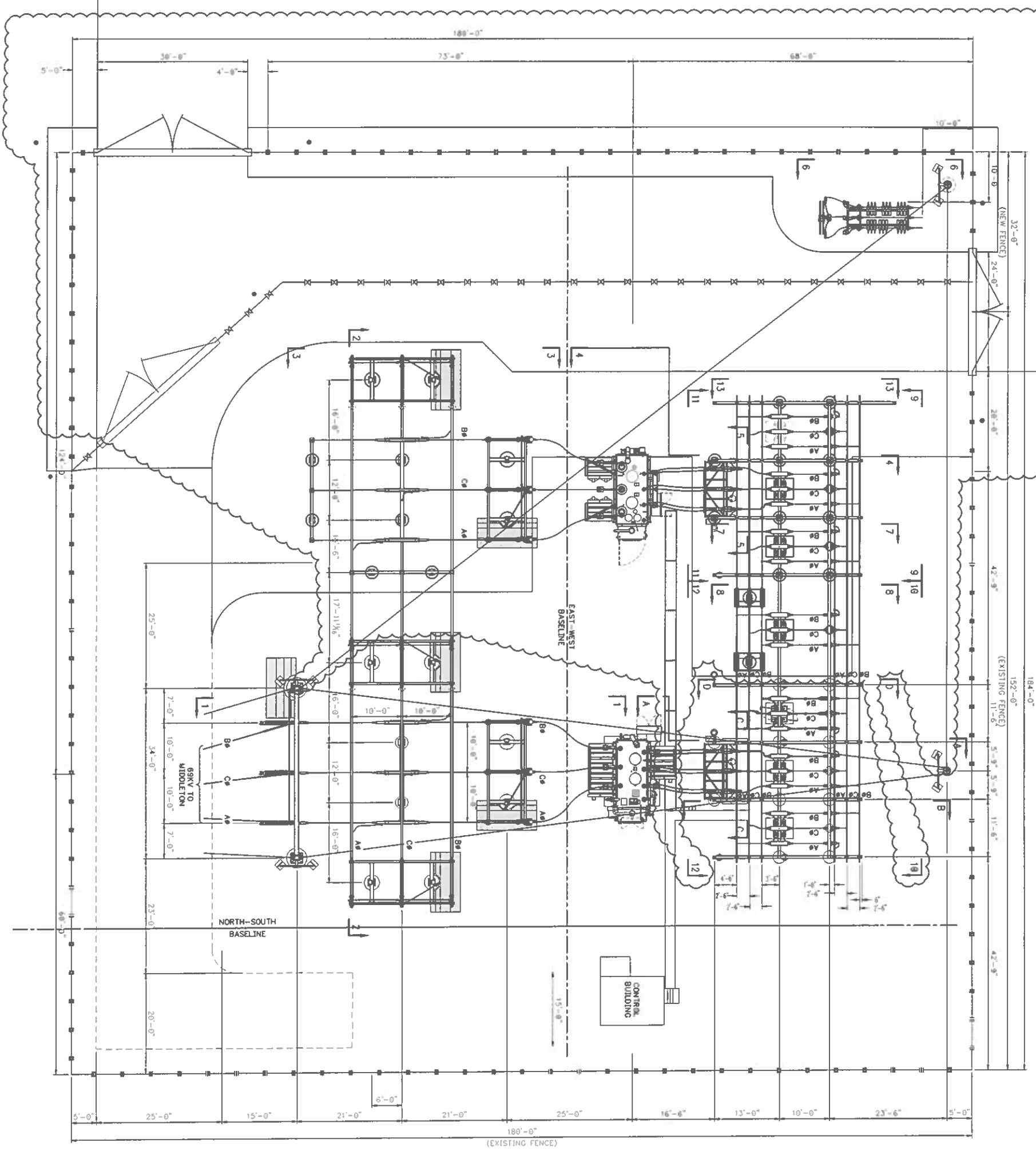
REVISED 05/02/14 D. HURLEY

FILE LOCATION: J:\Shared Data\Work In Progress\Substation_Active Projects\Ivins - 1887788\Design\DWG\99762S01.SAVED BY:(P49124) 1/18/2023 12:51 PM PLOTTED BY:(SHARP, MARIAN (PACIFICORP)) 1/18/2023 4:00 PM



PARTIALLY REDRAWN ON CAD 1-30-98

SCALE IN FEET
1/32"=1'-0"
0 16' 28'

REFERENCE DRAWINGS

99757	DRAWING LIST
96289	ONE LINE DIAGRAM
99761	BILL OF MATERIALS
99752	PLANS & ELEVATIONS
980V7L	FOUNDATION PLAN
187588	GRADING PLAN
186654	FENCE PLAN
148573	CONDUIT & CABLE PLAN
99764	GROUNDING PLAN

IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
GENERAL PLAN

ELECTRICAL

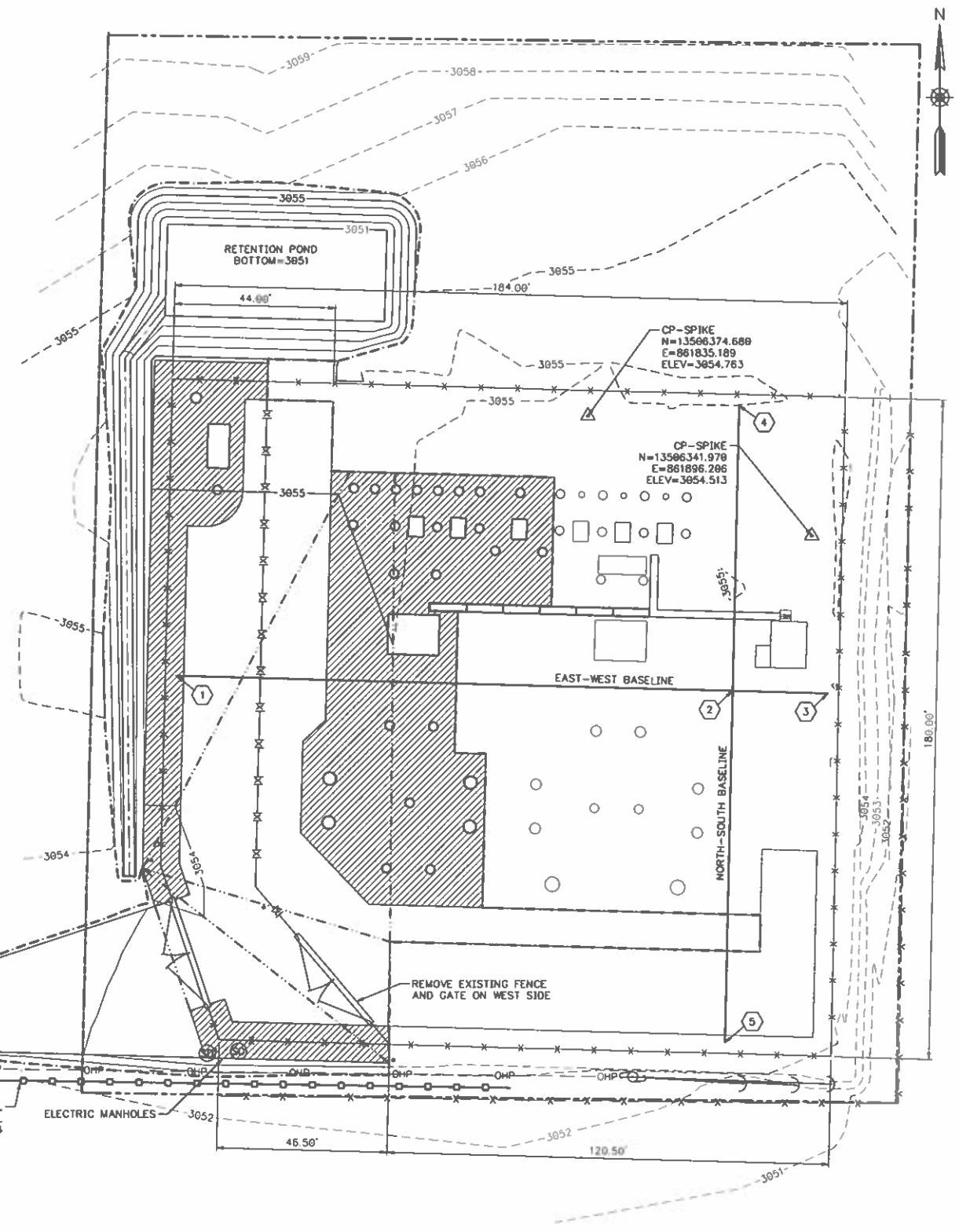
PROJ/ER#	10002944	DISCIPLINE ENG.	GARY W. REAVES
PL#	917174	PROJECT ENG.	
DATE:	07/06/2000		
ENG.	GWR	DES.	VLT
DR.	GWR	CH.	JFB
SCALE:	1/32"=1'-0"	APPROVAL ENG.	JOSEPH F. BELL

PACIFICORP
A SUBSIDIARY OF PACIFICORP ENERGY COMPANY

REVISION	SHEET
5	1 OF 1

99762S01

NO.	DATE	REVISIONS	ENGINEER	DES./ DR.	CHECKED	APPROVED
2	08/25/09	WO# 10037528 #13 NEW CIRCUIT BREAKER	T. BYRNE/WLP	M.CASADOS/WLP	T. BYRNE/WLP	R.JUKKOLA/WLP
3	07/27/12	WO# 10083855 AS-BUILT UPDATE PHASE LABELS		M. RIDGE	R. BURBACH	J. BELL
4	07/06/18	WO# 10063512 REPLACE TRANSFORMER, ADD TRANSRUPTER & NEW 138KV HIGH SIDE, CHANGE DWG SCALE	D. SOUTH/ECI	J. MAROSTICA/ECI	D. BRANDT/ECI	B. LAMERES/ECI
5	03/07/23	WO# 10079267 ADD NEW 69-12.5KV XFMR, BUS TIE BREAKER, TWO FEEDER BREAKERS & CAPACITOR BANK	P. HOANG	M. SHARP		



SITE PLAN
SCALE: 1"=20'

20' 10' 0 10' 20' 40'
SCALE IN FEET
1"=20'

BASELINE MONUMENT LAT & LONG COORDINATES

1. WEST BASELINE MONUMENT:
LAT:N037°10'08.4387", LONG:W113°48'23.2453", ELEV: 3054.41
2. INTERSECTION BASELINE MONUMENT:
LAT:N037°10'08.4415", LONG:W113°48'21.3680", ELEV: 3054.63
3. EAST BASELINE MONUMENT:
LAT:N037°10'08.4428", LONG:W113°48'21.8469", ELEV: 3054.66
4. NORTH BASELINE MONUMENT:
LAT:N037°10'01.2125", LONG:W113°48'21.3699", ELEV: 3054.99
5. SOUTH BASELINE MONUMENT:
LAT:N037°09'59.4927", LONG:W113°48'21.3658", ELEV: 3054.16

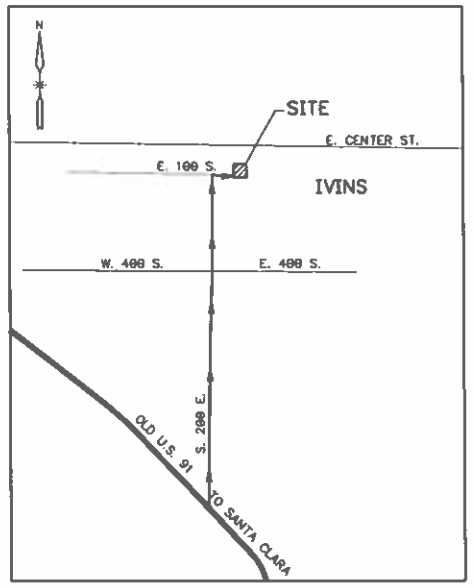
CIVIL SPECIFICATION SECTIONS

- 02010 FOUNDATION REMOVAL
- 02020 STRUCTURAL REMOVAL
- 02030 FENCE REMOVAL
- 02110 CLEARING AND GRUBBING
- 02120 SITE GRADING
- 02121 GENERAL EXCAVATION AND BACKFILL
- 02122 TRENCH EXCAVATION AND BACKFILL
- 02134 ROAD FINISH ROCK
- 02132 YARD FINISH ROCK
- 02138 AGGREGATE BASE COURSE
- 02275 GEOTEXTILES
- 02810 SEEDING AND EROSION CONTROL
- 02950 SOIL STERILIZATION

REFERENCE DRAWINGS

LEGEND

- CONTROL POINT
- 100 GRADING POINT MARKER
- POWER POLE
- BASE LINE
- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- 5530 EXISTING MAJOR CONTOUR
- 5531 EXISTING MINOR CONTOUR
- 5530 MAJOR CONTOUR
- 5531 MINOR CONTOUR
- NEW WALL
- EXISTING FENCE OR WALL
- WALL DEMO
- EROSION CONTROL SILT FENCE
- GRADE CHANGE
- OHP OVERHEAD POWER LINE
- OHP EXISTING OVERHEAD POWER LINE
- UGP UNDERGROUND POWER LINE
- UGP EXISTING UNDERGROUND POWER LINE
- SCREENING WALL
- ROAD ROCK
- YARD ROCK
- AGGREGATE BASE COURSE
- STRUCTURAL FILL
- EARTH
- CONCRETE



VICINITY MAP
SCALE: 1:24,000

GENERAL CONTRACTOR NOTES

ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REQUIREMENTS.

