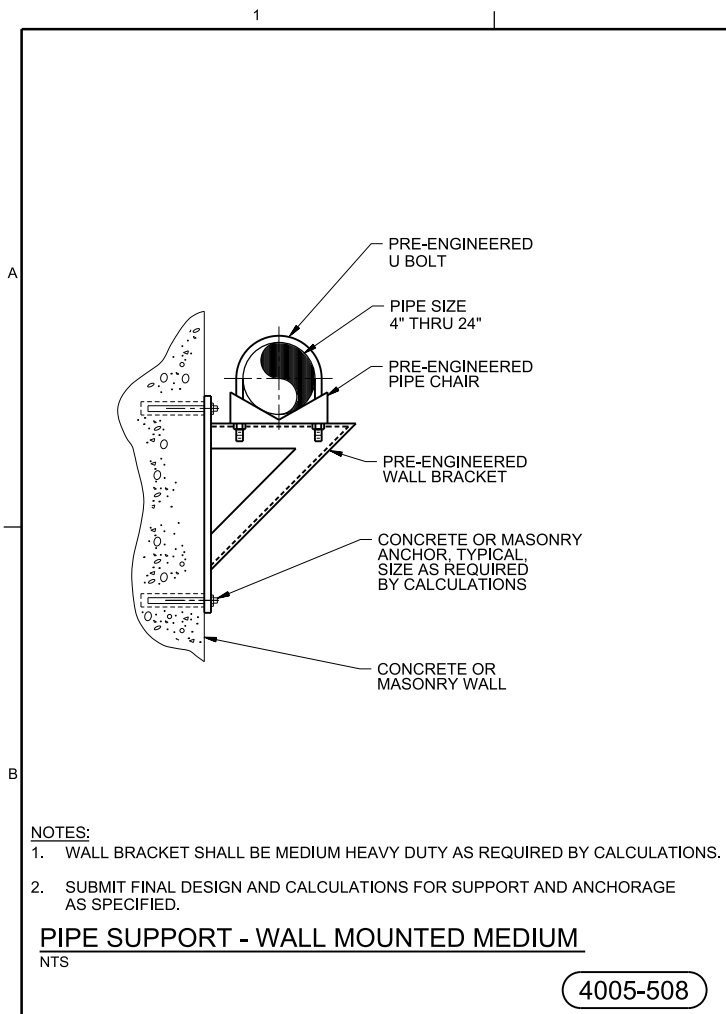
REGISTERED PROFESSIONAL ENGINEER JEREMY KELLOGG STRUCTURAL LICENSE NO. 027491 STATE OF NEVADA NOT FOR CONSTRUCTION	
NO.	DATE
REVISION	CHK
APVD	BY
APVD	APVD
DR	DR
DSGN	DSGN

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

Jacobs
STRUCTURAL
STANDARD DETAILS

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	900-SD-0005
SHEET	38 of 43

90% DESIGN - NOT FOR CONSTRUCTION



REGISTERED PROFESSIONAL ENGINEER JOHN SIMONDS MECHANICAL LICENSE NO. 027655 STATE OF NEVADA NOT FOR CONSTRUCTION	
NO.	DATE
REVISION	CHK
APVD	APVD
BY	APVD
A KELLOGG	

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

Jacobs
PROCESS MECHANICAL
STANDARD DETAILS

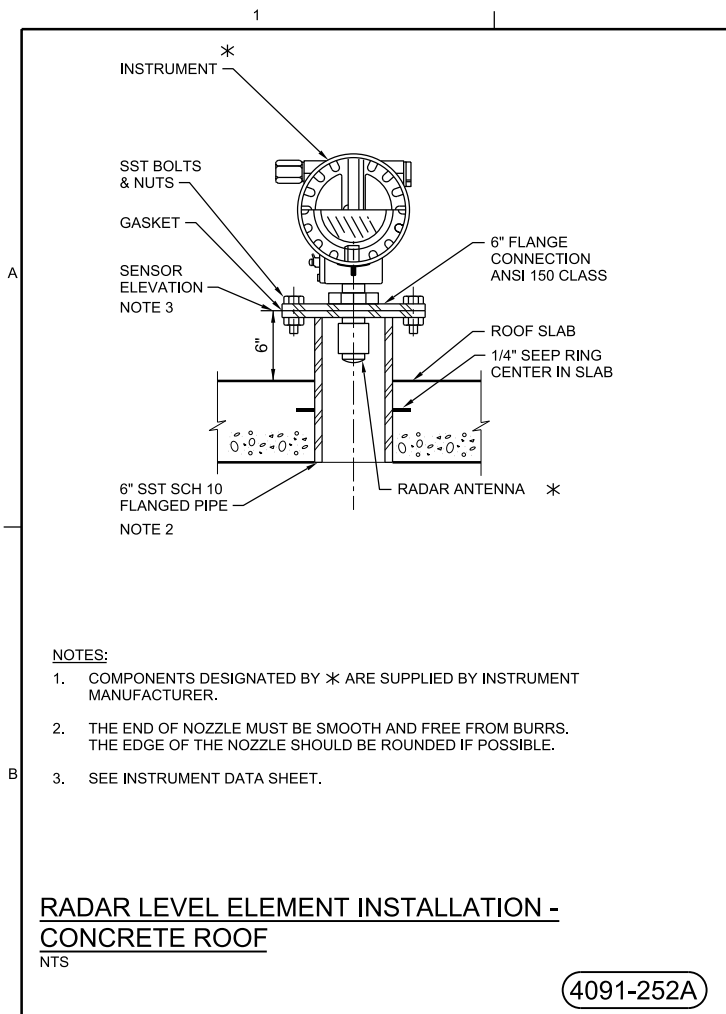
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE FEBRUARY 2023
PROJ W8Y12900
DWG 900-SD-0006
SHEET 39 of 43

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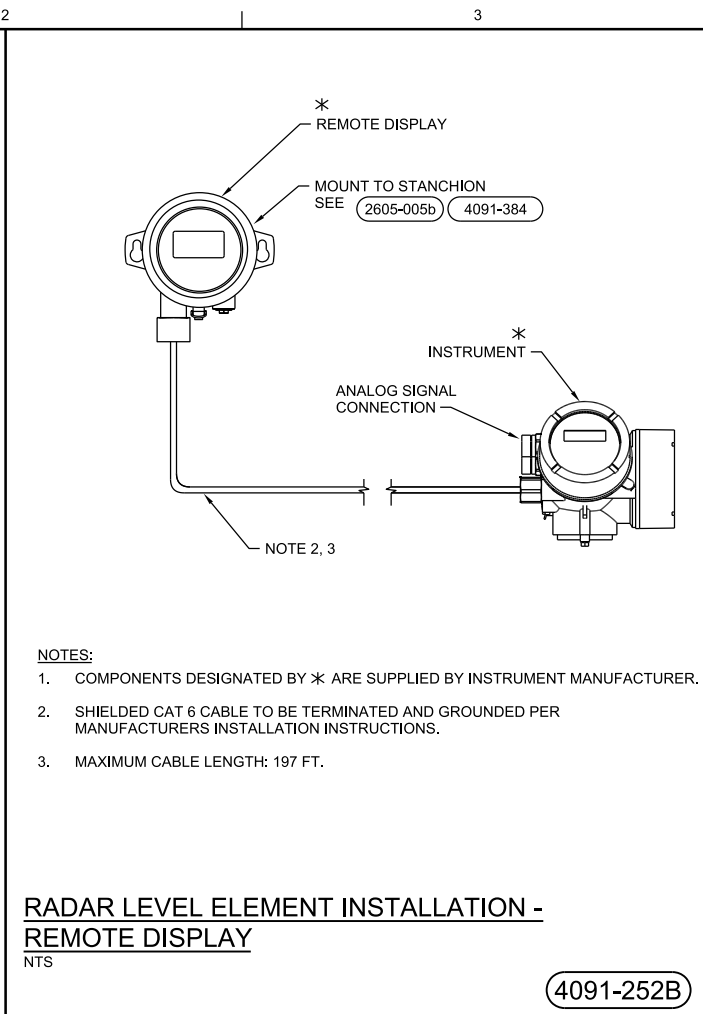
90% DESIGN - NOT FOR CONSTRUCTION



