

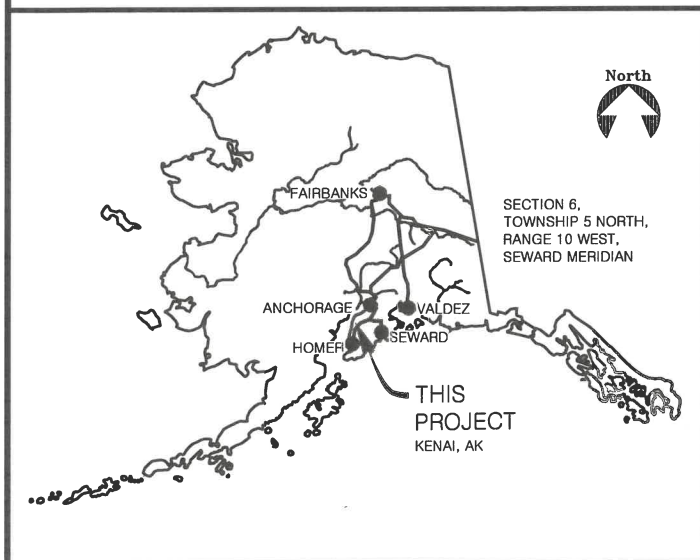
STATE OF ALASKA
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF PARKS
 AND
 OUTDOOR RECREATION

KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS

PROJECT NO.
 72018-2

INDEX

Vicinity Map




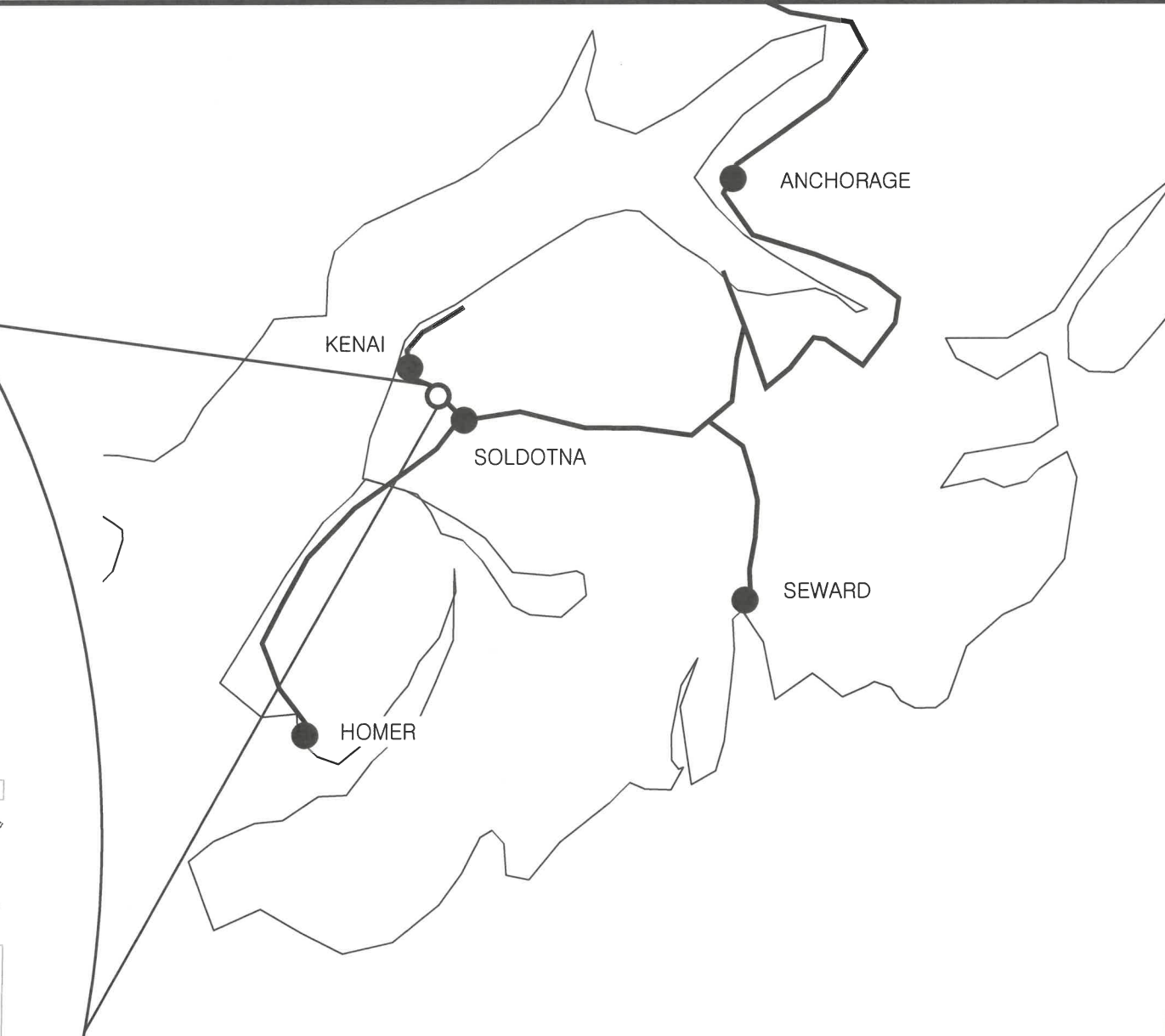
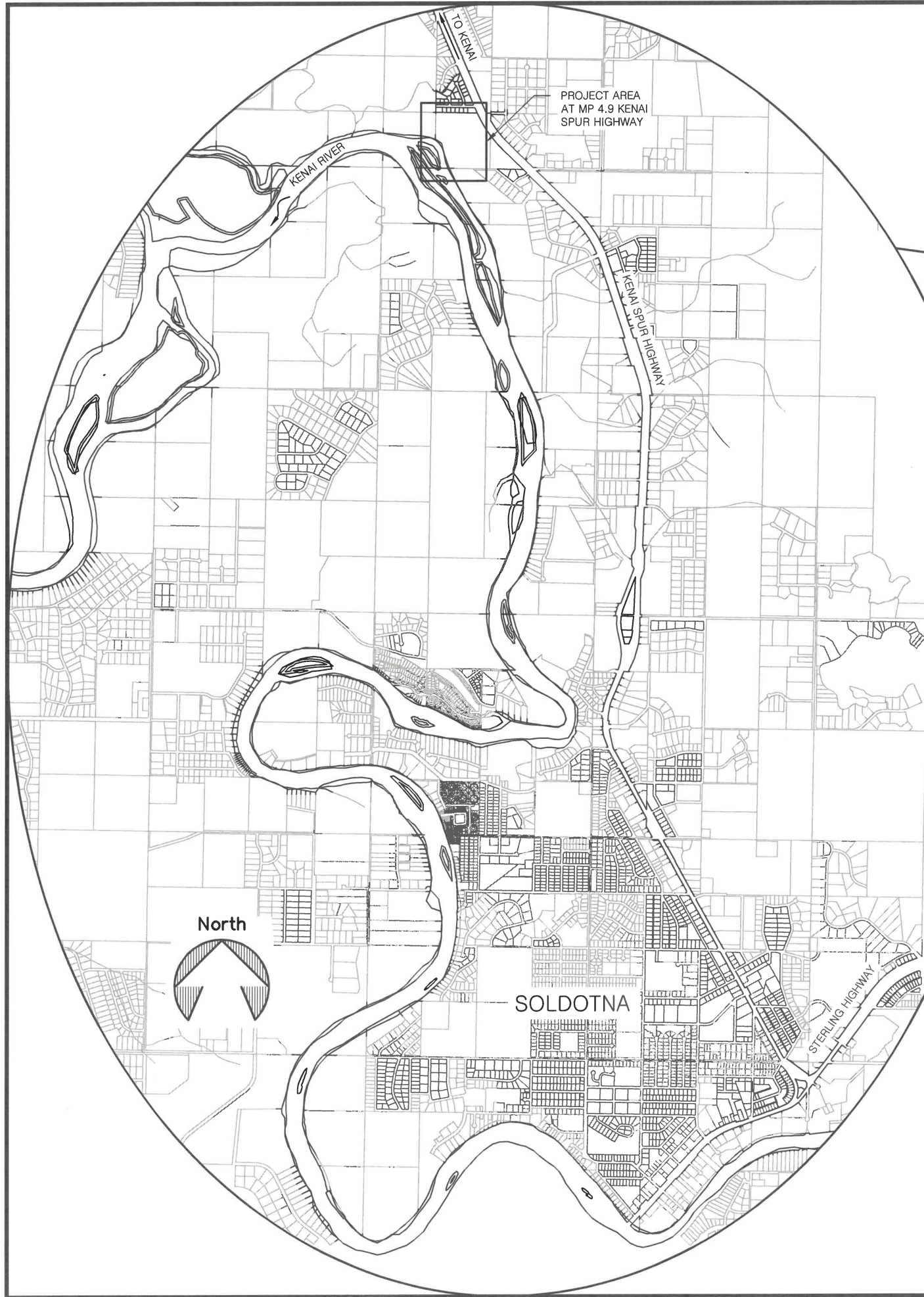
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The following Division of Parks & Outdoor Rec. standard drawings apply to this project: G-2, P-6, R-11, S-3C, S-10D, S-11D
 The following D.O.T.(Highways) standard drawings apply to this project: D-01.22, D-04.22, D-09.00, I-30.10, S-00.12, S-01.02, S-05.02, S-30.05

Plans developed by:
STATE OF ALASKA
 Department of Natural Resources
 Division of Parks & Outdoor Recreation
 550 W 7th Ave. Suite 1340, Anchorage, AK 99501