THESE DESIGN DRAWINGS PRESENT THE CIVIL CONCEPTS OF THIS PROJECT AND ARE NOT INTENDED TO SERVE AS THE CONTRACTOR'S SHOP DRAWINGS. CERTAIN ITEMS MAY NOT BE COMPLETELY DETAILED ON THESE DRAWINGS. SUCH ITEMS SHALL BE CONSTRUCTED TO THE CODES AND STANDARDS AS NOTED. THE STANDARDS AND REQUIREMENTS OF LOCAL GOVERNING AGENCIES SHALL TAKE PRECEDENCE.

GRADING SHALL BE PERFORMED TO THE PLANS, ELEVATIONS, PROFILES, SECTIONS, DETAILS AND SPECIFICATIONS UNLESS APPROVED IN ADVANCE TO DO OTHERWISE.

THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE OPERATION OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA THROUGHOUT THE CONSTRUCTION PROCESS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ALL EXISTING UTILITIES WHICH ARE DISTURBED "IN KIND" AS PART OF THE CONTRACT.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE PROJECT OBJECTIVES WITH ALL RESPECTIVE UTILITY COMPANIES, AND SHALL REQUEST LOCATES OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.

THE CONTRACTOR SHALL VERIFY THE LOCATION, HEIGHT AND DEPTH OF ALL UTILITIES AND STRUCTURES WITHIN THE PROJECT AREA IF THEY EXIST.

FOR THE EXACT LOCATION OF EXISTING AND PROPOSED ELECTRICAL EQUIPMENT, FOUNDATIONS, CABLE TRENCHES, CABLES, STRUCTURES, GROUNDING WIRES AND CONDUITS SEE THE ELECTRICAL PLANS. FIELD VERIFY THE LOCATION OF ALL EXISTING ITEMS.

NOTIFY THE PROJECT ENGINEER IF ANY EXISTING UTILITIES (SUCH AS PIPES, CONDUITS, VAULTS, BOXES, RIMS, CLEANOUTS, ETC.) ARE IN CONFLICT WITH THE PROPOSED GRADING OR UTILITY PLAN.

IF UTILITY SHUTDOWNS, INSPECTIONS, AND ACCEPTANCE TESTS ARE REQUIRED THEY SHALL BE COORDINATED IN ADVANCE WITH THE APPROPRIATE PARTIES.

DOWNTIME FOR UTILITIES SHALL BE HELD TO A MINIMUM AND TEMPORARY BYPASSES SHALL BE PROVIDED WHERE NECESSARY TO MAINTAIN PROPER SERVICE. DO NOT INTERRUPT UTILITIES THAT ARE SERVING FACILITIES OCCUPIED BY THE OWNER OR BY OTHERS UNLESS GRANTED IN WRITING BY THE PROJECT MANAGER OR PROJECT ENGINEER, AND ONLY AFTER ARRANGING TO PROVIDE TEMPORARY SERVICES ACCORDING TO THE REQUIREMENTS AS INDICATED.

IF EXISTING PIPELINES ARE TO BE ABANDONED, ALL OPEN ENDS, HOLES, OR OTHER OPENINGS SHALL BE PLUGGED WITH CONCRETE, OR AS SPECIFIED BY THE LOCAL GOVERNING AGENCIES, WHICH SHALL TAKE PRECEDENCE. ALL COSTS INVOLVED WITH THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICES FOR GRADING WORK.

THE CONTRACTOR SHALL GIVE THE APPROPRIATE INSPECTION AGENCY TWO (2) WORKING DAYS ADVANCE NOTICE WHEN REQUESTING INSPECTIONS.

THE LOCATION OF PROPERTY LINES, EXISTING STRUCTURES, FIXTURES AND UNDERGROUND UTILITIES ARE DRAWN FROM THE BEST AVAILABLE AS-BUILT AND SURVEYED INFORMATION. THIS DOES NOT GUARANTEE THAT THE LOCATION OF EXISTING ITEMS ARE EXACT OR COMPLETE.

SITE CONSTRUCTION PRACTICES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS. THE CONTRACTOR SHALL MAINTAIN ON-SITE, LEGIBLE MATERIAL SAFETY DATA SHEETS FOR ALL HAZARDOUS MATERIALS USED ON-SITE.

ANY OFF-SITE PROPERTY FOUND DAMAGED SHALL BE REPLACED TO THE SATISFACTION OF THE INSPECTOR, DIRECTOR OF THE AFFECTED AGENCY OR THE OWNER OF THE PROPERTY.

THE WORK SCHEDULE SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND WITH ANY LOCAL ORDINANCES.

THE CONTRACTOR SHALL SECURE THE JOB AT THE END OF EACH DAY. ON-DUTY AND OFF-DUTY CONTACTS AND PHONE NUMBERS FOR THE CONTRACTOR SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE.

THE CONTRACTOR SHALL COORDINATE WITH THE FACILITY MANAGER TO MANAGE THE PROJECT'S IMPACT TO SECURITY AND SAFETY MATTERS.

ANY REVISIONS MADE TO THE APPROVED PLANS REQUIRE SUBSEQUENT APPROVAL BY THE APPROPRIATE AUTHORITY. PROVIDE A MINIMUM OF ONE (1) SET OF FULL SIZE, REDLINED RECORD DRAWINGS TO THE COMPANY AT THE COMPLETION OF THE PROJECT.

REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOILS, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS, INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF SITE AT AN APPROVED LOCATION.

NO OPEN BURNING OF WASTE MATERIALS SHALL BE PERMITTED ON THE SITE WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE AND APPROPRIATE REGULATORY AGENCIES.

DUST SHALL BE CONTROLLED AT ALL TIMES BY WATERING OR OTHER APPROVED METHODS. DIRT DEBRIS, TRASH OR OTHER CONSTRUCTION MATERIALS SHALL BE CONTAINED WITHIN CONSTRUCTION BOUNDARIES AT ALL TIMES AND SHALL BE CLEANED AND REMOVED DAILY AS NECESSARY. EXCESS EXCAVATED MATERIALS SHALL BE PROMPTLY DISPOSED OF TO AN APPROVED LOCATION AT THE CONTRACTOR'S EXPENSE. EXCAVATED MATERIAL TO BE REUSED AS BACKFILL MAY BE TEMPORARILY STOCKPILED AS INDICATED ON THE GRADING PLAN, BUT SHALL BE WATERED AND/OR COVERED TO PREVENT BLOWING ONTO ADJACENT PROPERTIES. THE CONTRACTOR SHALL ALSO PREVENT CONSTRUCTION DEBRIS FROM ENTERING ANY EXISTING STORM DRAINAGE SYSTEMS BY IMPLEMENTING PREVENTATIVE MEASURES SUCH AS DAMMING OR TEMPORARY CLOSURES (ALSO SEE THE EROSION CONTROL PLAN).

CODES AND STANDARDS:

AMERICAN CONCRETE INSTITUTE ACI 318, CURRENT EDITION
NFPA NATIONAL ELECTRICAL CODE, CURRENT EDITION
LOCAL EROSION AND SEDIMENT CONTROL STANDARDS
I.B.C. WITH ALL AMENDMENTS, CURRENT EDITION
LOCAL D.O.T. STANDARD SPECIFICATIONS, CURRENT EDITION
SPECIFICATIONS FOR HWY. CONSTRUCTION, CURRENT EDITION
FIRE DEPARTMENT REGULATIONS
NATIONAL FIRE PROTECTION ASSOCIATION, CURRENT EDITION

NO.	DATE	REVISIONS	ENGINEER	DES./ DR.	CHECKED	APPROVED
1	10/10/23	WO# 1887867 UPDATE GRADING PLAN PER AS-BUILT INFO, EXPAND YARD TO THE WEST.	G. HUNTING	G. HUNTING		

PACIFICORP

CIVIL

PROJECT NO. 16063512
DATE: 07/06/2018
DES. D. JOHNSON/ECI
DR. D. JOHNSON/ECI
CHK. B. PUCKETT/ECI
DISCIPLINE CHG. DAVID SOUTH/ECI
PROJECT CHG. DAVID BRANOT/ECI
APPROVAL CHG. BRUCE LAMERES/ECI
SCALE: AS NOTED

IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
GRADING PLAN
OVERALL SITE PLAN - 2023 YARD EXPANSION

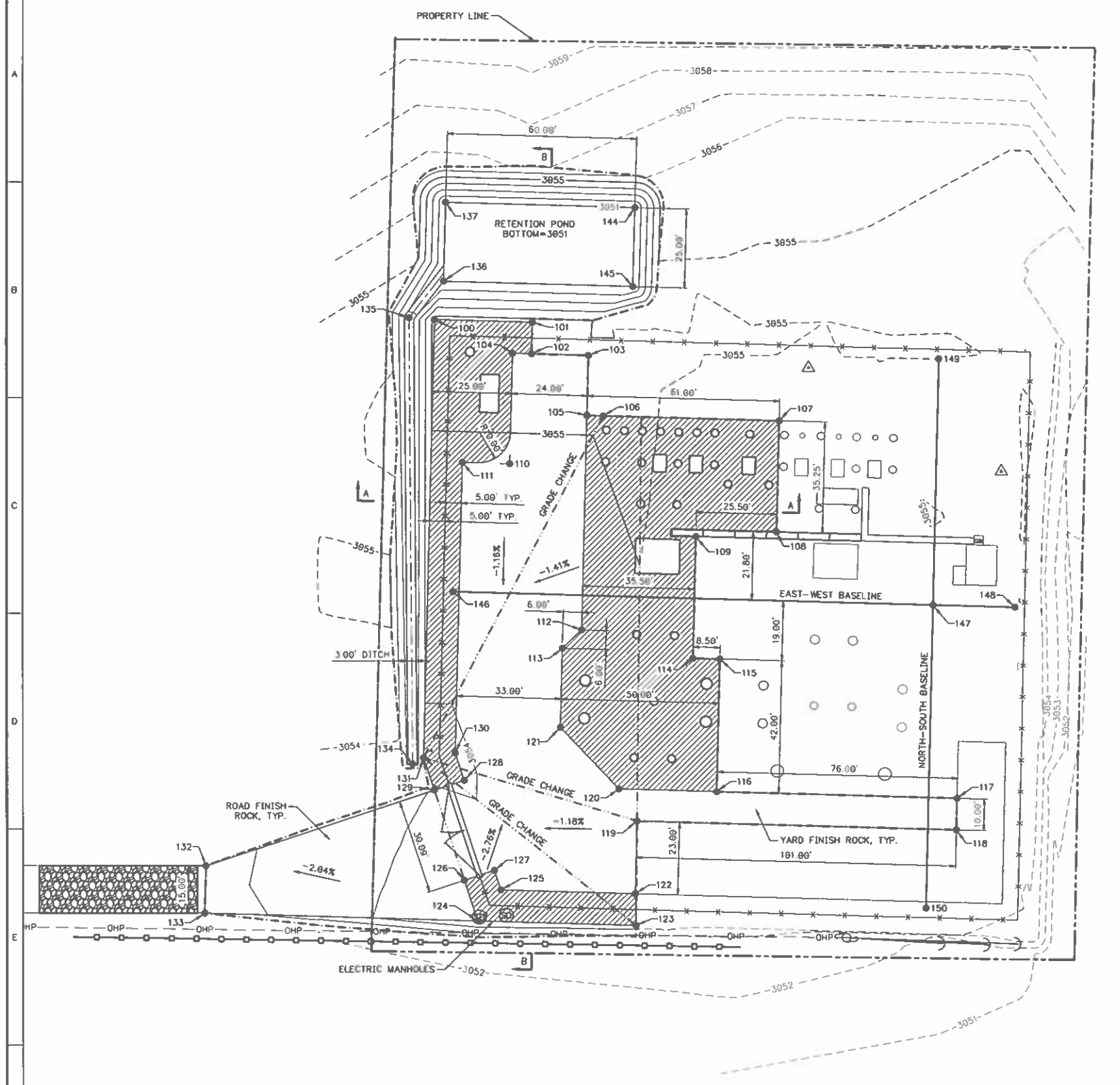
SHEET 1 OF 4

REVISION 1
187588.001

REVISED 05/02/14 D. HURLEY

FILE LOCATION: z:\Shared Data\Work In Progress\Substation_Active Projects\Ivins 18073675\187588.000 SAVED BY:(P28348) 6/30/2023 3:18 PM PLOTTED BY:(HUNTING, GARY (PACIFICORP)) 6/30/2023 3:20 PM

ATTACHED XREFS: XREFOVERLEVING / ATTACHED IMAGES: AERIAL.JPG



GRADING PLAN

GRADING DRAWING NOTES

LAYOUT:

1. THE BASELINES SHALL BE ESTABLISHED AS SHOWN, AND THE EAST-WEST BASELINE SHALL BE PERPENDICULAR TO THE NORTH-SOUTH BASELINE.
2. THE BASIS OF HORIZONTAL AND VERTICAL CONTROL IS SHOWN ON SHEET 1. THE CONTRACTOR IS RESPONSIBLE FOR SETTING PROJECT BENCHMARKS AS REQUIRED FROM THE SURVEY MONUMENTS, AND SHALL PROTECT ALL MONUMENTS FROM DISTURBANCE THROUGHOUT CONSTRUCTION. IF ANY MONUMENTS ARE DISPLACED THEY SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
3. ALL RADII OF INTERNAL ROADWAYS ARE 10 FEET UNLESS OTHERWISE NOTED.