- NOTES:**
- COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
 - THE END OF NOZZLE MUST BE SMOOTH AND FREE FROM BURRS. THE EDGE OF THE NOZZLE SHOULD BE ROUNDED IF POSSIBLE.
 - SEE INSTRUMENT DATA SHEET.

RADAR LEVEL ELEMENT INSTALLATION - CONCRETE ROOF
NTS

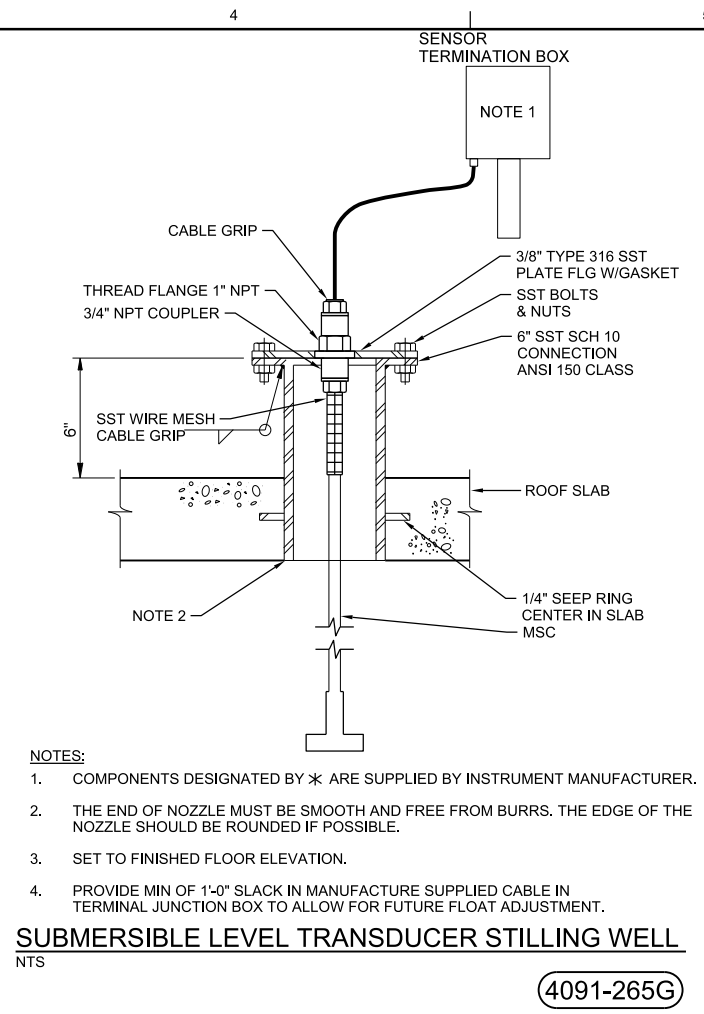
4091-252A



- NOTES:**
- COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
 - SHIELDED CAT 6 CABLE TO BE TERMINATED AND GROUNDED PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
 - MAXIMUM CABLE LENGTH: 197 FT.

RADAR LEVEL ELEMENT INSTALLATION - REMOTE DISPLAY
NTS

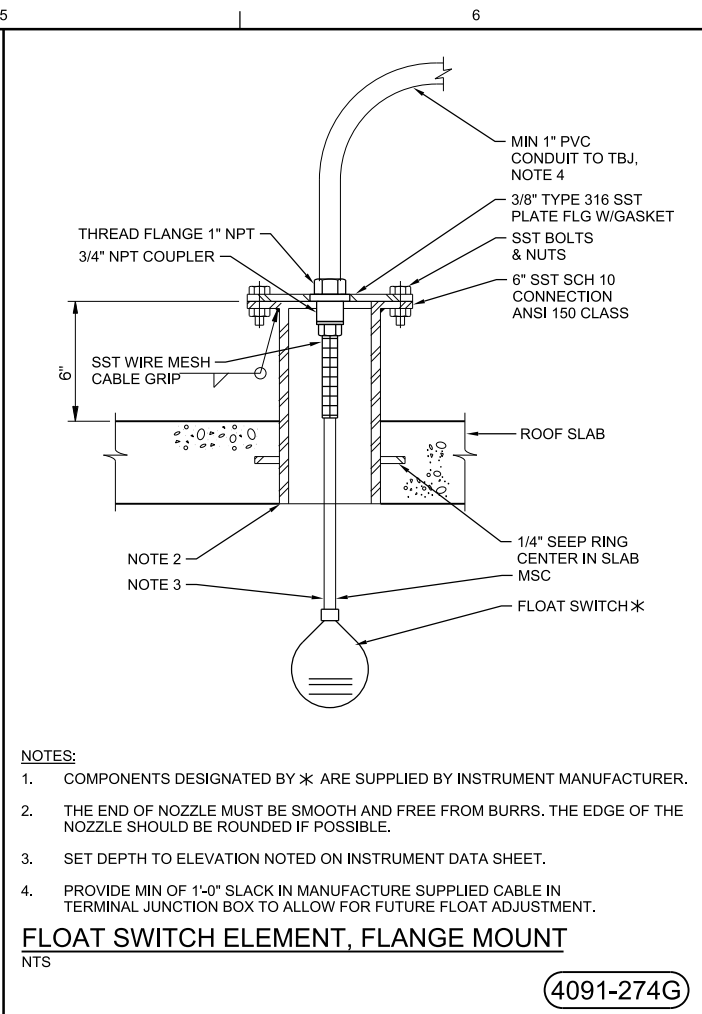
4091-252B



- NOTES:**
- COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
 - THE END OF NOZZLE MUST BE SMOOTH AND FREE FROM BURRS. THE EDGE OF THE NOZZLE SHOULD BE ROUNDED IF POSSIBLE.
 - SET TO FINISHED FLOOR ELEVATION.
 - PROVIDE MIN OF 1'-0" SLACK IN MANUFACTURE SUPPLIED CABLE IN TERMINAL JUNCTION BOX TO ALLOW FOR FUTURE FLOAT ADJUSTMENT.