Recommended:
 5/28/2026
 Rys Miranda, P.E. Date
 Chief, Design and Construction

Approved:
 5/28/26
 Ricky Gease Date
 Director, Alaska State Parks



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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 550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

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 PROJECT No. 72018-2

VICINITY MAP



PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET
2
 OF 34 SHEETS

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
201.0001.0000	CLEARING AND GRUBBING	ACRE	8.2
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.S.	ALL REQ'D
202.2012.0000	GROUND WATER WELL DECOMMISSIONING	EACH	4
203.0003.0000	UNCLASSIFIED EXCAVATION	C.Y.	60,250
203.0005.000A	BORROW, TYPE A	C.Y.	5,500
205.0004.000A	POROUS BACKFILL MATERIAL, TYPE A	C.Y.	175
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	5,600
401.0001.002B	HOT MIX ASPHALT, TYPE II, CLASS B	TON	1,725
505.0005.0012	FURNISH 12-INCH STRUCTURAL STEEL PILE	L.F.	120
505.0006.0012	DRIVE 12-INCH STRUCTURAL STEEL PILE	EACH	3
505.2001.0035	MICROPILE	EACH	78
603.0001.0024	24 INCH CSP	L.F.	106
603.0003.0024	END SECTION FOR 24 INCH CSP	EACH	4
605.0008.0006	PERFORATED CORRUGATED HDPE PIPE 6 INCH	L.F.	430
611.0001.0001	RIPRAP, CLASS I	C.Y.	360
615.0001.0000	STANDARD SIGN	S.F.	93.86
618.0002.0000	SEEDING	POUND	420
619.0003.0000	ROOT BARRIER	L.F.	550
620.0001.000B	TOPSOIL, CLASS B	S.Y.	23,350
622.2006.0000	BEARPROOF GARBAGE CAN	EACH	3
622.2007.00DE	DOUBLE ENTRANCE GATE	EACH	4
622.2008.000A	ELP WALKWAY	L.S.	ALL REQ'D
622.2008.000B	STEEL STAIRWAY	L.S.	ALL REQ'D
622.2009.000F	DOCK FLOAT	L.S.	ALL REQ'D
622.2009.00MF	MODIFY EXISTING ALLMINUM FLOAT	L.S.	ALL REQ'D
622.2010.0000	CONCRETE PARKING BUMPER	EACH	72
622.2011.0000	ENTRANCE SIGN	EACH	1
622.2012.0000	ORIENTATION KIOSK	EACH	1
622.2013.0000	INTERPRETIVE SIGN, TYPE D	EACH	1
622.2014.0000	INTERPRETIVE BRACKET	EACH	2
622.2015.0000	DUMPSTER SCREEN	EACH	1
630.0001.0000	GEOTEXTILE, SEPARATION, CLASS 3	S.Y.	19,300
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	L.S.	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	L.S.	ALL REQ'D
641.0005.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	C.S.	ALL REQ'D
641.0006.0000	WITHHOLDING	C.S.	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	L.S.	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HOURL	5
642.2013.0000	AS-BUILT SURVEY	L.S.	ALL REQ'D
643.0002.0000	TRAFFIC MAINTENANCE	L.S.	ALL REQ'D
647.0001.0000	HYDRAULIC EXCAVATOR, 1 C.Y., 100 HP MINIMUM	HOURL	20
654.2026.0000	DOUBLE CONCRETE VAULTED TOILET	EACH	3
670.0001.0000	PAINTED TRAFFIC MARKINGS	L.S.	ALL REQ'D

ABBREVIATIONS

φ	DIAMETER
ε	CENTERLINE
APPRX.	APPROXIMATE
BOP	BEGINNING OF PROJECT
C.F.	CUBIC FOOT
C.S.	CONTINGENT SUM
CSP	CORRUGATED STEEL PIPE
C.Y.	CUBIC YARD
E	EAST
E.G.	EXISTING GRADE
ELEV.	ELEVATION
ELP	ELEVATED LIGHT-PENETRATING
EOG	EDGE OF GRAVEL
EOP	EDGE OF PAVEMENT
EOS	EDGE OF SHOULDER
EST.	ESTIMATE
F.G.	FINAL GRADE
IN.	INCH
INTP.	INTERPRETIVE
INV	INVERT
KRSMA	KENAI RIVER SPECIAL MANAGEMENT AREA
LB/LBS.	POUND/POUNDS
L.F.	LINEAR FEET
L.S.	LUMP SUM
M.E.	MATCH EXISTING
MAX.	MAXIMUM
MIN.	MINIMUM
MP	MILEPOST
N	NORTH
N/A	NOT APPLICABLE
NE	NORTHEAST
NO.	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
O.C.	ON CENTER
OHW	ORDINARY HIGH WATER
QTY.	QUANTITY
PE	POLYETHYLENE
PIP	PROTECT IN PLACE
REQ'D	REQUIRED
S	SOUTH
SE	SOUTHEAST
S.F.	SQUARE FEET
STA	STATION
SW	SOUTHWEST
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
S.Y.	SQUARE YARD
TB	TEST BORING
TP	TEST PIT
TYP.	TYPICAL
UHMW	ULTRA-HIGH MOLECULAR WEIGHT
W	WEST