GRADING UNLESS OTHERWISE DESIGNATED:

1. THE TOP LAYER OF UNSUITABLE ORGANIC TOPSOIL WITHIN THE GRADING LIMITS SHALL BE STRIPPED TO A MINIMUM DEPTH OF SIX (6) INCHES. AFTER THE SITE HAS BEEN GRADED TO SUB-GRADE THE SITE SHALL BE PROOF-ROLLED WITH A LOADED DUMP TRUCK (WITH 90 P.S.I. TIRE PRESSURE). SOILS THAT ARE OBSERVED TO RUT OR DEFLECT GREATER THAN ONE INCH UNDER THE MOVING LOAD OF THE LOADED DUMP TRUCK SHALL BE STRIPPED TO FIRM, UNDISTURBED SOIL AND REPLACED WITH AN APPROVED BACKFILL PER SPECIFICATIONS.
2. EXCAVATED SOIL THAT CANNOT BE USED FOR FILL OR LANDSCAPING SHALL BE DISPOSED OF OFF-SITE UNLESS PRE-APPROVED TO STOCKPILE AT AN APPROVED LOCATION. TOPSOIL THAT WILL BE USED FOR SEED BEDDING SOIL SHALL BE TEMPORARILY STOCKPILED. RE-SEED ALL CUT AND FILL SLOPES OUTSIDE OF THE SUBSTATION PER NOTE 13.
3. ELEVATIONS SHOWN ON THE GRADING PLAN ARE FINISHED GRADE ELEVATIONS (UNLESS NOTED OTHERWISE), WHICH IS DEFINED AS THE TOP OF FINISH ROCK WHERE YARD AND ROAD ROCK IS SHOWN. THE SUB-GRADE ELEVATIONS ARE BELOW THE FINISH ROCK, WHICH IS THE TOP OF STRUCTURAL BACKFILL, AGGREGATE BASE OR UNDISTURBED EARTH. ALL GRADES SHALL BE COMPACTED AS REQUIRED IN THE SPECIFICATIONS. SEE THE TYPICAL SECTIONS AND DETAILS SHOWN ON SHEET 3.
4. THREE (3) INCH COMPACTED THICKNESS OF BASE ROCK SHALL BE PLACED OVER THE SUBSTATION YARD AREA SUB-GRADE FOR A CONSTRUCTION PAD IF WEATHER WARRANTS.
5. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN A 3:1 SLOPE.
6. NATIVE BACKFILL RG-1 (IF APPROVED FOR USE) AND IMPORTED ROAD FINISH ROCK SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER ASTM D-1557. SEE SITE GRADING SPECIFICATION, SECTION 02120 & 02134.
7. FINISH ROCK SHALL NOT BE INSTALLED UNTIL ALL UNDERGROUND CONDUITS, GROUNDING AND UTILITIES ARE INSTALLED AND TRENCHES ARE BACKFILLED.
8. ALL AREAS NOT DESIGNATED AS ROADWAYS WITHIN THE SUBSTATION, AND THE FIVE (5) FOOT SHOULDER ADJACENT TO AND OUTSIDE OF THE SUBSTATION WALL, SHALL RECEIVE FOUR (4) INCHES OF YARD FINISH ROCK. THERE SHALL BE A MINIMUM OF SIX (6) INCHES OF NATIVE RG-1 OR IMPORTED ROAD FINISH ROCK TO REPLACE THE SUB-GRADE IF IT IS UNSUITABLE AND CANNOT MEET COMPACTION REQUIREMENTS AFTER PROOF-ROLLING. SEE TYPICAL SECTION ON SHEET 3.
9. ALL AREAS DESIGNATED AS NEW ROADWAY SHALL HAVE A MINIMUM OF FOUR (4) INCHES OF ROAD FINISH ROCK. SEE TYPICAL SECTION ON SHEET 3.
10. FINISH ROAD ROCK SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER ASTM D-1557. SEE SPECIFICATIONS FOR DETAILS.
11. THE ACCESS ROAD CONNECTION SHALL BE GRADED AND SURFACED AS DETAILED TO THE LIMITS AS SHOWN ON THE PLANS.
12. FOR GEOTECHNICAL INFORMATION REFER TO THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY PSI, PROJECT NO. 07041140, DATED MARCH 05, 2018.
13. DISTURBED SLOPES OUTSIDE OF THE SUBSTATION AREA SHALL HAVE A CULTIVATED SURFACE SOIL OR ADEQUATE GROWING MEDIUM IN A CONDITION FAVORABLE FOR SEED GROWTH. REMOVE ALL ROCKS, WEEDS, DEBRIS AND MATTER DETRIMENTAL TO SEED GERMINATION AND GROWTH. THE SEED MIXTURE SHALL INCLUDE A VARIETY OF GRASSES WHICH ARE SUITABLE TO THE LOCAL CLIMATE, AND SHALL BE SUPPLIED BY A STATE CERTIFIED SEED VENDOR. THE SEED AND FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY THE SEED SUPPLIER. IF MULCH IS USED IT SHALL BE FREE OF NOXIOUS WEED SEEDS AND PLANTS, AND IT SHALL BE PROCESSED TO HAVE THE ABILITY TO COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL. THE CONTRACTOR SHALL USE HYDRO-SEEDING TECHNIQUES, OR AN APPROVED EQUIVALENT, TO APPLY THE SEED AND MULCH. ALL SEEDS AND APPLICATION TECHNIQUES SHALL BE PRE-APPROVED.

ESTIMATED QUANTITIES:

EARTHWORK QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE IN BANK CUBIC YARDS WITH NO ALLOWANCE FOR SHRINK OR SWELL. THE CONTRACTORS SHALL CALCULATE THEIR OWN ITEMIZED EARTHWORK AND MATERIAL QUANTITIES FOR THIS PROJECT.

QUANTITIES DO NOT INCLUDE EXCAVATED OR FILL MATERIAL FOR FOUNDATION WORK.

LIMITS OF CONSTRUCTION (DISTURBED AREA)	0.55 ACRES
TOPSOIL (ORGANICS) REMOVAL	210 C.Y.
EXPORTED OR STOCKPILED TOPSOIL	210 C.Y.
EXCAVATED RG-1	700 C.Y.
IMPORTED FINISH ROAD ROCK	125 C.Y.
AGGREGATE BASE COURSE	305 C.Y.
IMPORTED FINISH YARD ROCK	100 C.Y.
TOTAL IMPORTED MATERIAL	530 C.Y.

Point Table

Point #	Raw Description	Elevation	Northing	Easting
100	CORNER OF YARD ROCK	3855.41	13506389.77	861716.75
101	EDGE OF ROAD & YARD ROCK	3855.41	13506388.96	861747.74
102	EDGE OF ROAD & YARD ROCK	3855.29	13506378.96	861747.48
103	EDGE OF ROAD ROCK	3855.29	13506378.49	861765.47
104	EDGE OF ROAD & YARD ROCK	3855.29	13506379.12	861741.48
105	EDGE OF ROAD & YARD ROCK	3855.07	13506359.49	861764.97
106	EDGE OF YARD ROCK @ BREAK	3854.99	13506359.36	861778.14
107	EDGE OF YARD ROCK	3854.65	13506357.89	861825.95
108	EDGE OF YARD ROCK	3854.63	13506322.69	861825.83
109	EDGE OF YARD ROCK	3854.44	13506321.20	861799.48
110	P.I. OF RADIUS	3854.67	13506344.13	861746.56
111	EDGE OF ROAD & YARD ROCK	3854.67	13506344.52	861725.56
112	EDGE OF ROAD & YARD ROCK	3854.52	13506291.52	861763.18
113	EDGE OF ROAD & YARD ROCK	3854.42	13506285.68	861757.03
114	EDGE OF YARD ROCK	3854.49	13506282.59	861798.45
115	EDGE OF YARD ROCK	3854.35	13506282.36	861806.96
116	EDGE OF ROAD & YARD ROCK	3854.62	13506240.38	861885.86
117	EDGE OF ROAD ROCK	3854.52	13506238.38	861881.83
118	EDGE OF ROAD ROCK	3854.48	13506228.38	861881.57
119	EDGE OF ROAD AT BREAK	3854.60	13506231.84	861780.60
120	EDGE OF ROAD & YARD ROCK	3854.57	13506241.19	861774.87
121	EDGE OF ROAD & YARD ROCK	3854.42	13506260.88	861756.37
122	EDGE OF ROAD & YARD ROCK	3854.60	13506208.84	861780.00
123	EDGE OF YARD AT BREAK	3854.60	13506198.84	861780.23
124	EDGE OF ROAD AT BREAK	3855.00	13506199.35	861730.24
125	EDGE OF ROAD & YARD ROCK	3854.68	13506209.16	861737.52
126	EDGE OF ROAD & YARD ROCK	3854.70	13506212.17	861725.98
127	EDGE OF ROAD & YARD ROCK	3854.54	13506215.32	861735.47
128	EDGE OF ROAD & YARD ROCK	3853.95	13506243.79	861726.91
129	EDGE OF ROAD & YARD ROCK	3854.04	13506240.72	861716.58
130	EDGE OF ROAD & YARD ROCK	3853.94	13506252.43	861723.14
131	EDGE OF YARD AT BREAK	3853.80	13506258.94	861713.18
132	EDGE OF ROAD ROCK	3852.78	13506216.62	861644.22
133	EDGE OF ROAD ROCK	3852.40	13506201.62	861643.83
134	CENTER OF DITCH BOTTOM	3852.80	13506248.97	861709.61
135	CENTER OF DITCH BOTTOM	3852.11	13506390.31	861708.65
136	CORNER OF POND AT BOTTOM	3851.00	13506401.91	861719.59
137	CORNER OF POND AT BOTTOM	3851.00	13506426.90	861720.25
144	CORNER OF POND AT BOTTOM	3851.00	13506425.32	861780.23
145	CORNER OF POND AT BOTTOM	3851.00	13506400.33	861779.57
146	YARD BASELINE MONUMENT	3854.41	13506303.59	861722.49
147	YARD BASELINE MONUMENT	3854.63	13506299.59	861874.44
148	YARD BASELINE MONUMENT	3854.66	13506298.91	861900.43
149	YARD BASELINE MONUMENT	3854.99	13506377.57	861876.49
150	YARD BASELINE MONUMENT	3854.16	13506203.63	861871.91

NO.	DATE	REVISIONS	ENGINEER	DES./ DR.	CHECKED	APPROVED
1	8/8/23	WO# 10077967 UPDATE GRADING PLAN PER AS-BUILT INFO, EXPAND YARD TO THE WEST.	G. HUNTING	G. HUNTING		

PACIFICORP

CIVIL

PROJECT#	10063512	DISCIPLINE DWG.	DAVID SOUTH/ECI
PW 611174			
DATE:	07/06/2018	PROJECT DIR.	DAVID BRANDT/ECI
DWG. D. SOUTH/ECI	CHK. D. JOHNSON/ECI	DES. D. JOHNSON/ECI	APPROVAL DWG. BRUCE LAUERER/ECI
DR. D. JOHNSON/ECI	CH. B. PUCKETT/ECI	SCALE:	1"=20'

IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
GRADING PLAN
SITE DEVELOPMENT - 2023 YARD EXPANSION

SHEET 2

REVISION 1

187588.002

REVISED 05/02/14 D. HURLEY

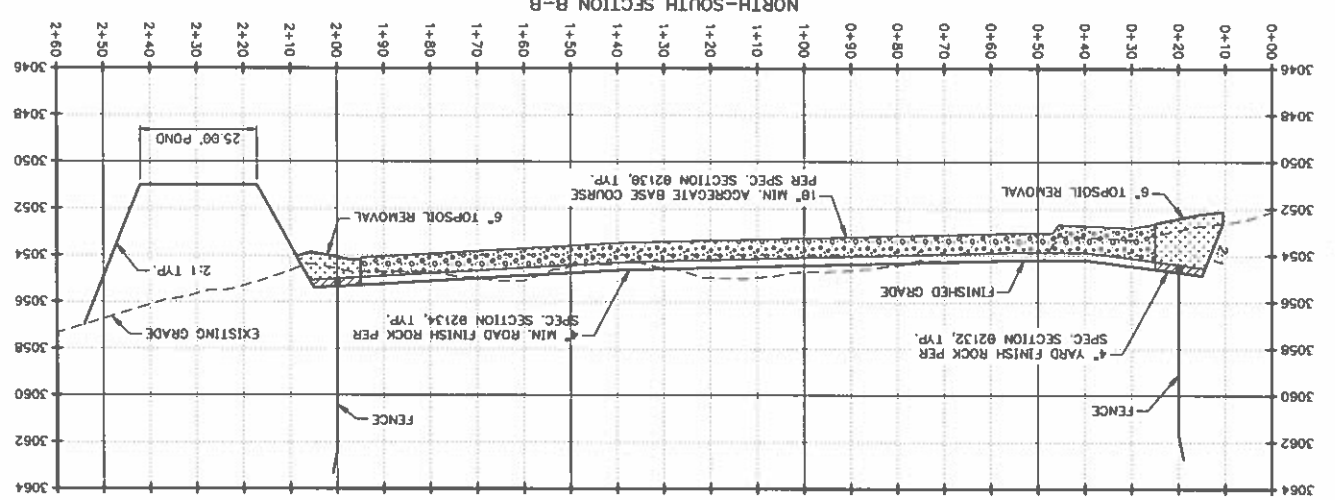
FILE LOCATION: J:\Shared Data\Work In Progress\Substation_Active Projects\Ivins 10073675\187588.000 SAVED BY:(P28348) 8/30/2023 3:18 PM PLOTTED BY:(HUNTING, GARY (PACIFICORP)) 8/30/2023 3:19 PM