SUBMERSIBLE LEVEL TRANSDUCER STILLING WELL
NTS

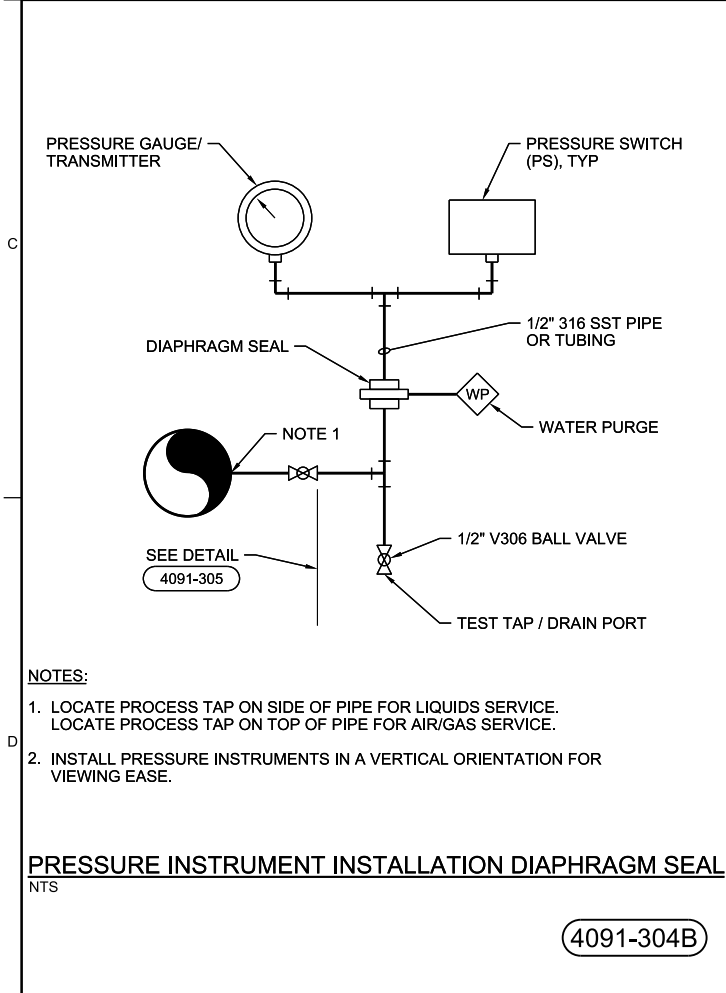
4091-265G



- NOTES:**
- COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
 - THE END OF NOZZLE MUST BE SMOOTH AND FREE FROM BURRS. THE EDGE OF THE NOZZLE SHOULD BE ROUNDED IF POSSIBLE.
 - SET DEPTH TO ELEVATION NOTED ON INSTRUMENT DATA SHEET.
 - PROVIDE MIN OF 1'-0" SLACK IN MANUFACTURE SUPPLIED CABLE IN TERMINAL JUNCTION BOX TO ALLOW FOR FUTURE FLOAT ADJUSTMENT.

FLOAT SWITCH ELEMENT, FLANGE MOUNT
NTS

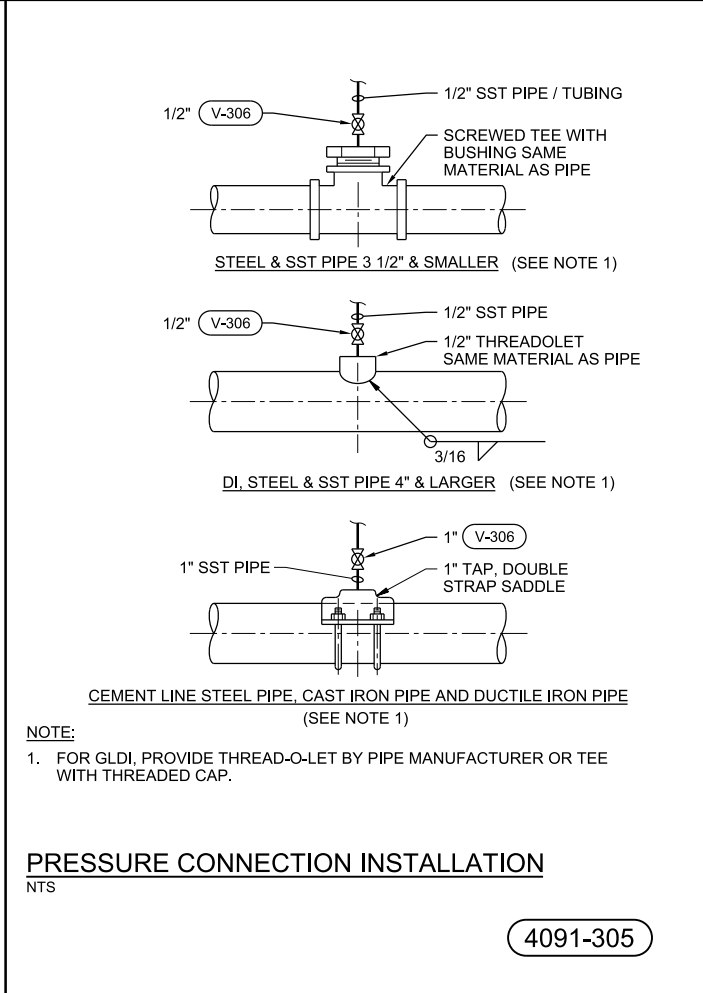
4091-274G



- NOTES:**
- LOCATE PROCESS TAP ON SIDE OF PIPE FOR LIQUIDS SERVICE. LOCATE PROCESS TAP ON TOP OF PIPE FOR AIR/GAS SERVICE.
 - INSTALL PRESSURE INSTRUMENTS IN A VERTICAL ORIENTATION FOR VIEWING EASE.

PRESSURE INSTRUMENT INSTALLATION DIAPHRAGM SEAL
NTS

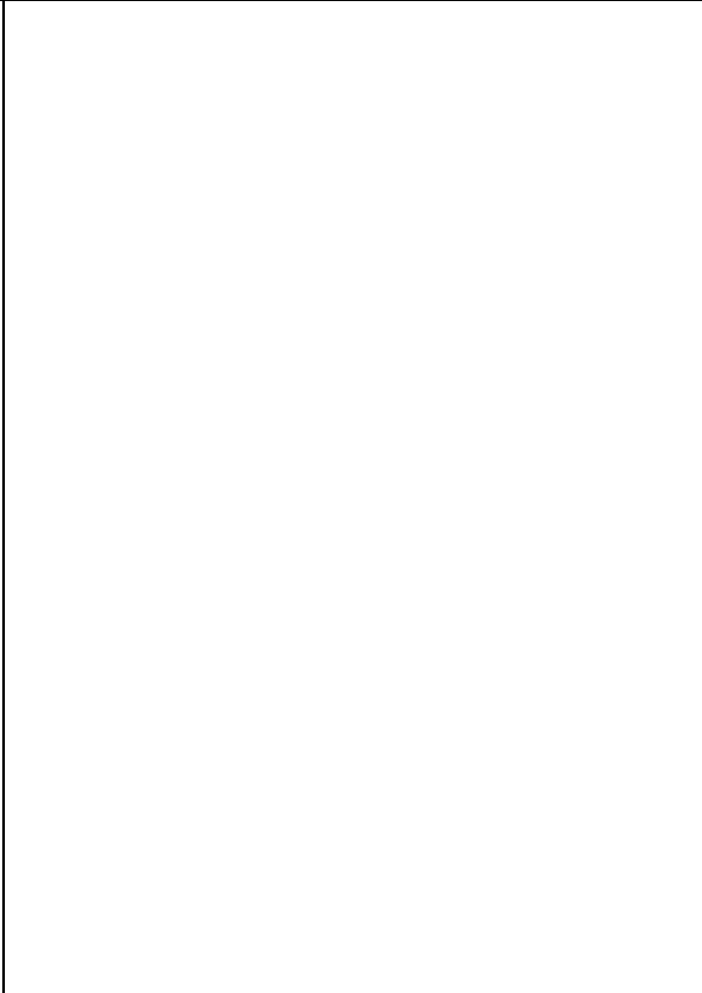
4091-304B



- NOTE:**
- FOR GLDI, PROVIDE THREAD-O-LET BY PIPE MANUFACTURER OR TEE WITH THREADED CAP.