LEGEND

EXISTING	PROPOSED	
		EDGE OF GRAVEL
		EDGE OF PAVEMENT
		EDGE OF VEGETATION
		EDGE OF WATER
		MAJOR CONTOUR LINE
		MINOR CONTOUR LINE
		LIMIT OF FILL SLOPE
		LIMIT OF CUT SLOPE
		PERFORATED CORRUGATED HDPE PIPE
		BARRIER ROCK
		CONCRETE PARKING BUMPER
		CULVERT
		SIGN
		TEST BORING
		TEST PIT
		TOPSOIL & SEED
		PUBLIC FIREWOOD STACK

ESTIMATING FACTORS	
ITEM DESCRIPTION	FACTOR
BORROW, TYPE A	142 LBS/C.F.
AGGREGATE BASE COURSE, GRADING D-1	146 LBS/C.F.
HOT MIX ASPHALT, TYPE II, CLASS B	151 LBS/C.F.
RIPRAP, CLASS I	108 LBS/C.F.



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ESTIMATE OF QUANTITIES, LEGEND,
 ABBREVIATIONS & TABLE OF
 ESTIMATING FACTORS

KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

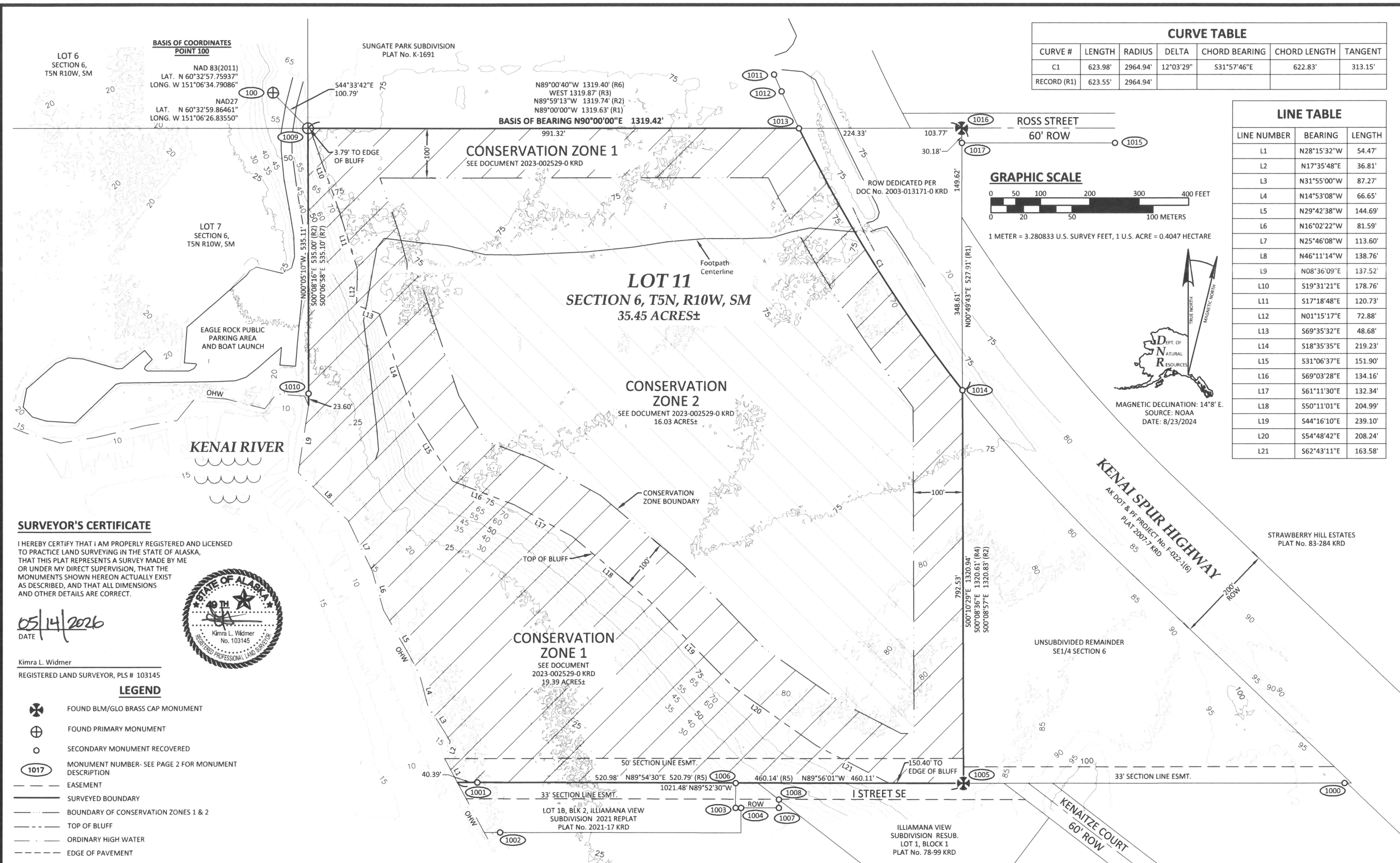


PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET

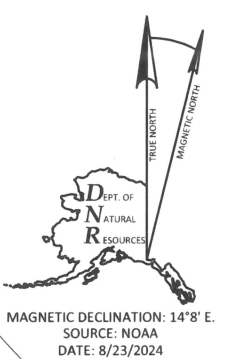
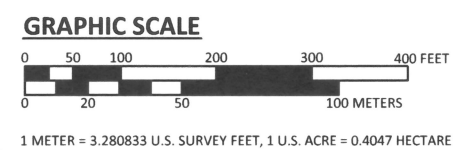
3

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CURVE TABLE						
CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH	TANGENT
C1	623.98'	2964.94'	12°03'29"	S31°57'46"E	622.83'	313.15'
RECORD (R1)	623.55'	2964.94'				

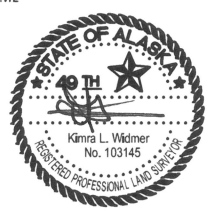
LINE TABLE		
LINE NUMBER	BEARING	LENGTH
L1	N28°15'32"W	54.47'
L2	N17°35'48"E	36.81'
L3	N31°55'00"W	87.27'
L4	N14°53'08"W	66.65'
L5	N29°42'38"W	144.69'
L6	N16°02'22"W	81.59'
L7	N25°46'08"W	113.60'
L8	N46°11'14"W	138.76'
L9	N08°36'09"E	137.52'
L10	S19°31'21"E	178.76'
L11	S17°18'48"E	120.73'
L12	N01°15'17"E	72.88'
L13	S69°35'32"E	48.68'
L14	S18°35'35"E	219.23'
L15	S31°06'37"E	151.90'
L16	S69°03'28"E	134.16'
L17	S61°11'30"E	132.34'
L18	S50°11'01"E	204.99'
L19	S44°16'10"E	239.10'