ATTACHED XREFS: XREFDVBUILDING / ATTACHED IMAGES: AERIAL.JPG

FILE LOCATION: C:\Saved Data\Docs In Progress\Substation_Active Projects\Ivins 187588.000 SAVED BY: (PACIFICORP) 6/30/2023 2:45 PM PLOTTED BY: (MARTINC, GARY (PACIFICORP)) 6/30/2023 3:12 PM
ATTACHED XREFS: XREFCMBLOCK / ATTACHED IMAGES: AERIAL.JPG
REVISED 06/07/23 BY MARTINC

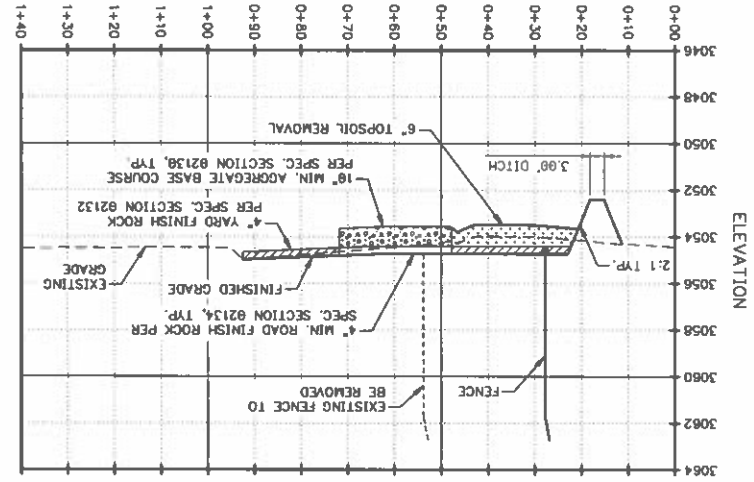
NORTH-SOUTH SECTION B-B

SCALE: 1"=20' (1"=4' VERTICAL)



EAST-WEST SECTION A-A

SCALE: 1"=20' (1"=4' VERTICAL)

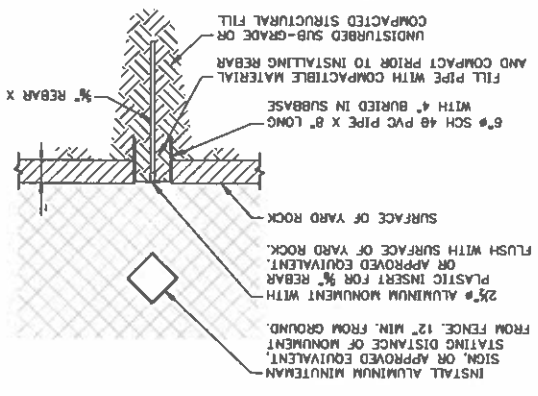


NOTE TO THE CONTRACTOR:

- ALL GRADING, OVER-EXCAVATING AND COMPACTING SHALL BE WITNESSED AND APPROVED BY A COMPANY REPRESENTATIVE.
- PERFORM CLEARING AND GRUBBING OVER THE LIMITS OF THE CONSTRUCTION AREA OUTSIDE OF THE EXISTING SUBSTATION AND REMOVE 6 INCHES OF TOPSOIL.
- PROOF-ROLL THE LIMITS OF CONSTRUCTION AREA TO IDENTIFY AREAS OF INSTABILITY AND UNSUITABLE SOILS.
- MOISTURE CONDITION THE EXISTING FILL THAT NEEDS TO BE COMPACTED AS NEEDED AND COMPACT WITH HEAVY COMPACTION EQUIPMENT TO THE REQUIREMENTS OF STRUCTURAL FILL PER SPECIFICATION 02121.
- SCARIFY THE UNSTABLE AREAS OF SUBGRADE.
- MOISTURE CONDITION THE EXISTING FILL THAT NEEDS TO BE COMPACTED AS NEEDED AND COMPACT WITH HEAVY COMPACTION EQUIPMENT TO THE REQUIREMENTS OF STRUCTURAL FILL PER SPECIFICATION 02121.
- SCARIFY THE UNSTABLE AREAS OF SUBGRADE.
- OVER-EXCAVATE AND REMOVE UNSATISFACTORY SOILS ENCOUNTERED WHILE PROOF-ROLLING AND SCARIFYING, SUCH AS UNSTABLE SOILS OR ANY DEBRIS/GARBAGE. ALL OVER-EXCAVATION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER.
- THE CONTRACTOR SHALL PROVIDE A SUBMITTAL FOR ALL IMPORTED MATERIAL TO THE CIVIL INSPECTOR AND PROJECT MANAGER, AND SHALL NOT IMPORT ANY MATERIAL UNTIL THE RESPECTIVE SUBMITTALS HAVE BEEN APPROVED IN WRITING BY THE APPROPRIATE AUTHORITY.
- FILL ALL OVER-EXCAVATED AND DEPRESSED AREAS WITH IMPORTED FILL RQ-2 AND COMPACT PER SPECIFICATION 02121.
- A GEOTECHNICAL ENGINEER (PROVIDED BY COMPANY) SHALL BE PRESENT DURING SUBGRADE PREPARATION TO VERIFY THAT ALL AREAS ARE PREPARED TO THE REQUIREMENTS OF STRUCTURAL FILL.
- MARK ALL AREAS THAT CANNOT BE COMPACTED AS REQUIRED.
- IF COMPACTION CANNOT BE ACHIEVED PLEASE INFORM THE GEOTECHNICAL AND PROJECT ENGINEERS.
- AN INDEPENDENT TESTING AGENCY (PROVIDED BY COMPANY) SHALL BE PRESENT TO VERIFY THAT ALL RQ-2 AND GRANULAR MATERIAL IS COMPACTED PER THE SPECIFICATIONS, AND TO INSPECT THE INSTALLATION OF THESE MATERIALS.
- ALL FILL MATERIAL SHALL BE INSTALLED IN LIFTS AND SHALL BE COMPACTED AS REQUIRED PER THE SPECIFICATIONS.

BASELINE YARD MONUMENT DETAIL

SCALE: ¾"=1'-0"

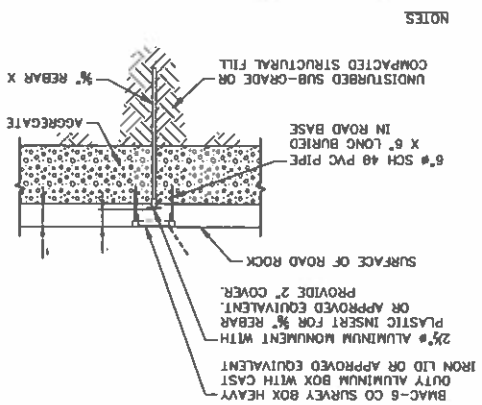


NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP HEAVY VEHICLES FROM DISTURBING THE MONUMENTS DURING CONSTRUCTION.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND OBTAIN PROFESSIONAL SERVICES FROM A LICENSED SURVEYOR TO SET THE MONUMENTS.

BASELINE ROAD MONUMENT DETAIL

SCALE: ¾"=1'-0"

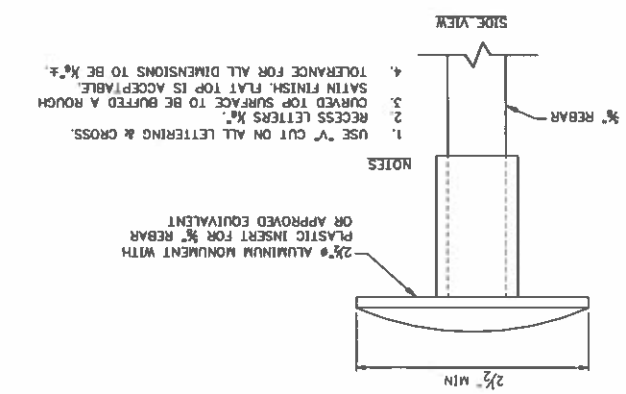


NOTES

1. THE INSTALLED MONUMENT MUST BE INDEPENDENT OF THE ROADWAY VIBRATIONS OF THE ROADWAY SURFACE MUST BE TRANSMITTED TO THE UNDERLYING SOILS AND NOT TO THE MONUMENT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP HEAVY VEHICLES FROM DISTURBING THE MONUMENTS DURING CONSTRUCTION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND OBTAIN PROFESSIONAL SERVICES FROM A LICENSED SURVEYOR TO SET THE MONUMENTS.

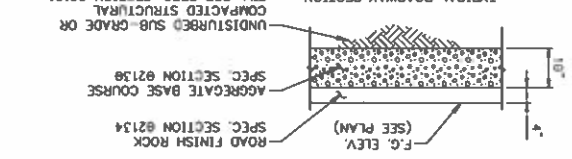
PLUG MARKER DETAIL

SCALE: 1"=0"=1'=0"



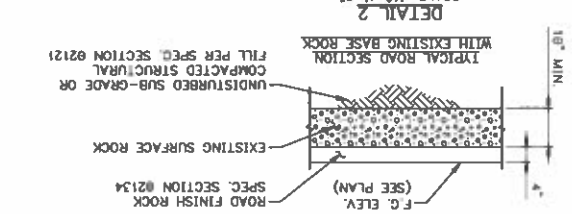
DETAIL 1

SCALE: ¾"=1'-0"



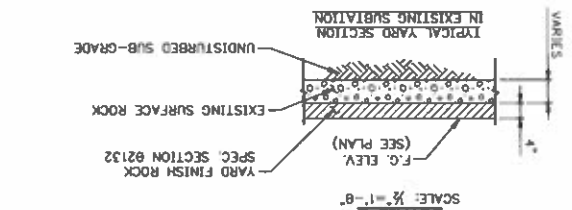
DETAIL 2

SCALE: ¾"=1'-0"



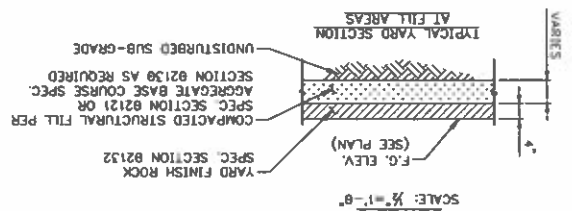
DETAIL 3

SCALE: ¾"=1'-0"



DETAIL 4

SCALE: ¾"=1'-0"



REVISION	DATE	DESCRIPTION	ENGINEER	DES. / DR.	CHECKED	APPROVED
1	06/30/23	REV 187588.000 UPDATE GRADING PLAN PER AS-BUILT INFO, EXPAND YARD TO THE WEST.	G. MARTINC	G. MARTINC		

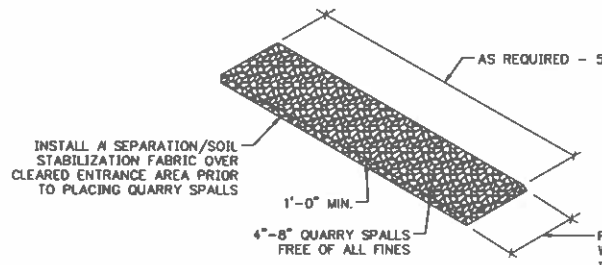
PACIFICORP
A DIVISION OF PACIFIC POWER

PROJ/JOB #	1866352
DATE	07/06/2018
DWG.	G_GRADING.dgn
DR.	B. JOHNSON/ECI
SCALE	AS NOTED
DESCRIPTION	CIVIL
DAVID SOUTH/ECI	
PROJECT ENG.	DAVID BRUNOT/ECI
DES.	B. JOHNSON/ECI
CH.	B. RUDESTI/ECI
APPROVAL ENG.	BRUCE LAMERS/ECI

IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
GRADING PLAN
GRADING SECTIONS AND DETAILS - 2023 YARD EXP.