PRESSURE CONNECTION INSTALLATION
NTS

4091-305



INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT ONE DISTRICT - ONE TEAM
EFFLUENT EXPORT POND LINING PROJECT

Jacobs
INSTRUMENTATION AND CONTROL
STANDARD DETAILS

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	900-SD-0007
SHEET	40 of 43

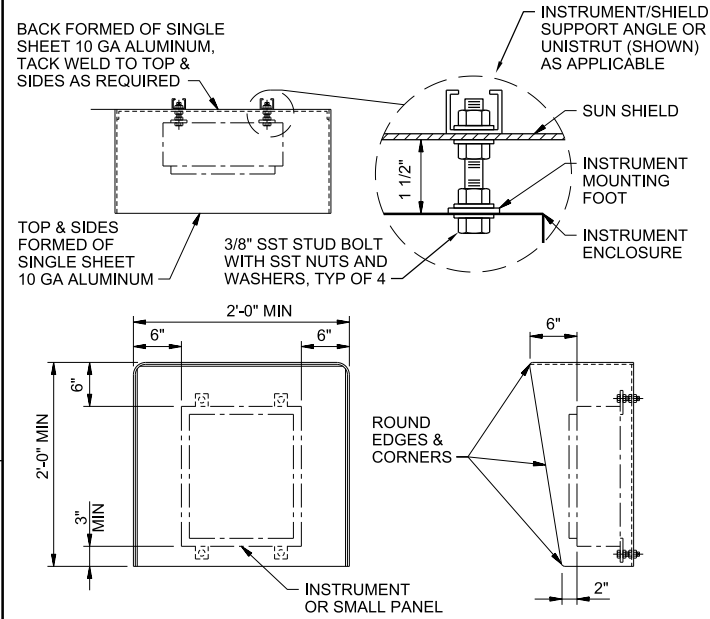
90% DESIGN - NOT FOR CONSTRUCTION

A

B

C

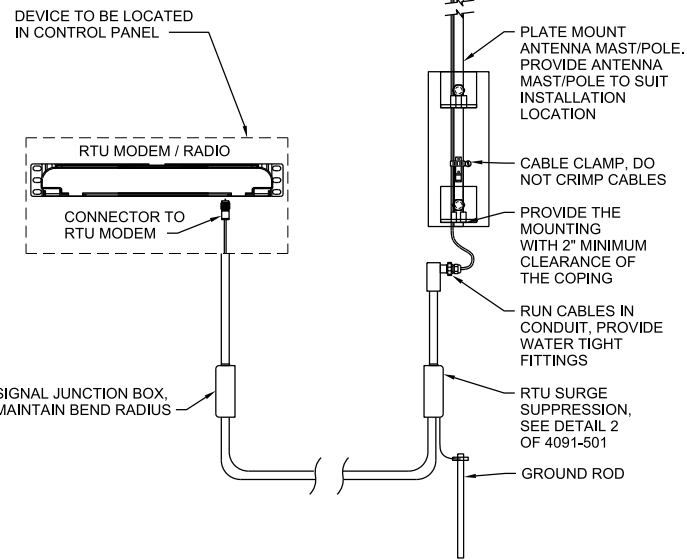
D



- NOTES:
1. ALL EXPOSED EDGES TO BE GRIND SMOOTH AND BURR FREE.
 2. MOUNT SUN SHIELD BETWEEN INSTRUMENT AND MOUNTING BRACKET. DRILL HOLES IN SUN SHIELD AS PER MOUNTING HOLES FOR INSTRUMENT, SEE 4091-383 4091-388

SUN SHIELD INSTALLATION
NTS

4091-384

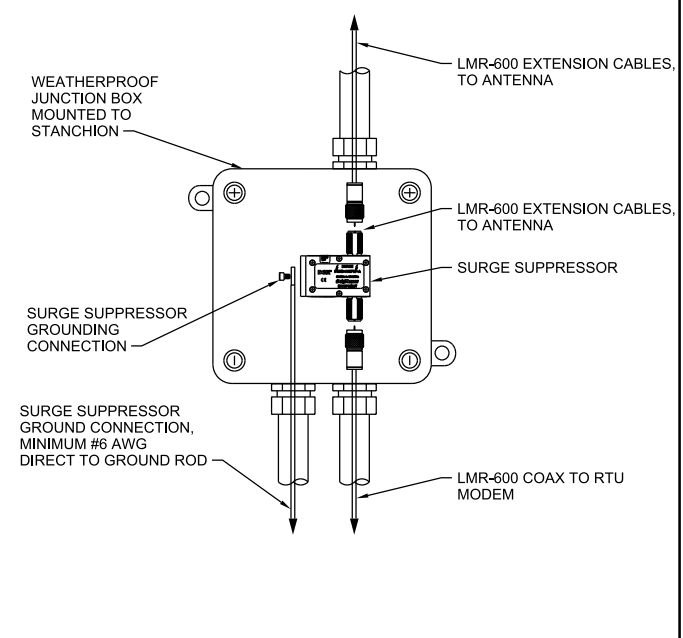


- NOTES:
1. SEE DETAIL 4091-501 2 OF 2 FOR SURGE SUPPRESSOR INSTALLATION AND GROUNDING/BONDING REQUIREMENTS.

ANTENNA INSTALLATION
NTS

DETAIL 1 OF 2

4091-501



- NOTES:
1. ADD ALL REQUIRED CABLE CONNECTORS THAT ARE COMPATIBLE WITH THE ANTENNA LMR-600 CABLE, SURGE SUPPRESSOR, AND RTU MODEM.

RTU/RADIO SURGE SUPPRESSION
NTS

DETAIL 2 OF 2

4091-501

REGISTERED PROFESSIONAL ENGINEER
CRAIG M. CUSWORTH
ELECTRICAL
LICENSE NO. 022425
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	DESIGN	REVISION		BY	APVD
				CHK	APVD		