L20	S54°48'42"E	208.24'
L21	S62°43'11"E	163.58'



SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA, THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE MONUMENTS SHOWN HEREON ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONS AND OTHER DETAILS ARE CORRECT.

DATE: 05/14/2026



Kimra L. Widmer
REGISTERED LAND SURVEYOR, PLS # 103145

LEGEND

- FOUND BLM/GLO BRASS CAP MONUMENT
- FOUND PRIMARY MONUMENT
- SECONDARY MONUMENT RECOVERED
- MONUMENT NUMBER- SEE PAGE 2 FOR MONUMENT DESCRIPTION
- EASEMENT
- SURVEYED BOUNDARY
- BOUNDARY OF CONSERVATION ZONES 1 & 2
- TOP OF BLUFF
- ORDINARY HIGH WATER
- EDGE OF PAVEMENT
- CENTERLINE OF FOOTPATH
- CONSERVATION ZONE 1; DOCUMENT 2023-002529-0 KRD
- CONSERVATION ZONE 2; DOCUMENT 2023-002529-0 KRD

NOTES

1. THIS SURVEY WAS ACCOMPLISHED IN ACCORDANCE WITH EPF No. 2024-22 SURVEY INSTRUCTIONS AND THE CONSERVATION EASEMENT RECORDED IN THE KENAI RECORDING DISTRICT AS DOCUMENT No. 2023-002529-0.
2. THIS SURVEY DOES NOT CONSTITUTE A SUBDIVISION AS DEFINED BY AS 40.15.900(5)(A).
3. THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:5000, AND/OR CORNER POSITIONS HAVE A RELATIVE POSITION ACCURACY AT THE 95 PERCENT CONFIDENCE LEVEL OF 0.13 FEET PLUS 100 PPM.
4. ALL PARCELS OF LAND OWNED BY THE STATE OF ALASKA, LOCATED WITHIN 50.00 FEET OF, OR BISECTED BY A SURVEYED OR PROTRACTED SECTION LINE, ARE SUBJECT TO A 50 FOOT (50') EASEMENT, ON EACH SIDE OF THE SECTION LINE, WHICH IS RESERVED TO THE STATE OF ALASKA FOR PUBLIC HIGHWAYS UNDER A.S.19.10.010.
5. THE EASEMENT SIDELINES SHALL BE EXTENDED OR SHORTENED TO MEET AT THE ANGLE POINTS AND TERMINATE AT THE BOUNDARIES WITH NON-STATE OWNED LANDS.