SHEET	REVISION
3	1

187588.0003

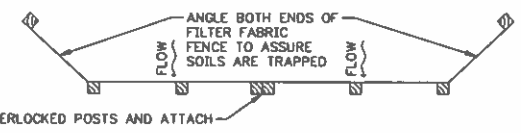


NOTES

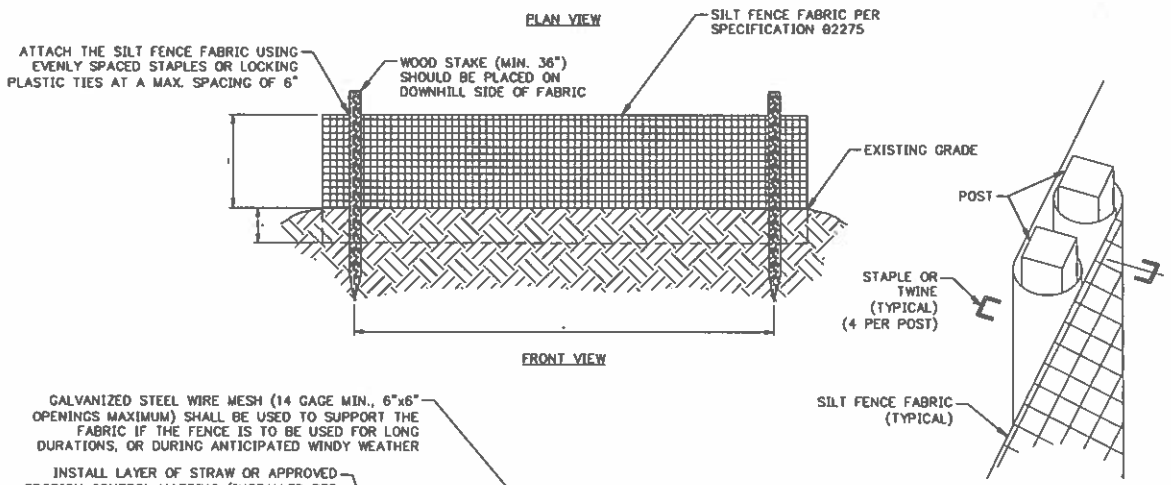
1. INSTALL WOVEN GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.
2. A VEHICLE WASHDOWN AREA, IF REQUIRED, SHALL BE INSTALLED AND USED TO REMOVE SEDIMENT FROM VEHICLES BEFORE LEAVING THE CONSTRUCTION SITE. THE WASH DOWN AREA SHALL BE MADE OF THE SAME QUARRY SPALLS AS A CONSTRUCTION ENTRANCE.
3. THE LOCAL GOVERNING AGENCY MAY REQUIRE ADDITIONAL OR ALTERNATE CONSTRUCTION ENTRANCE DETAILS.
4. THE CONTRACTOR SHALL ENSURE THAT ALL VEHICLES USE THIS ENTRANCE AND ARE CLEANED OF SOILS BEFORE LEAVING THE PROJECT, AND THAT THE ENTRANCE IS TO BE KEPT CLEAN AT ALL TIMES. THIS MAY REQUIRE TOP DRESSING AND REPAIR.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

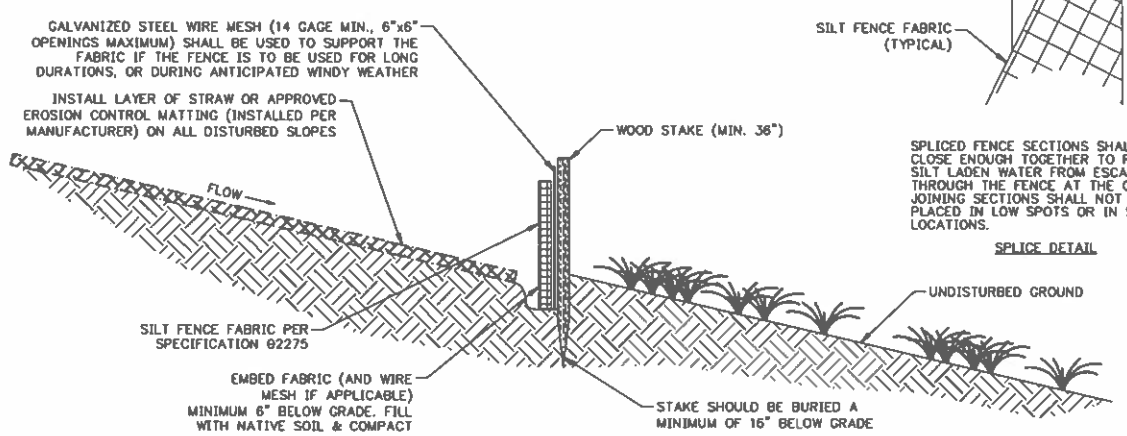
SCALE: ¼"=1'-0"



PLAN VIEW



FRONT VIEW



CROSS SECTION

SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP. JOINING SECTIONS SHALL NOT BE PLACED IN LOW SPOTS OR IN SUMP LOCATIONS.

SPLICE DETAIL

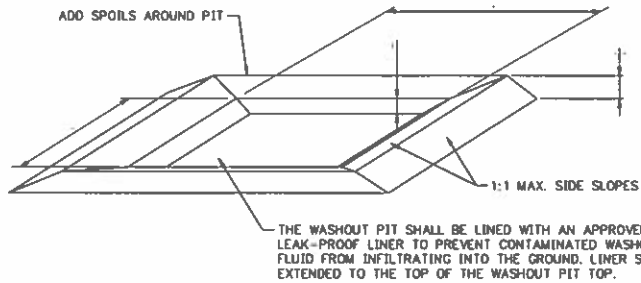
NOTES

1. INSTALL SILT FENCE ALONG CONTOURS. TO AVOID CREATING LOW POINTS ALONG THE SILT FENCE, ALIGN THE FENCE ALONG THE CONTOUR AS MUCH AS POSSIBLE. WHERE EXCESSIVE RUNOFF WILL ACCUMULATE AT A LOW POINT, PROVIDE AN OPENING IN THE FENCE AND INSTALL A SEDIMENT TRAP.
2. EMBED BOTTOM OF SILT FENCE FABRIC 6" VERTICALLY BELOW FINISHED GRADE. COMPACT ALL AREAS WHERE THE FABRIC IS EMBEDDED.
3. 2"x2" FIR, PINE OR STEEL FENCE POSTS.
4. STITCHED LOOPS TO BE INSTALLED UPHILL SIDE OF SLOPE.
5. DO NOT PLACE SILT FENCE ACROSS POTENTIAL CONCENTRATED FLOWS (PIPE OUTLETS, DRAINAGE CHANNELS, CUT DITCHES).
6. SEDIMENT CONTROL FABRIC SHALL BE USED FOR INSTALLATIONS OF SHORT DURATION. THE FABRIC IS CUT ON SITE TO THE DESIRED WIDTH, UNROLLED ALONG THE LENGTH OF THE FENCE. THE FABRIC TOE IS SECURED WITH ROCKS OR DIRT AND THE FABRIC IS SECURED TO THE STAKES WITH TWINE, STAPLES, OR SIMILAR DEVICES. AFTER THE CONSTRUCTION AREA IS STABILIZED AND EROSION ACTIVITY CURTAILED, THE SILT FENCES SHALL BE REMOVED AND THE SEDIMENT THAT WAS CONTAINED SHALL BE LEVELED, SEEDED, AND MULCHED. SPECIAL PROTECTION OF THE SEED BED MAY BE NECESSARY IF THE LAYERS ARE OVER 1 FOOT THICK.
7. SEDIMENT FROM THE STORM EVENT AND THE FENCE TRENCH SPOIL ON THE UPHILL SIDE OF THE FENCE SHALL BE REMOVED FROM THE SITE OR STORED IN THE STOCKPILE AREA.
8. AFTER THE SURROUNDING AREAS HAVE BEEN STABILIZED AND THE PROJECT IS APPROVED BY PACIFICORP, THE FENCE POST AND FENCE SHALL BE REMOVED COMPLETELY AND HAULED TO AN APPROVED LOCATION OFFSITE.
9. AS AN ALTERNATIVE, A STRAW WATTLE SHALL BE USED IN PLACE OF A SILT FENCE WHEN WINDY WEATHER IS ANTICIPATED OR WHEN THE BMPs ARE TO REMAIN INSTALLED FOR LONG PERIODS OF TIME.

USED FOR SHEET FLOWS

SILT FENCE DETAIL

SCALE: ¼"=1'-0"



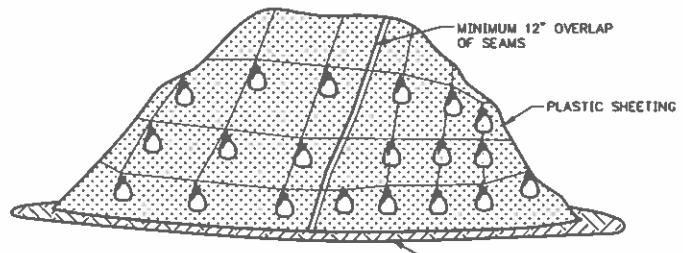
ISOMETRIC VIEW

NOTES

1. A WASHOUT PIT SHALL BE CONSTRUCTED FOR CONCRETE TRUCK WASHING. THE LOCATION SHALL BE COORDINATED WITH PACIFICORP PRIOR TO CONSTRUCTION AND SHALL COMPLY TO THE REQUIREMENTS OF THE STATE AND LOCAL GOVERNING AGENCIES.
2. WASHING OUT OF CONCRETE TRUCKS AND RINSING OF THE CONCRETE TRUCK CHUTES SHALL BE STRICTLY MONITORED TO AVOID THE CONTAMINATION OF DOWNSTREAM WATERWAYS.
3. EXCESS WASHOUT FLUID AND CONCRETE MATERIALS IN THE PIT SHALL BE REMOVED REGULARLY TO AVOID OVERFLOW. DISPOSAL MATERIALS SHALL BE HAULED TO AN APPROVED DISPOSAL LOCATION OFFSITE.
4. AFTER COMPLETION OF THE PROJECT, WASHOUT PIT INCLUDING ALL EXCESS WASHOUT, AND CONCRETE SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL LOCATION OFFSITE.

CONCRETE TRUCK WASHOUT PIT DETAIL

SCALE: ¼"=1'-0"



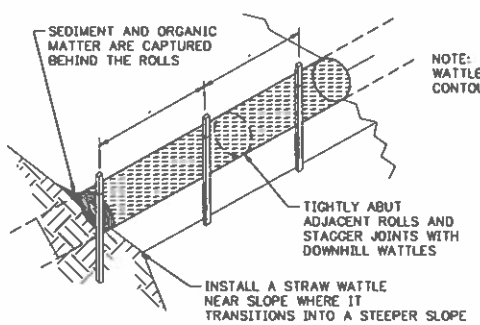
ISOMETRIC VIEW

NOTES

1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 19' GRID SPACING IN ALL DIRECTIONS.
3. BARRIERS AT THE TOE OF STOCKPILE SHALL BE CONSTRUCTED WITH SEDIMENT FENCES, MULCH BERMS, CLIPPINGS, STRAW WATTLES, OR OTHER APPROVED BMP MATERIALS.
4. PLASTIC SHEETING IS USED TO PROVIDE IMMEDIATE PROTECTION TO SLOPES AND STOCKPILES.
5. DO NOT USE PLASTIC COVERING UPSLOPE OF AREAS SUCH AS STEEP AND/OR UNSTABLE SLOPES THAT MIGHT BE ADVERSELY AFFECTED BY CONCENTRATED RUNOFF.
6. WHEN NECESSARY, INSTALL AN INTERCEPTOR DIKE, GRAVEL OR RIPRAP BERM, OR OTHER SUITABLE PROTECTION DEVISE UPHILL OF THE STOCKPILE TO DIVERT FLOWS AROUND THE STOCKPILE OR TO DISSIPATE RUNOFF VELOCITY.
7. TOE-IN THE TOP OF THE SHEETING IN A 6"x6" TRENCH BACKFILLED WITH COMPACTED NATIVE MATERIAL.
8. ANCHOR THE PLASTIC USING SANDBAGS, TIRES, OR OTHER SUITABLE TETHERED ANCHOR SYSTEM SPACED ON A 10' GRID SPACING IN ALL DIRECTIONS.
9. OVERLAP SEAMS 1' TO 2', TAPE, ROLL AND STAKE THE SEAMS AND THEN WEIGH DOWN THE ENTIRE LENGTH.
10. REPLACE TORN SHEETS AND REPAIR OPEN SEAMS. WHEN THE PLASTIC SHEET BEGINS TO DETERIORATE, IT SHALL BE REMOVED AND REPLACED COMPLETELY.