INCLINE VILLAGE

GENERAL IMPROVEMENT DISTRICT ONE DISTRICT - ONE TEAM

EFFLUENT EXPORT POND LINING PROJECT

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JACOBS

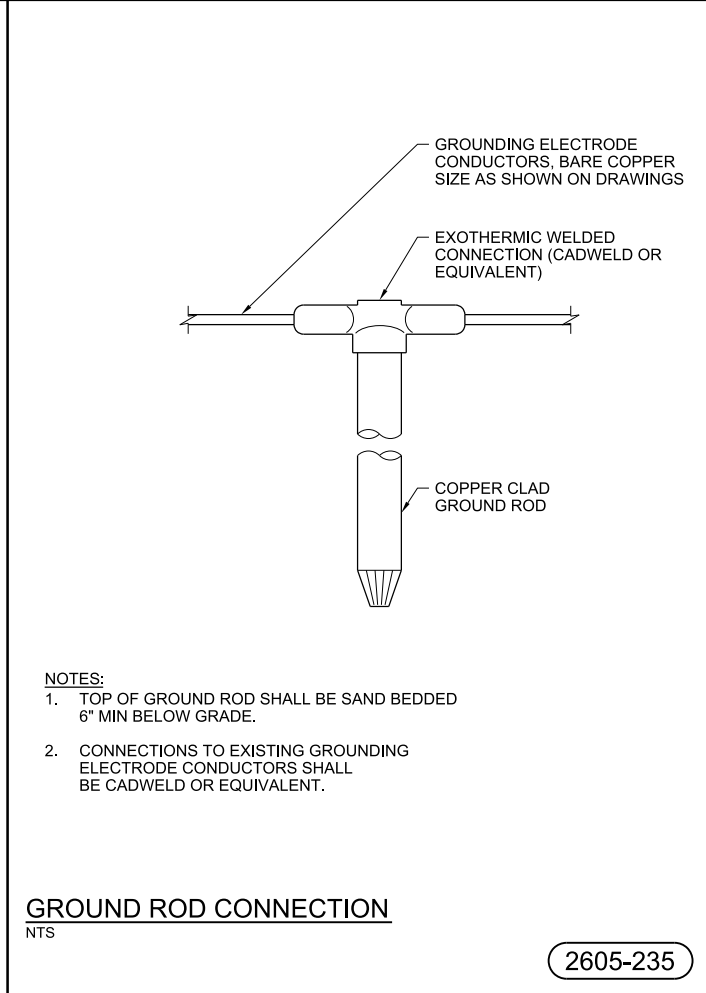
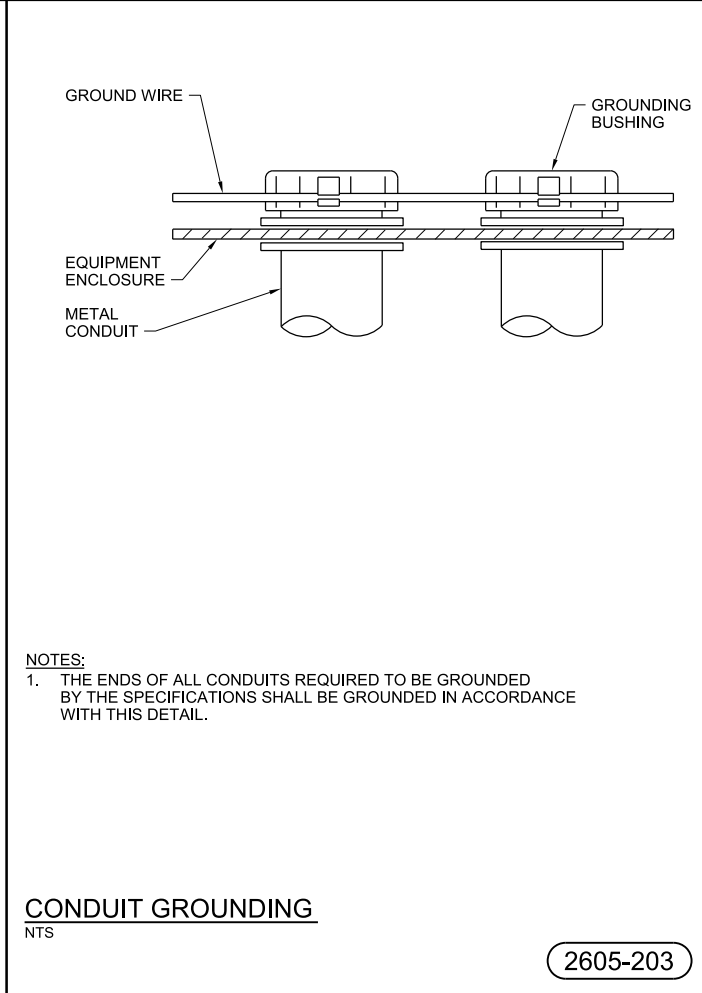