6. THE INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY THE ALASKA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF MINING, LAND AND WATER, ON JANUARY 22-23, 2024. THE FIELD CREW INCLUDED AMY HELKERN AND RANDY GUINTU. AN ADDITIONAL FIELD SURVEY WAS ACCOMPLISHED ON MAY 20, 2024 TO COLLECT LIDAR DATA. THE FIELD CREW INCLUDED AMY HELKERN AND KIMRA WIDMER, PLS.
7. THIS PLAT REPRESENTS A BOUNDARY & TOPOGRAPHIC SURVEY OF LOT 11, LOCATED WITHIN THE SE ¼ SW ¼ SECTION 6, T5N, R10W, SEWARD MERIDIAN, KENAI RECORDING DISTRICT, KENAI PENINSULA BOROUGH, ALASKA.
8. THE PURPOSE OF THIS SURVEY IS TO PROVIDE TOPOGRAPHIC INFORMATION FOR THE IMPROVEMENT OF THE EAGLE ROCK SITE. TOPOGRAPHIC INFORMATION IS FROM THE LIDAR SURVEY ACCOMPLISHED ON MAY 20, 2024 AND THE RTK SURVEY ACCOMPLISHED ON JANUARY 22-23, 2024.
9. THE COORDINATE SYSTEM FOR THIS PROJECT IS ALASKA STATE PLANE ZONE 4, NAD83(2011), IN US SURVEY FEET. THE BASIS OF COORDINATES IS MONUMENT NUMBER 100 "ERL-1 2014" BASED ON A GPS OPUS SOLUTION PERFORMED ON JANUARY 22-23, 2024. COORDINATES OF OTHER SURVEY CONTROL POINTS WERE COMPUTED BY A GPS STATIC NETWORK, HOLDING MONUMENT NUMBER 100 AS CONTROL.

10. ALL BEARINGS SHOWN ARE ALASKA STATE PLANE ZONE 4, NAD83(2011) GRID BEARINGS BASED UPON GPS OBSERVATIONS. ALL DIMENSIONS SHOWN ARE ALASKA STATE PLANE ZONE 4 GRID DISTANCES IN US SURVEY FEET. TO CONVERT TO GROUND DISTANCES SCALE BY THE COMBINED SCALE FACTOR OF 1/0.99994177.
11. THE VERTICAL DATUM FOR THIS SURVEY IS NAVD88 (OPUS DERIVED FROM GEOID 12B). THE BASIS OF VERTICAL CONTROL IS MONUMENT NUMBER 100, HAVING AN ORTHOMETRIC HEIGHT OF 17.94', BASED ON AN AVERAGE OF THREE OPUS DERIVED SOLUTIONS PERFORMED ON JANUARY 22-23 AND MAY 20, 2024. VERTICAL CONTROL ELEVATIONS SHOWN TO 1 DECIMAL PLACE ARE DERIVED BY RTK GPS.
12. SURVEY BOUNDARY LINES ARE SHOWN FOR REFERENCE ONLY.
13. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
14. THE NATURAL MEANDERS OF THE MEAN HIGH WATERLINE FORM THE TRUE BOUNDS OF THE SOUTH SIDE OF LOT 7 AND THE SOUTHWEST SIDE OF LOT 11 BORDERING THE KENAI RIVER. THE COMPUTED MEAN HIGH WATERLINE AS SHOWN IS FOR AREA COMPUTATIONS ONLY, WITH THE TRUE LOT CORNERS BEING ON THE EXTENSION OF THE LOT SIDE LINES AND THEIR INTERSECTION WITH THE TRUE NATURAL MEANDERS.

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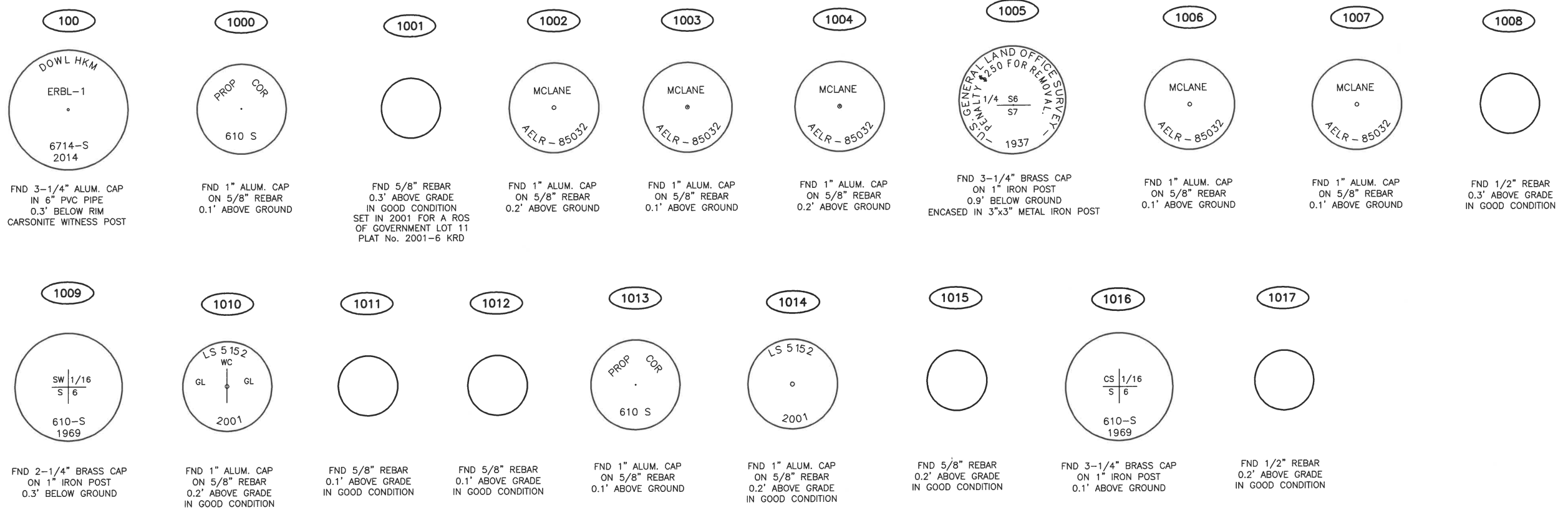
SURVEY CONTROL