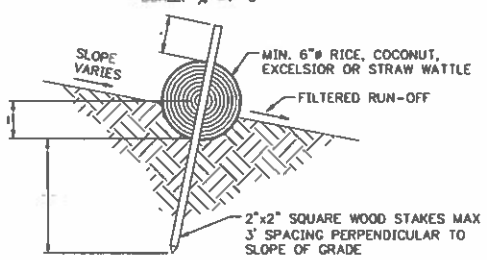
STOCKPILE OR SURCHARGE SHEETING DETAIL

SCALE: ¼"=1'-0"



TYPICAL STRAW WATTLE INSTALLATION DETAIL

SCALE: ¼"=1'-0"



ENTRENCHMENT DETAIL

SCALE: ¼"=1'-0"

EROSION CONTROL NOTES

1. CONTROLLING SEDIMENT MIGRATION DURING STORM EVENTS AND PREVENTING AND/OR CORRECTING PROBLEMS ASSOCIATED WITH EROSION WHILE RUNOFF IS OCCURRING (WHICH CAN OCCUR BOTH DURING AND AFTER PROJECT CONSTRUCTION) WILL BE CLOSELY MONITORED. ALL MUNICIPALITIES HAVE DEFINED BEST MANAGEMENT PRACTICES (BMPs) THAT SHALL BE IMPLEMENTED TO PREVENT THE TRANSFER OF SEDIMENT AND TO CONTROL EROSION DURING EARTH MOVING ACTIVITIES. PERIODIC MAINTENANCE AND INSPECTION OF EROSION CONTROL DEVICES SHALL BE SCHEDULED.
2. THE CONTRACTOR SHALL COMPLY WITH WASHINGTON COUNTY AND OTHER GOVERNING AGENCIES FOR TEMPORARY EROSION CONTROL MEASURES.
3. EROSION CONTROL–SHOULD SILT LEAVE THE SITE OR EROSION OCCUR, THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE CORRECTIVE ACTION AND REPAIR ANY DAMAGE CAUSED BY THE SILT OR EROSION IMMEDIATELY. ALL COSTS ASSOCIATED WITH THE PREPARATION, MODIFICATION AND APPROVAL OF THE PLAN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. BEFORE CONSTRUCTION BEGINS, THE LIMITS OF DISTURBANCE BOUNDARY SHALL BE FLAGGED ON SITE AND APPROVED BY PACIFICORP. UNDER NO CIRCUMSTANCES SHALL SITE DISTURBANCE OCCUR OUTSIDE THE DESIGNATED AREAS AT ANY TIME DURING CONSTRUCTION.
4. EXCAVATION AND EMBANKMENT OPERATIONS SHALL PROCEED IN SUCH A MANNER SO THAT FINISHING OF SLOPES, INCLUDING REVEGETATION, SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER ROUGH GRADING. ALL SLOPES 2:1 OR FLATTER SHALL BE SCARIFIED WITH HEAVY EQUIPMENT, LEAVING TRACKS PERPENDICULAR TO THE SLOPE. THE TOPS OF ALL CUT SLOPES IN SOIL SHALL BE ROUNDED FOR A HORIZONTAL DISTANCE OF THREE FEET BEYOND THE CATCH POINT. SLOPE ROUNDING SHALL OCCUR AS THE SLOPE IS BEING BROUGHT DOWN. THE OVERALL SHAPE, HEIGHT AND GRADE OF ANY CUT AND/OR FILL SLOPE SHALL BE DEVELOPED IN CONCERT WITH THE EXISTING NATURAL CONTOURS, SCALE AND VEGETATION OF NATURAL TERRAIN.
5. STABILIZATION PRACTICES MAY INCLUDE, BUT NOT BE LIMITED TO TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PRESERVATION OF NATURAL VEGETATION, AND OTHER APPROPRIATE MEASURES. USE OF IMPERVIOUS SURFACES FOR STABILIZATION SHALL BE AVOIDED. EXCEPT AS PROVIDED BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE IN DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 15 DAYS AFTER ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED.

5.1. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 15TH DAY AFTER CONSTRUCTION ACTIVITY PERMANENTLY CEASES IS PRECLUDED BY DEEP SNOW OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.

5.2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING WILL RESUME WITHIN 15 WORKING DAYS, TEMPORARY STABILIZATION MEASURES NEED NOT BE INITIATED ON THAT PORTION OF THE SITE.

6. SPECIFICALLY OUTLINED DISTURBED AREAS, BOTH ON AND OFF-SITE SHALL BE REVEGETATED. THESE AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO ALL UNSURFACED AREAS WITHIN THE FLAGGED LIMITS OF DISTURBANCE, STAGING AND STORAGE AREAS, MATERIAL WASTE AREAS, UNDERGROUND UTILITY CONSTRUCTION AREAS, BENCHED AREAS, AND TEMPORARY OR EXISTING ACCESS ROADS USED FOR CONSTRUCTION ACTIVITIES. CUT AND FILL SLOPES OVER 3:1 REQUIRE THE PLACEMENT OF EROSION CONTROL/REVEGETATION MATTING. SLOPES LESS THAN 3:1 MAY BE SPRAYED WITH TACKIFIER.
7. SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED (PREFERABLY UNDISTURBED) GROUND, OR LEFT TO PERCOLATE INTO THE GROUND.
8. CONTROLLED OUTLETS SHALL DIRECT COLLECTED RUNOFF THROUGH SILT FENCES OR STRAW BALES.
9. TYPICAL FUGITIVE DUST SHALL BE CONTROLLED BY WATERING AND/OR CHEMICAL STABILIZATION, PROVIDING VEGETATIVE OR SYNTHETIC COVER AND WIND BREAKS CONSISTENT WITH THE COUNTY OF WASHINGTON AND THE STATE OF UTAH REQUIREMENTS.
10. SEE CONSTRUCTION SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

REVEGETATION NOTES

1. RECOMMENDED SEEDING MIXTURES MUST BE DONE ON A SITE SPECIFIC BASIS WHICH ACCOUNTS FOR THE FOLLOWING: SOIL PROPERTIES, CLIMATIC FACTORS, TOPOGRAPHIC POSITION AND FEASIBILITY.
2. VEGETATIVE PLANTING SHALL BE DONE WHERE DEEMED NECESSARY TO HASTEN THE RETURN OF PRE-EXISTING SITE CHARACTERISTICS AND ON ANY FINISHED SLOPE WHICH WILL REMAIN UNDISTURBED FOR AT LEAST 10 YEARS.
3. ALL DISTURBED OPEN SPACE AREAS, AND CUT AND FILL AREAS, SHALL RECEIVE AN ACCEPTABLE SEED MIX.
4. SEED MIX SHALL BE APPLIED AT A RATE SO THAT GERMINATION AND SUBSEQUENT COVERAGE REACHES 80 PERCENT IN A REPRESENTATIVE 10' x 10' AREA. IF COVERAGE DOES NOT REACH 80 PERCENT, RESEEDING MUST OCCUR.
5. APPROPRIATE FERTILIZER SHALL BE APPLIED TO ALL SLOPES RECEIVING SEED. APPLICATION RATES OF THE FERTILIZER SHALL BE STRICTLY ADHERED TO.

NOTES

1. WATTLES SHALL CONSIST OF CYLINDERS OF BIODEGRADABLE PLANT MATERIAL SUCH AS COCONUT EXCELSIOR, STRAW, COIR, COMPOST OR WOOD SHAVINGS ENCASED WITHIN BIODEGRADABLE OR PHOTO DEGRADABLE NETTING. WATTLES SHALL BE AT LEAST 6 INCHES IN DIAMETER, UNLESS OTHERWISE SPECIFIED. ENCASING MATERIAL SHALL BE CLEAN, EVENLY WOVEN AND FREE OF ENCRUSTED CONCRETE OR OTHER CONTAMINATING MATERIALS SUCH AS PRESERVATIVES. ENCASING MATERIAL SHALL BE FREE FROM CUTS, TEARS OR WEAK PLACES AND SHALL HAVE A LIFE SPAN GREATER THAN 6 MONTHS. COMPOST FILLER SHALL MEET THE MATERIAL REQUIREMENTS AS SPECIFIED BY THE GOVERNING AGENCY.
2. PLACE WATTLES IN SHALLOW TRENCHES EXCAVATED ALONG SLOPE CONTOURS. BEGIN WATTLE INSTALLATION AT THE BOTTOM OF THE SLOPE AND WORK UP. CONSTRUCT TRENCHES AT CONTOUR INTERVALS OF 25' AND 300' APART DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES (SEE WATTLE SPACING TABLE). IT IS CRITICAL THAT THE WATTLES ARE INSTALLED PERPENDICULAR TO WATER MOVEMENT AND PARALLEL TO THE SLOPE CONTOUR.
3. WATTLES SHALL BE INSPECTED REGULARLY AND AFTER EACH RAINFALL TO ENSURE THAT THEY ARE THOROUGHLY ENTRENCHED, INTACT WITH THE SOIL AND FUNCTIONING PROPERLY. DAMAGED WATTLES SHALL BE REPAIRED OR REPLACED TO WORKING ORDER. ALSO INSPECT THE SLOPES AFTER EACH SIGNIFICANT STORM EVENT FOR EROSION, AND ANY RILLS OR GULLIES SHALL BE REPLACED AND REPAIRED IMMEDIATELY.
4. THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE HALF THE THICKNESS OF THE WATTLE.
5. THE TRENCH SPOIL SHALL BE STORED IN THE STOCKPILE OR HAULED TO AN APPROVED LOCATION OFFSITE.
6. LAY THE WATTLE WITHIN THE TRENCH AND FIT IT TIGHTLY AGAINST THE SOIL TO ELIMINATE GAPS BETWEEN THE SOIL AND THE WATTLE.
7. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE WATTLE AND INTO THE SOIL. DRIVE THE STAKE THROUGH THE PREPARED HOLE INTO THE GROUND, LEAVE ONLY 1 INCH TO 2 INCHES OF STAKE EXPOSED ABOVE THE ROLL. INSTALL STAKES AT LEAST EVERY 4 FEET APART THROUGH THE WATTLE. ADDITIONAL STAKES MAY BE DRIVEN ON THE DOWNSLOPE SIDE OF THE TRENCHES ON HIGHLY EROSIVE OR VERY STEEP SLOPES.
8. SEDIMENT SHALL BE REMOVED FROM THE WATTLE UPGRADIENT SIDE WHEN IT HAS REACHED ONE THIRD THE EXPOSED HEIGHT OF THE WATTLE. SEDIMENT SHALL BE STORED IN THE STOCKPILE.
9. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL THE SLOPE IS STABILIZED.
10. AFTER THE SURROUNDING AREAS HAVE BEEN STABILIZED AND THE PROJECT IS APPROVED BY PACIFICORP, THE WATTLES AND STAKES SHALL BE REMOVED COMPLETELY AND HAULED TO AN APPROVED LOCATION OFFSITE. THE EXPOSED TRENCH AREAS SHALL BE LEVELED, SEEDED, AND MULCHED.

NO.	DATE	REVISIONS	ENGINEER	DES./ DR.	CHECKED	APPROVED
1	03/03/23	MOD 19877867 UPDATE GRADING PLAN PER AS-BUILT INFO, EXPAND YARD TO THE WEST.	G. HUNTING	G. HUNTING		

PACIFICORP

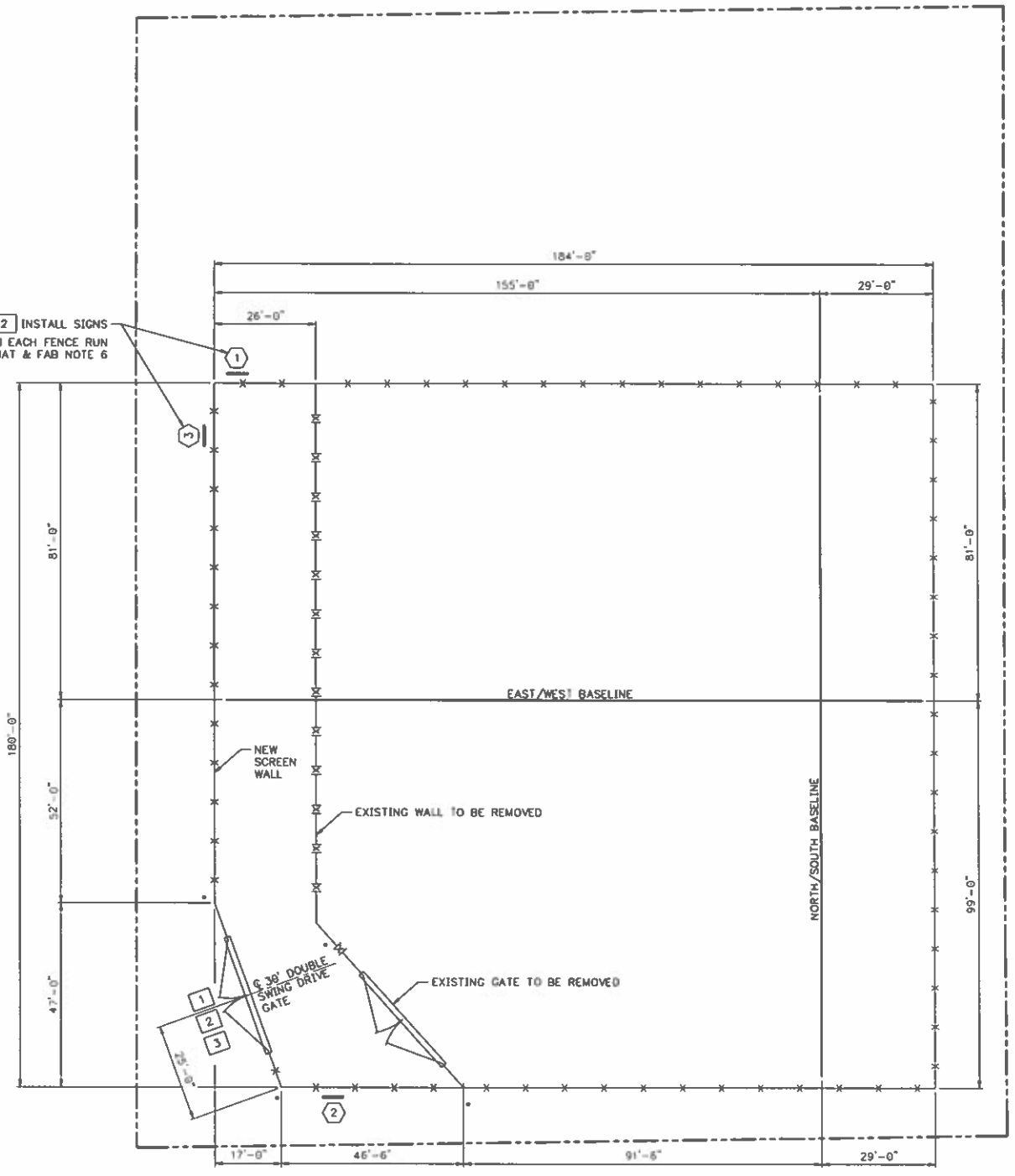
CIVIL

PROJ/JOB# PJ# 617174	19963512	DISCIPLINE ENG.	DAVID SOUTH/ECI
DATE:	07/06/2018	PROJECT ENG.	DAVID BRANOT/ECI
ENG. D. SOUTH/ECI	DES. D. JOHNSON/ECI	APPROVAL ENG.	BRYCE LAWRENCE/ECI
DR. D. JOHNSON/ECI	CH. D. PROCTOR/ECI	SCALE:	NONE