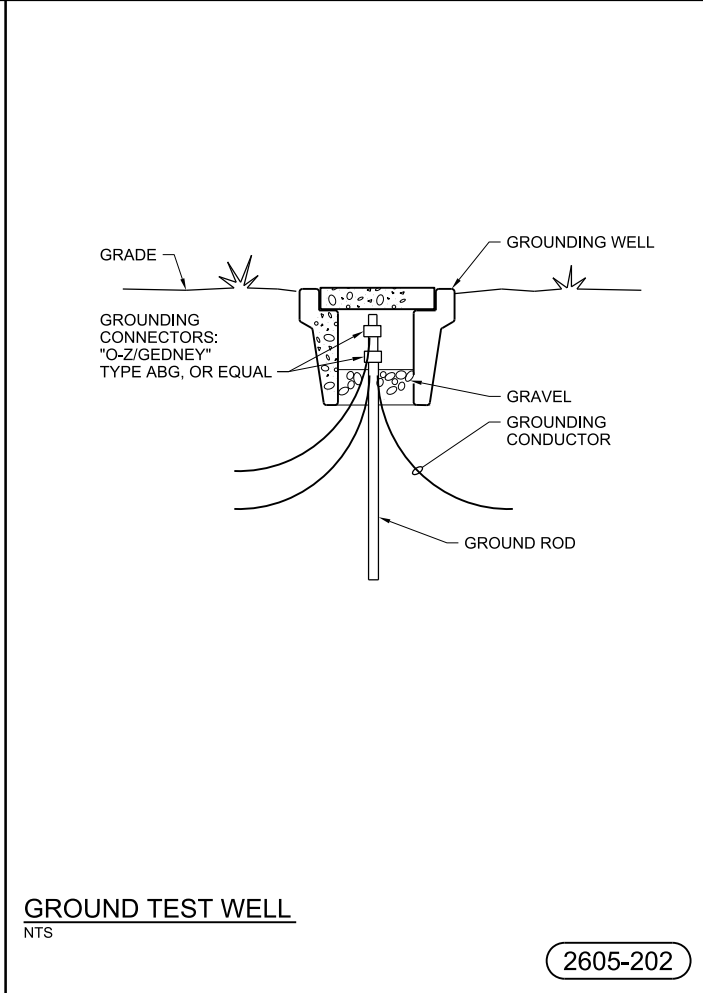
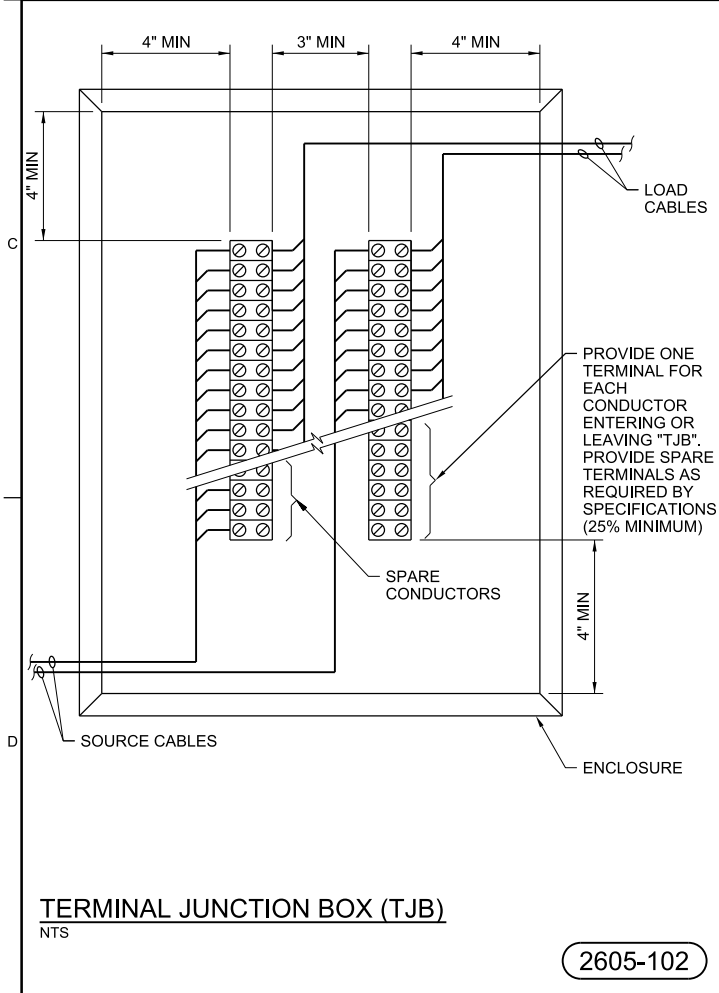
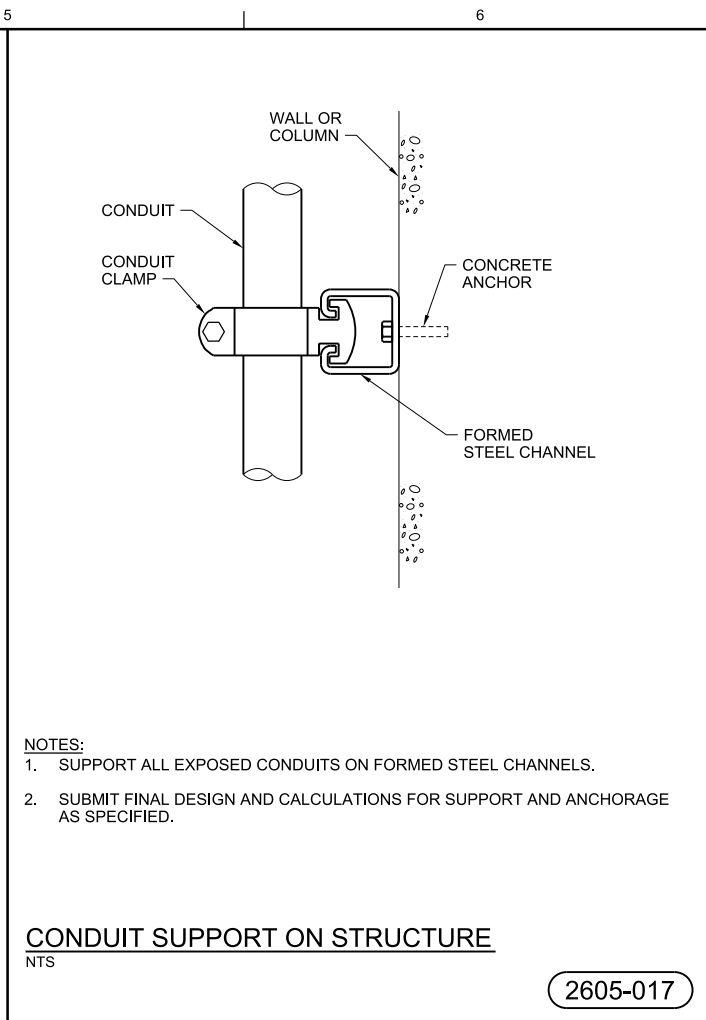
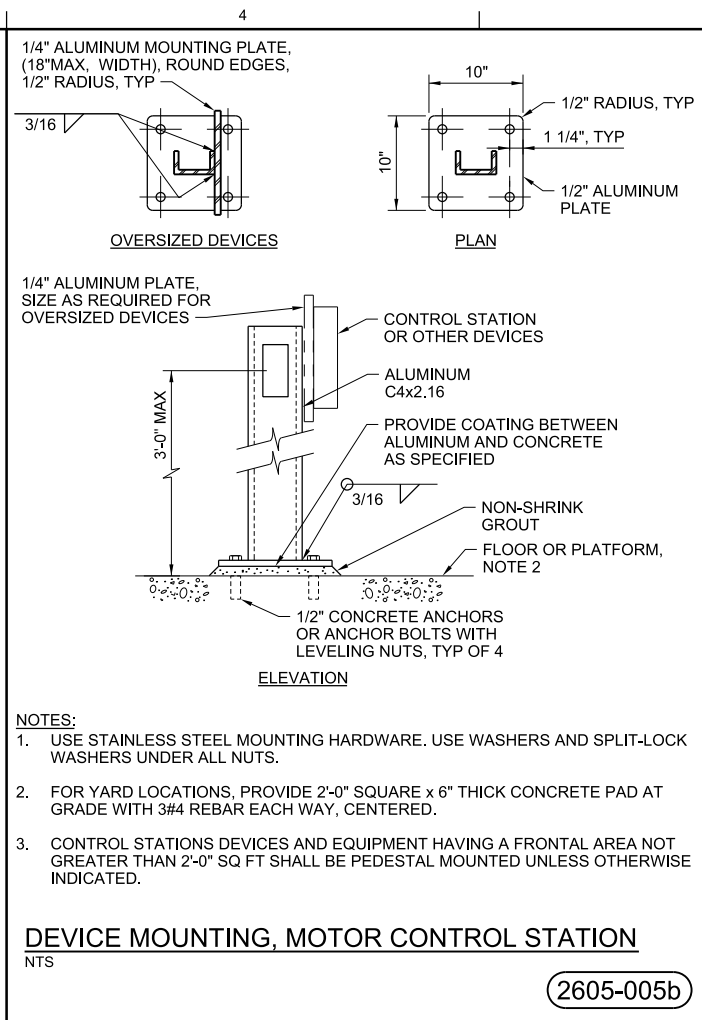
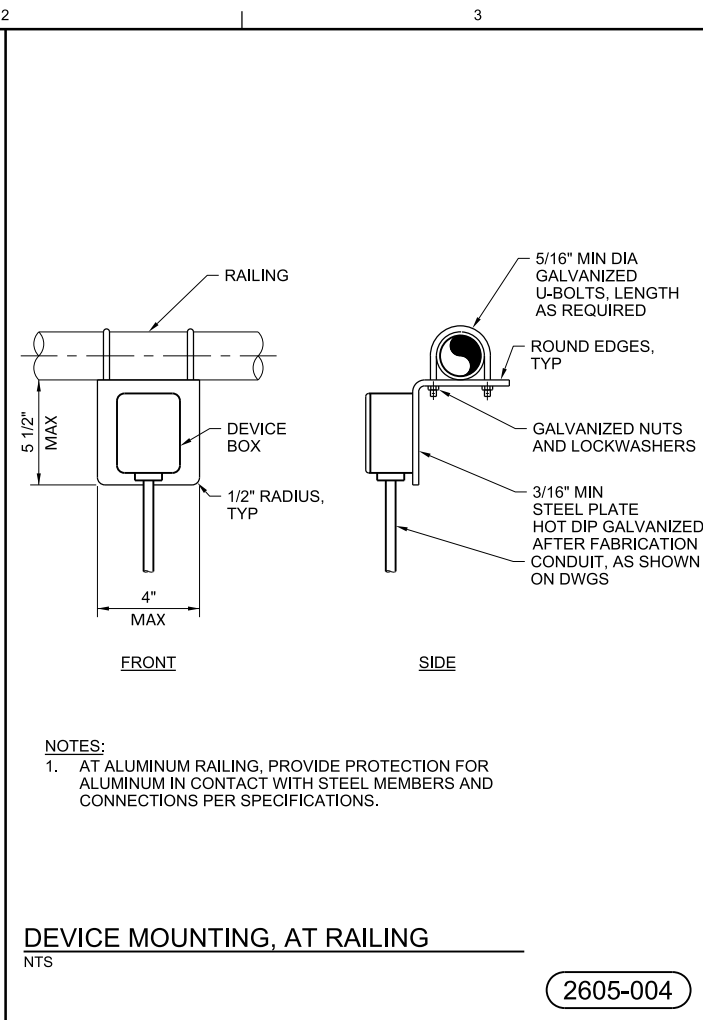
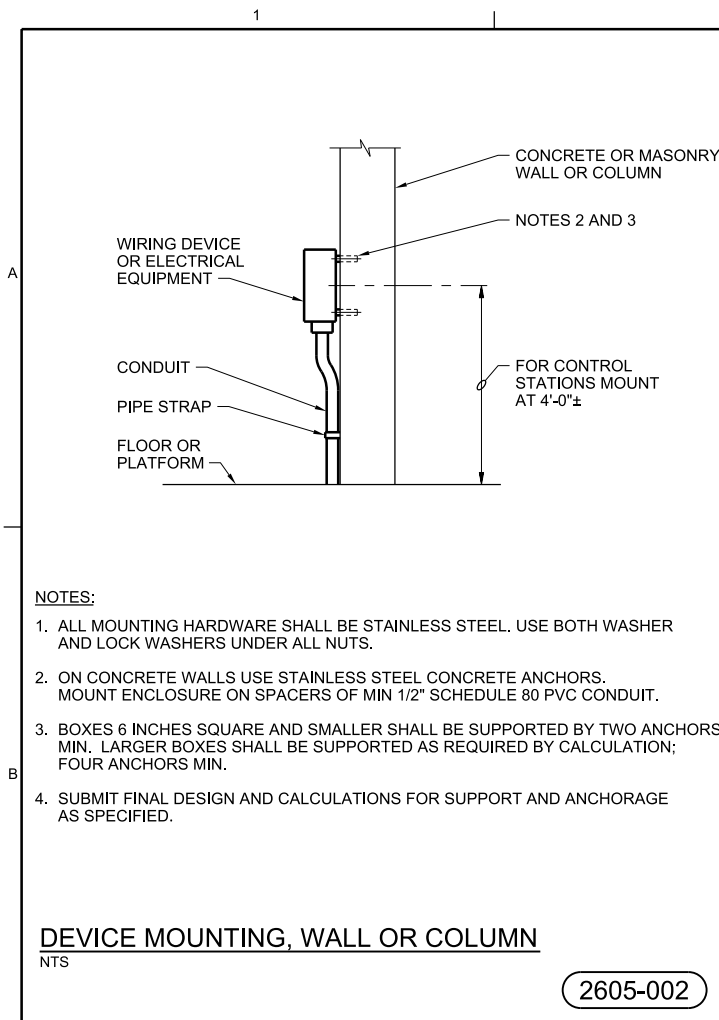
INSTRUMENTATION AND CONTROL