KRSMA: EAGLE ROCK
UPPER PARKING IMPROVEMENTS
PROJECT No. 72018-2



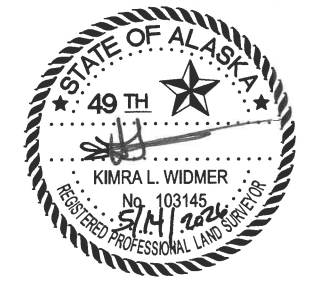
PREPARED: K LW
DRAWN: K LW
REVIEWED: R LQ
DATE: 05/14/2026

SHEET
4
OF 34 SHEETS



Point	Northing (ft)	Easting (ft)	Orthometric Height (ft)
100	2394375.87	1440673.85	58.90
1000	2392946.04	1442814.11	99.1
1001	2392978.43	1441062.74	18.3
1002	2392876.74	1441106.96	19.5
1003	2392917.75	1441582.60	28.6
1004	2392917.62	1441593.64	28.8
1005	2392959.26	1442043.59	83.5
1006	2392967.76	1441583.58	29.3
1007	2392916.14	1441670.23	29.4
1008	2392933.07	1441670.53	31.0
1009	2394302.84	1440743.31	68.6
1010	2393767.83	1440734.84	19.2
1011	2394394.80	1441686.04	73.5
1012	2394360.69	1441700.80	73.4
1013	2394285.57	1441734.35	71.9
1014	2393751.59	1442054.96	70.5
1015	2394244.67	1442372.15	70.0
1016	2394279.98	1442062.45	74.4
1017	2394249.80	1442062.49	72.5

SURVEY NOTE: Vertical control shown to 1 decimal place was surveyed with RTK GPS. See note 11



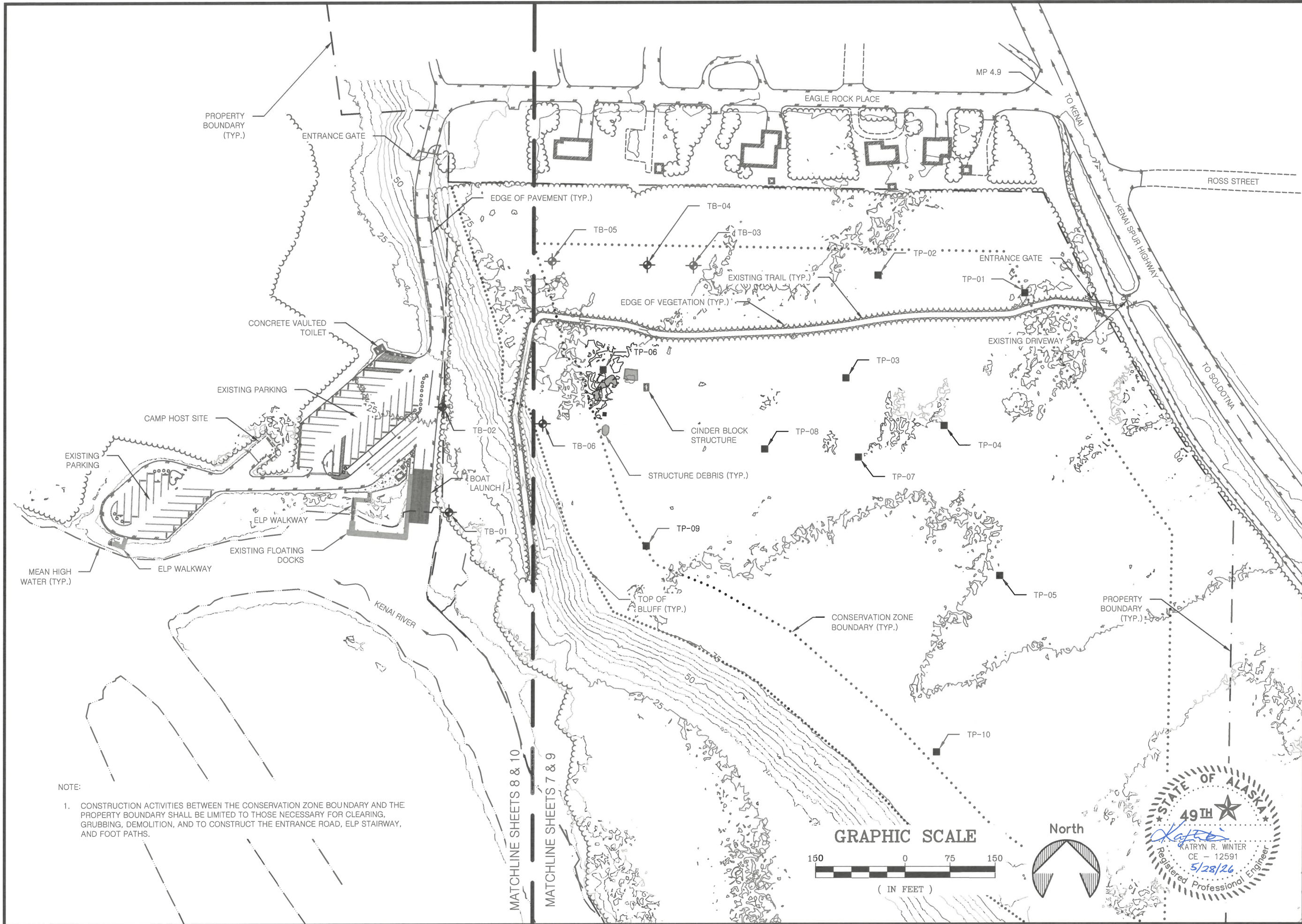
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PREPARED: KLV
 DRAWN: KLV
 REVIEWED: RLQ
 DATE: 05/14/2026