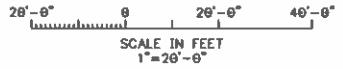
IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
GRADING PLAN
EROSION CONTROL DETAILS – 2023 YARD EXPANSION

REVISION	187588.004	SHEET 4
1		

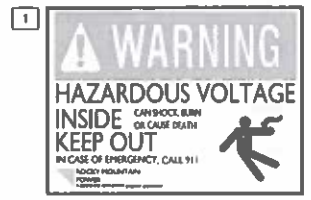
REVISED 06/02/14 D. HURLEY



WALL PLAN
SCALE: 1"=20'



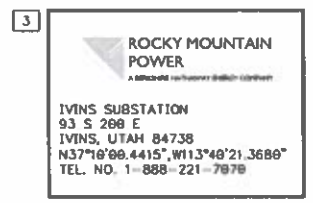
SCALE IN FEET
1"=20'-0"



1 TOTAL

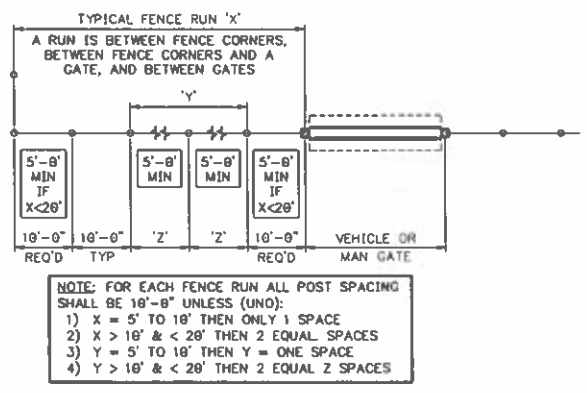


7 TOTAL



1 TOTAL

SIGN DETAILS
SCALE: NTS



NOTE: FOR EACH FENCE RUN ALL POST SPACING SHALL BE 10'-0" UNLESS (UNO):
1) X = 5' TO 10' THEN ONLY 1 SPACE
2) X > 10' & < 20' THEN 2 EQUAL SPACES
3) Y = 5' TO 10' THEN Y = ONE SPACE
4) Y > 10' & < 20' THEN 2 EQUAL Z SPACES

TYPICAL FENCE POST SPACING
SCALE: NTS

DESIGN PARAMETERS

1. FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL ENGINEERING REPORT PREPARED BY PSI, DATED MARCH 5, 2018 PROJECT NO 07041148.
2. REFER TO THE GROUNDING PLAN FOR GROUNDING THE FENCE AND GATES, AND HOW TO CONNECT TO THE GROUNDING GRID.

GENERAL CONCRETE NOTES

1. ALL CONCRETE SHALL HAVE A MINIMUM STRENGTH f'c OF 4,000 PSI AT 28 DAYS WITH 6% ± 1% ENTRAINED AIR.
2. ALL REINFORCING STEEL SHALL BE DEFORMED NEW BILLET STEEL CONFORMING TO ASTM A615 GRADE 60.
3. TIE WIRE SHALL BE #18 GAUGE MINIMUM.
4. TOOL EDGE ALL HORIZONTAL & VERTICAL CORNERS OF CONCRETE.
5. MINIMUM REINFORCING COVER SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
   CONCRETE CAST AGAINST EARTH.....3"
   ALL OTHER SURFACES.....2"
6. HORIZONTAL TOLERANCE FOR STEEL EMBEDS & CONDUIT LOCATION TO BE ± ½".
7. SEE CONCRETE SPECIFICATION SECTION 03100 FOR DETAILED CONCRETE REQUIREMENTS.
8. CONTRACTOR SHALL VERIFY GATE APRON, POST LOCATIONS AND SPACING PRIOR TO INSTALLATION. SECURE GATE POST IN VERTICAL POSITION PRIOR TO PLACING FOUNDATION. CONTACT ENGINEER FOR ANY DEVIATION FROM DESIGN DRAWING.
9. ALL REINFORCING STEEL SHALL BE FABRICATED IN ACCORDANCE WITH THE 2004 ACI DETAILING MANUAL.
10. SECURE POST INSTALLED ANCHORS IN CURED CONCRETE IN ACCORDANCE WITH THE HILTI MANUFACTURER INSTRUCTIONS, WITH THE FOLLOWING EXCEPTIONS:

    HOLES SHALL BE DRILLED TO SPECIFIED DEPTH AND DIAMETER USING ROTARY HAMMER DRILL WITH CARBIDE-TIPPED FLUTED OR CRUCIFORM BIT ONLY.

    DIAMOND-CORING SHALL NOT BE PERMITTED, EXCEPT FOR CUTTING THROUGH REBAR.

MATERIAL AND FABRICATION NOTES

1. SEE THE FENCE INSTALLATION PORTION OF THE CONSTRUCTION TECHNICAL SPECIFICATIONS (02810 CHAIN LINK FENCING AND GATES) FOR COMPLETE MATERIAL AND INSTALLATION REQUIREMENTS.
2. REFER TO CONSTRUCTION TECHNICAL SPECIFICATIONS FOR ALTERNATE POST FOOTING IF SOLID ROCK IS ENCOUNTERED.
3. REFER TO FENCE STANDARDS FOR JOINING FENCES HAVING UNEQUAL HEIGHTS (SEE DETAIL).
4. FORM TOP 6" OF TERMINAL AND GATE POST FOOTINGS SQUARE OR ROUND.
5. SEE GRADING PLAN FOR TOP OF FOOTING ELEVATIONS FOR POST, GATE AND CURB.
6. INSTALL ¼" MINIMUM PREMOLDED JOINT FILLER AT EACH SIDE OF GATE CURB AND AT EVERY OTHER LINE OR CORNER POST.
7. FOR CONTINUOUS FENCE RUNS GREATER THAN 1,500 FEET, INSTALL A TERMINAL POST AT MID-POINT. SEE CORNER BRACE DETAIL TO BE APPLIED ON EACH SIDE.
8. 18"x24" SIGNS (SUPPLIED BY COMPANY) SHALL BE PLACED PER SPECIFICATION 02812. HAZARDOUS VOLTAGE WARNING SIGNS SHALL BE PROVIDED PER PACIFICORP STANDARD SG001.

FENCING MATERIALS	SIZE
CORNER POST	3½" SCHEDULE 40
TERMINAL POST	3½" SCHEDULE 40
11'-18' LEAF DRIVE GATE POST	6" SCHEDULE 40
LINE POST	2" SCHEDULE 40
TOP RAIL	1¼" SCHEDULE 40
BRACE RAIL	1¼" SCHEDULE 40
TRUSS RODS W/ TIGHTENER	⅜"ø A36 GALV
DROP RODS (MIN SIZE)	1"ø SCHEDULE 40
VEHICLE GATE FRAME	1½" SCHEDULE 40
VEHICLE GATE FRAME BRACING	1¼" SCHEDULE 40
FENCE FABRIC	2" DIAMOND, 9g GALV WIRE
SLATS	REQUIRED, BROWN

NOTES:
SEE SPECIFICATION 02810 "CHAIN LINK FENCING AND GATES" FOR DETAILS.
ALL STEEL PIPE PER ASTM F1083 REGULAR GRADE, 30 KSI

LEGEND

- INDICATES 8'-0" CHAIN LINK FENCE, CONSISTING OF 7'-0" OF FABRIC AND THREE STRANDS OF BARBED WIRE. THE TOP STRAND OF BARBED WIRE IS LOCATED 12" ABOVE THE FABRIC.
- INDICATES EXISTING CHAIN LINK FENCE
- INDICATES EXISTING CHAIN LINK FENCE TO BE REMOVED
- BASELINE (SEE GRADING PLAN DWG. 187588 FOR LOCATIONS OF BASELINES)
- SIGN — INDICATES TYPE OF SIGN (SEE SIGN DETAILS ON THIS SHEET)
- INDICATES NUMBER OF SIGNS (FOR EACH TYPE OF SIGN) PER FENCE RUN ON PLAN VIEW. ALSO INDICATES TOTAL NUMBER OF EACH SIGN AS SHOWN UNDER EACH SIGN DETAIL.

REFERENCE DRAWINGS

99762500	GENERAL PLAN
187588	GRADING PLAN
99764500	GROUNDING PLAN
218560	FOUNDATION PLAN

NO.	DATE	REVISIONS	ENGINEER	DES./DR.	CHECKED	APPROVED
1	03/03/23	WO# 188778167 INSTALL NEW WALL FOR WEST EXPANSION, UPDATE TO CURRENT STANDARDS	G. HUNTING	G. HUNTING		

PACIFICORP
A BERKSHIRE HATHAWAY ENERGY COMPANY

CIVIL

		DISCIPLINE ENG.	PROJECT ENG.	APPROVAL ENG.
PROJ/FIN	19083512	PAUL ERICKSON/ECI	DAVID BRAND/ECI	BRUCE LAMBERS/ECI
P.M.	617174	07/06/2018		
DES.	P. ERICKSON/ECI	RES. F. ANSARI/ECI	Dr. P. ERICKSON/ECI	
DR.	F. ANSARI/ECI	Ch.	SCALE:	1"=20'-0"

IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
FENCE PLAN
WALL PLAN

SHEET 1 OF 2

REVISION 0

188654.001

REVISED 05/02/14 D. HURLEY

FILE LOCATION: z:\Shared Data\Work In Progress\Substation_Active Projects\Ivins 19073675\188654.000 SAVED BY:(P28346) 2/7/2023 3:39 PM PLOTTED BY:(HUNTING, GARY (PACIFICORP)) 6/30/2023 3:50 PM

ATTACHED XREFS: XMBDYNLDWG

FILE LOCATION: I:\Shared Data\Work In Progress\Substation_Active Projects\Ivins 188754.000 SAVED BY: (PACIFICORP) 8/30/2023 2:54 PM PLOTTED BY: (HUNTING, GARY (PACIFICORP)) 8/30/2023 4:03 PM

ATTACHED 360° MODEL FILE

REVISED 09/07/23 D. HUNTER

IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
FENCE PLAN
DETAILS

188654.002

SHEET 2

CIVIL

PROJ./RPM: 1696312
Pg 677174
DATE: 07/06/2018
DWG. F. ERICKSON/ECI
DES. F. HANSAU/ECI
CHK. F. ERICKSON/ECI
SCALE: AS NOTED

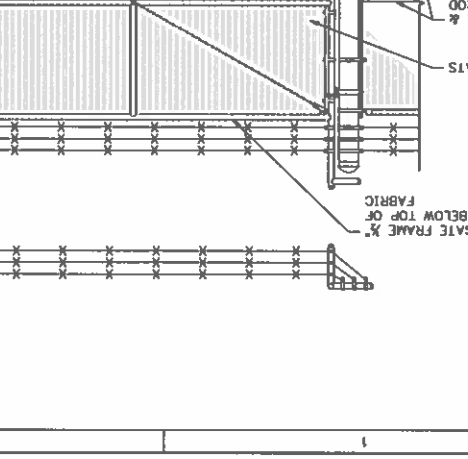
DESIGN ENG. PAUL ERICKSON/ECI
PROJECT ENG. DAVID BRANOT/ECI
APPROVAL ENG. BRUCE LAWERS/ECI

PACIFICORP
A BERKSHIRE HATHAWAY ENERGY COMPANY

NO.	DATE	REVISIONS	ENGINEER	DES. / DR.	CHECKED	APPROVED
1	08/30/23	NEW 138/69KV INSTALL NEW MAIN FOR WEST EXPANSION. UPDATE TO CURRENT STANDARDS.	G. HUNTING	G. HUNTING		

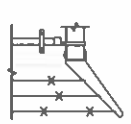
DETAIL 7 GATE HOLDBACK ASSEMBLY DETAIL
SCALE: 1½"=1'-0"