STANDARD DETAILS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	FEBRUARY 2023
PROJ	W8Y12900
DWG	900-SD-0008
SHEET	41 of 43



REGISTERED PROFESSIONAL ENGINEER
CRAIG M. CUSWORTH
ELECTRICAL
LICENSE NO. 022425
STATE OF NEVADA
NOT FOR CONSTRUCTION

NO.	DATE	DR	CHK	APVD	BY	APVD
		J. JABSHIER	J. MINOR	C. CUSWORTH	A. KELLOGG	

REVISION

DESIGN

PROJECT: EFFLUENT EXPORT POND LINING PROJECT

TEAM: GENERAL IMPROVEMENT DISTRICT ONE DISTRICT - ONE TEAM

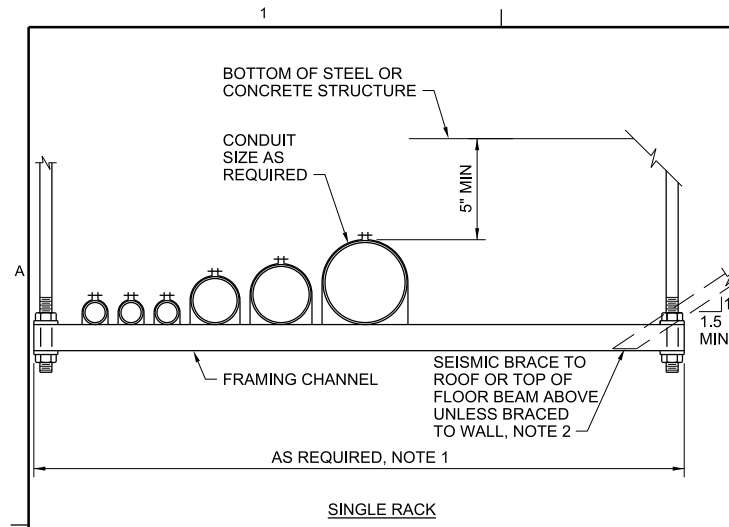
INCLINE VILLAGE

JACOBS
ELECTRICAL
STANDARD DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE: FEBRUARY 2023
PROJ: W8Y12900
DWG: 900-SD-0009
SHEET: 42 of 43

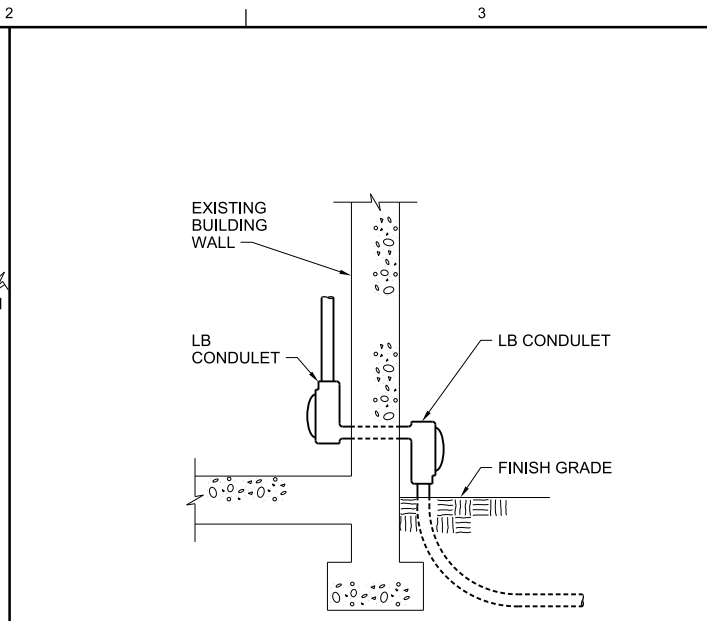
90% DESIGN - NOT FOR CONSTRUCTION



- NOTES:**
1. LENGTH VARIES WITH NUMBER OF CONDUITS TO BE SUPPORTED AND SPACING BETWEEN CONDUITS.
 2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
 3. USE STAINLESS STEEL HARDWARE IN WET AND/OR CORROSIVE AREAS.
 4. SPACE CONDUIT SUFFICIENTLY TO ALLOW REMOVAL OF ONE CONDUIT WITHOUT DISTURBING ADJACENT CONDUITS.

CONDUIT RACKING SYSTEM
NTS

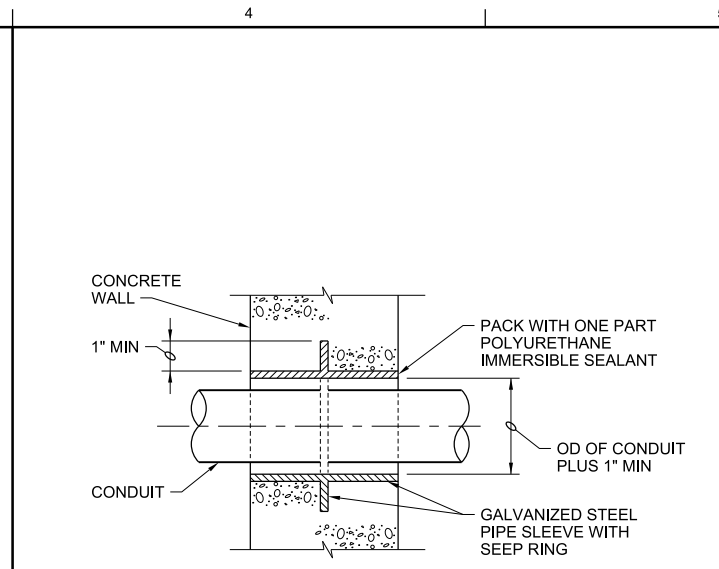
2605-300



- NOTES:**
1. INSTALL CONDUITS THROUGH EXISTING WALLS IN ACCORDANCE WITH THIS DETAIL IF NOT OTHERWISE INDICATED.
 2. DRILL HOLE USING METHODS THAT LEAVE A SMOOTH OPENING. SEAL OPENING AROUND CONDUIT, INSIDE, AND OUTSIDE, WITH ONE PART POLYURETHANE IMMERSIBLE SEALANT.

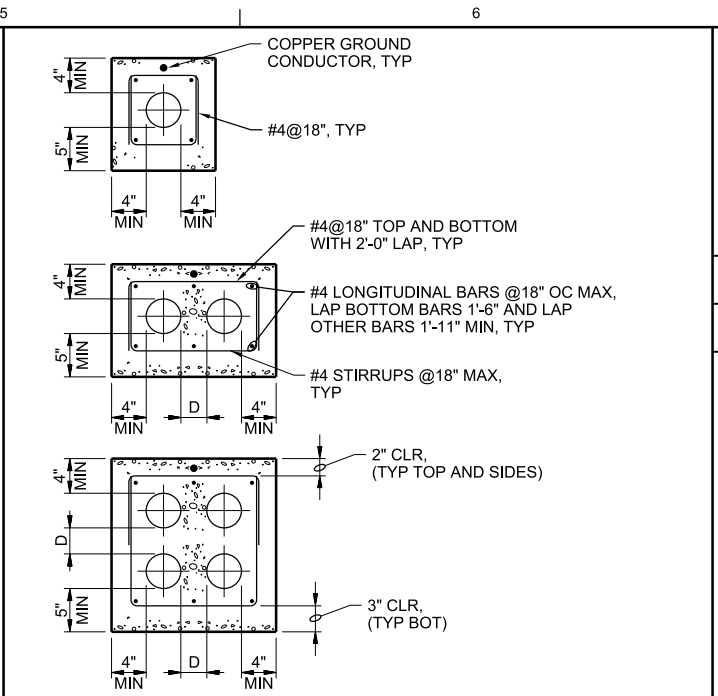
CONDUIT ENTRANCE
NTS

2605-304



CONDUIT UNDERGROUND ENTRANCE
NTS

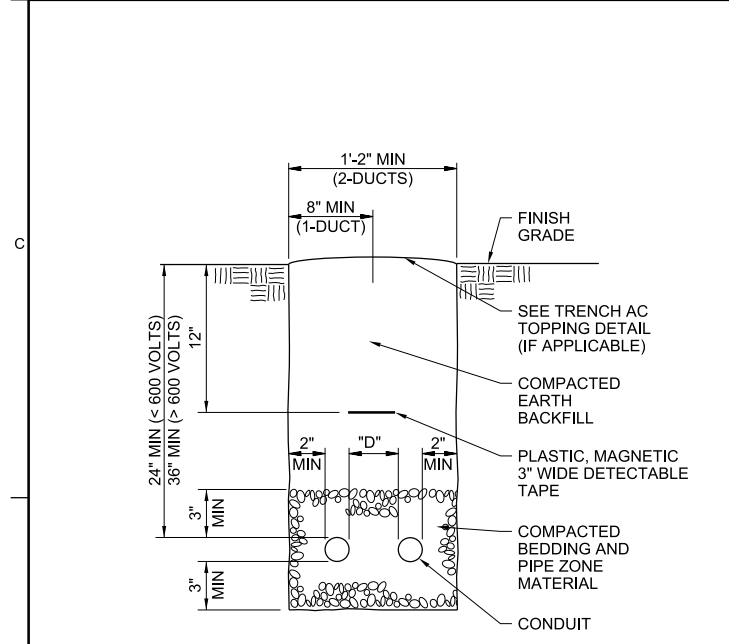
2605-307



- NOTES:**
1. PROVIDE 6\"/>

DUCT BANK
NTS

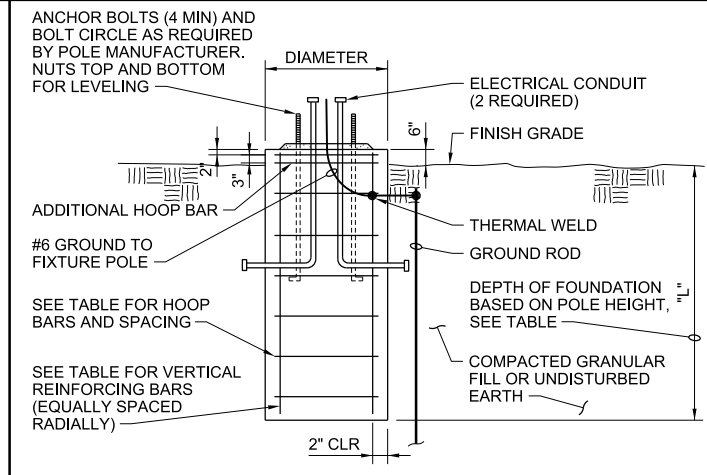
2605-400b



- D = 3\"/>
- D = 2\"/>

TRENCH AND CONDUIT PLACEMENT
NTS

2605-423b



MAX POLE HEIGHT	DIAMETER	"L"	VERTICAL BARS	HOOP BARS

- NOTES:**
1. USE STAINLESS STEEL NUTS AND LOCKWASHERS.
 2. INSTALL TWO CONDUITS (MINIMUM) PER POLE.
 3. INSTALL CENTERLINE OF POLE 3'-0\"/>

SITE AREA LIGHT POLE FOOTING
NTS

2656-216



Jacobs
ELECTRICAL
STANDARD DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	FEBRUARY 2023
PROJ	W8Y12900
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90% DESIGN - NOT FOR CONSTRUCTION