TWO GATE HOLDBACKS SHALL BE INSTALLED W/EACH DOUBLE SWING GATE

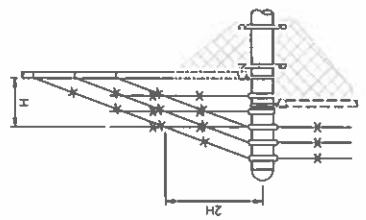


FENCE DETAIL ASSEMBLY
SCALE: NTS

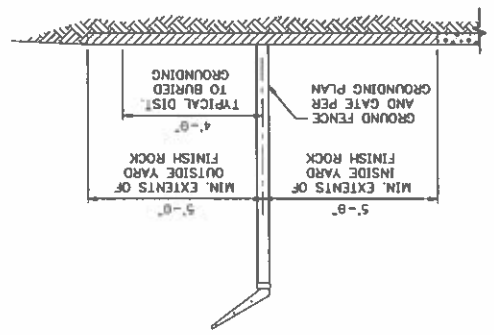
CORNER & LINE POST EXTENSION ARM



DETAIL FOR JOINING UNEQUAL HEIGHT FENCES

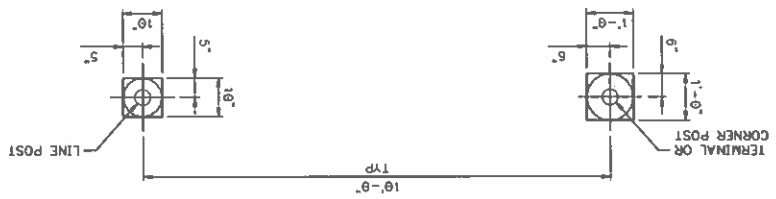


SECTION A–A
SCALE: ¾"=1'-0"



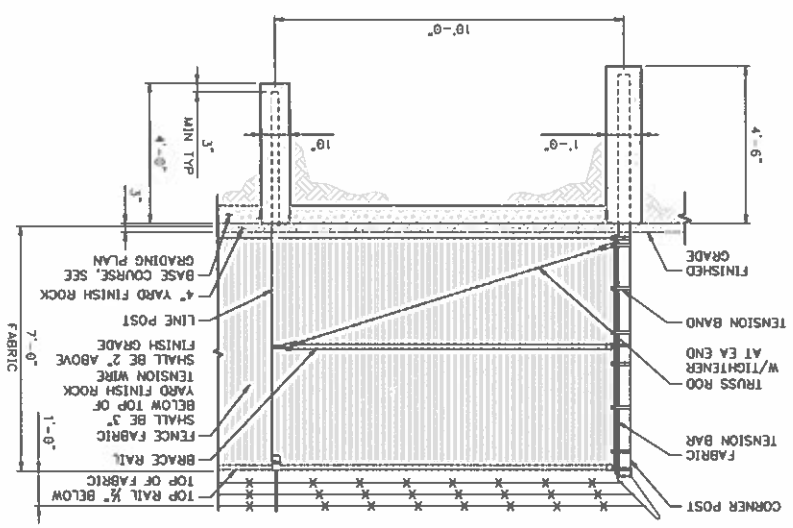
FOOTING DETAIL
SCALE: ¾"=1'-0"

PLAN VIEW
TYPICAL FENCE AT CORNER OR TERMINAL & LINE POST

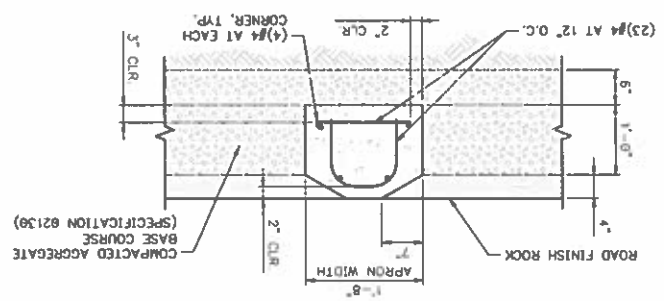


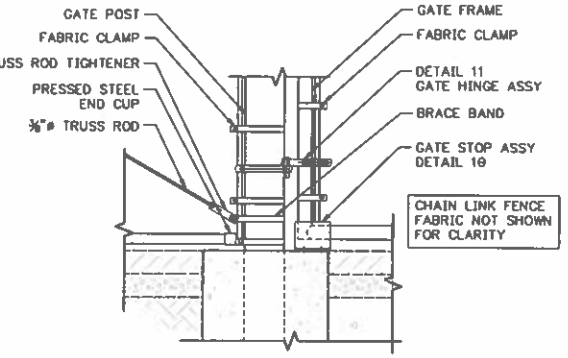
30' DOUBLE SWING DRIVE GATE
SCALE: ¾"=1'-0"

CORNER BRACING
SCALE: ¾"=1'-0"



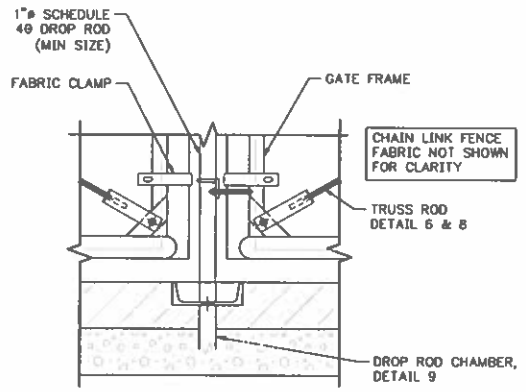
CONCRETE GATE APRON SECTION B–B
SCALE: ¾"=1'-0"





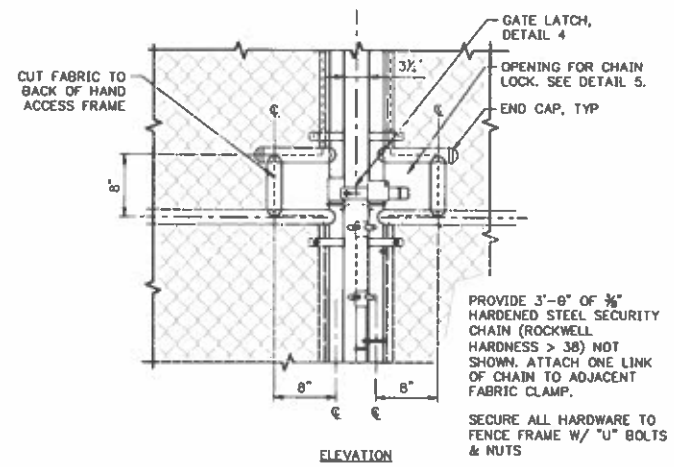
HINGE AREA ASSEMBLY

DETAIL 1
SCALE: ¾"=1'-0"



DROP ROD & TRUSS ROD ASSEMBLY

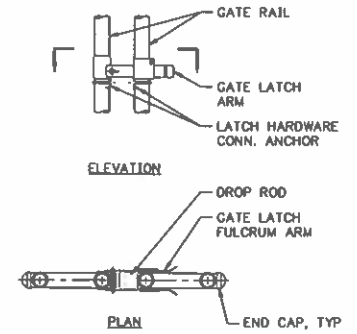
DETAIL 2
SCALE: 1½"=1'-0"



ELEVATION

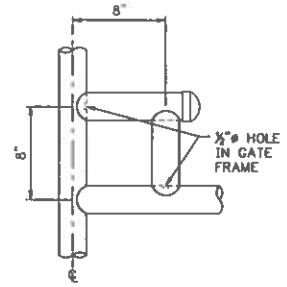
GATE LATCH & DROP ROD ASSEMBLY

DETAIL 3
SCALE: 1"=1'-0"



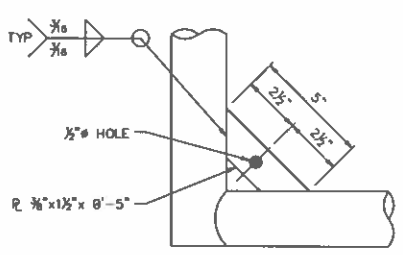
FULCRUM LATCH ASSEMBLY

DETAIL 4
SCALE: 1"=1'-0"



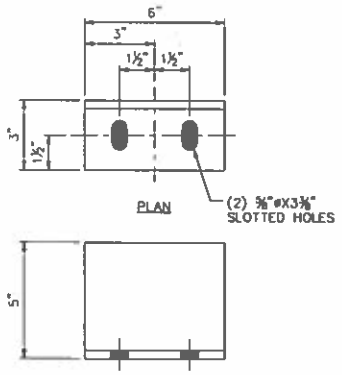
CHAIN OPENING

DETAIL 5
SCALE: 1½"=1'-0"



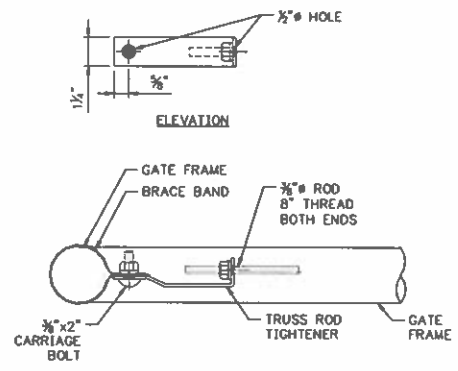
TRUSS ROD CONNECTION (FOR GATE FRAME)

DETAIL 6
SCALE: 3"=1'-0"



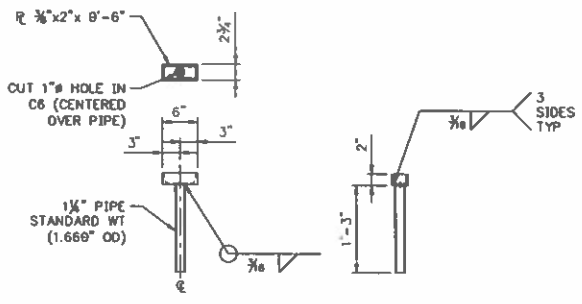
(2) L 5x3x⅜x 6'-6"

DETAIL 7
SCALE: 3"=1'-0"



TRUSS ROD ASSEMBLY (FOR GATE FRAME)

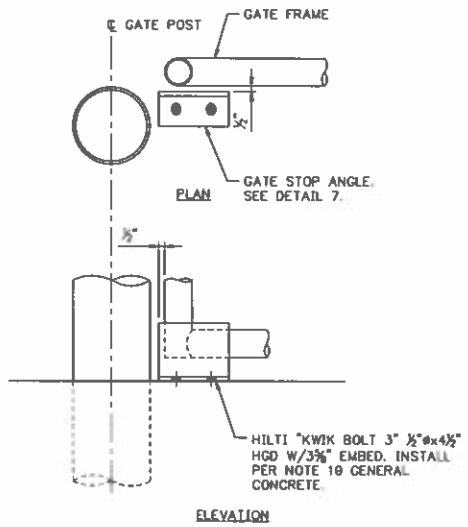
DETAIL 8
SCALE: 3"=1'-0"



(1) C6x10.6x 6'-2" (2) ℄ ⅜"x2"x 6'-6"
(1) 1¼" STD WT. PIPE 1'-3";
HOT DIP GALV AFTER FABRICATION

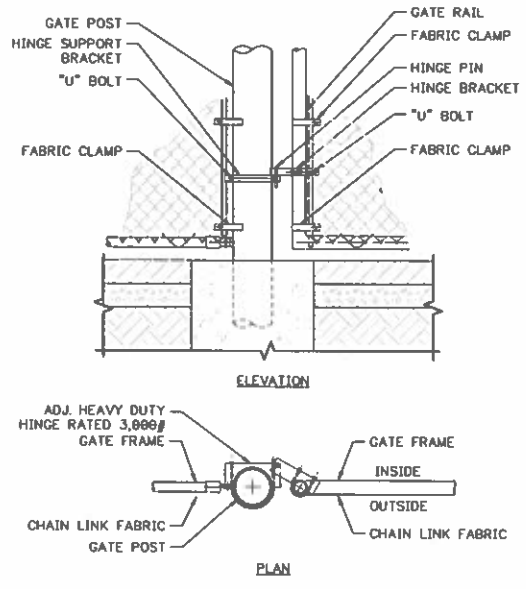
ONE DROP ROD CHAMBER ASSEMBLY SHALL BE INSTALLED W/EACH DOUBLE SWING GATE

DETAIL 9
SCALE: ¾"=1'-0"



GATE STOP ASSEMBLY

DETAIL 10
SCALE: 1½"=1'-0"



GATE HINGE ASSEMBLY

DETAIL 11
SCALE: ¾"=1'-0"

NO.	DATE	REVISIONS	ENGINEER	DES./ DR.	CHECKED	APPROVED
1	10/03/23	WO# 10077867 INSTALL NEW WALL FOR WEST EXPANSION, UPDATE TO CURRENT STANDARDS.	G. HUNTING	G. HUNTING		

PACIFICORP
A PORTLAND GENERAL ELECTRIC COMPANY

CIVIL

PROJ/ESI	108653512	DISCIPLINE ENG.	PAUL ERICKSON/ECI
PJ #	817174	PROJECT ENG.	DAVID BRANDT/ECI
DATE:	07/06/2016	DES. F. ANSARI/ECI	
DRG. P. ERICKSON/ECI		CH. P. ERICKSON/ECI	
DR. F. ANSARI/ECI		APPROVAL ENG.	BRUCE LAMBERS/ECI
SCALE:	AS NOTED	SHEET	3

IVINS SUBSTATION
WASHINGTON COUNTY, UTAH
FENCE PLAN
DETAILS

188654.003

REVISION 0

REVISED 05/02/14 D. HURLEY

ATTACHED XREFS: X18007VLB.DWG