SHEET
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 OF 34 SHEETS



NOTE:
 1. CONSTRUCTION ACTIVITIES BETWEEN THE CONSERVATION ZONE BOUNDARY AND THE PROPERTY BOUNDARY SHALL BE LIMITED TO THOSE NECESSARY FOR CLEARING, GRUBBING, DEMOLITION, AND TO CONSTRUCT THE ENTRANCE ROAD, ELP STAIRWAY, AND FOOT PATHS.

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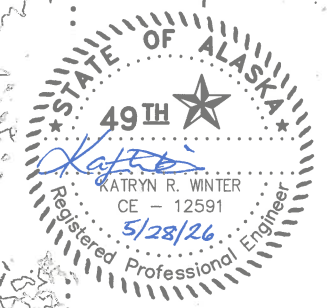
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EXISTING CONDITIONS



PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

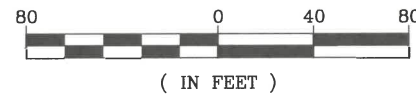
SHEET
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MATCHLINE SHEET 8

GRAPHIC SCALE



North



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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DEMOLITION PLAN

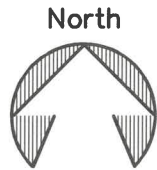
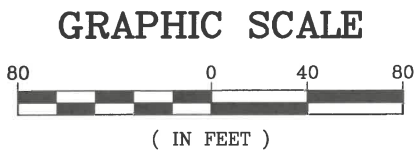


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 DRAWN: FWS
 REVIEWED: KRW
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SHEET

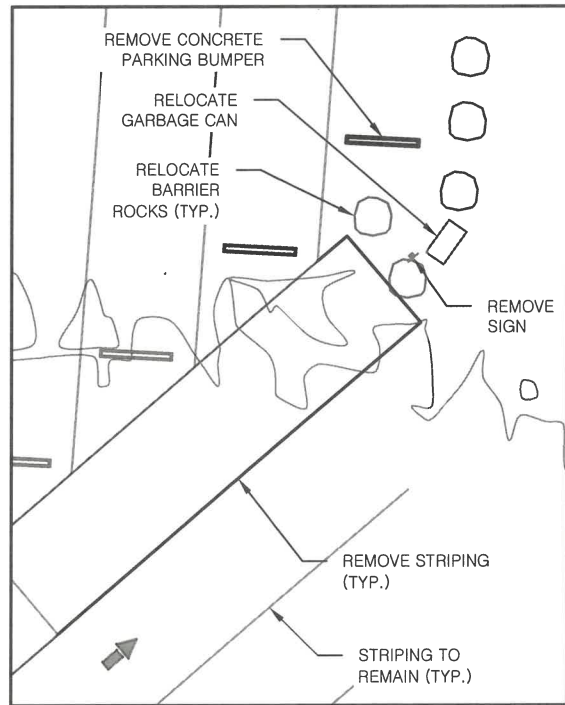
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OF 34 SHEETS

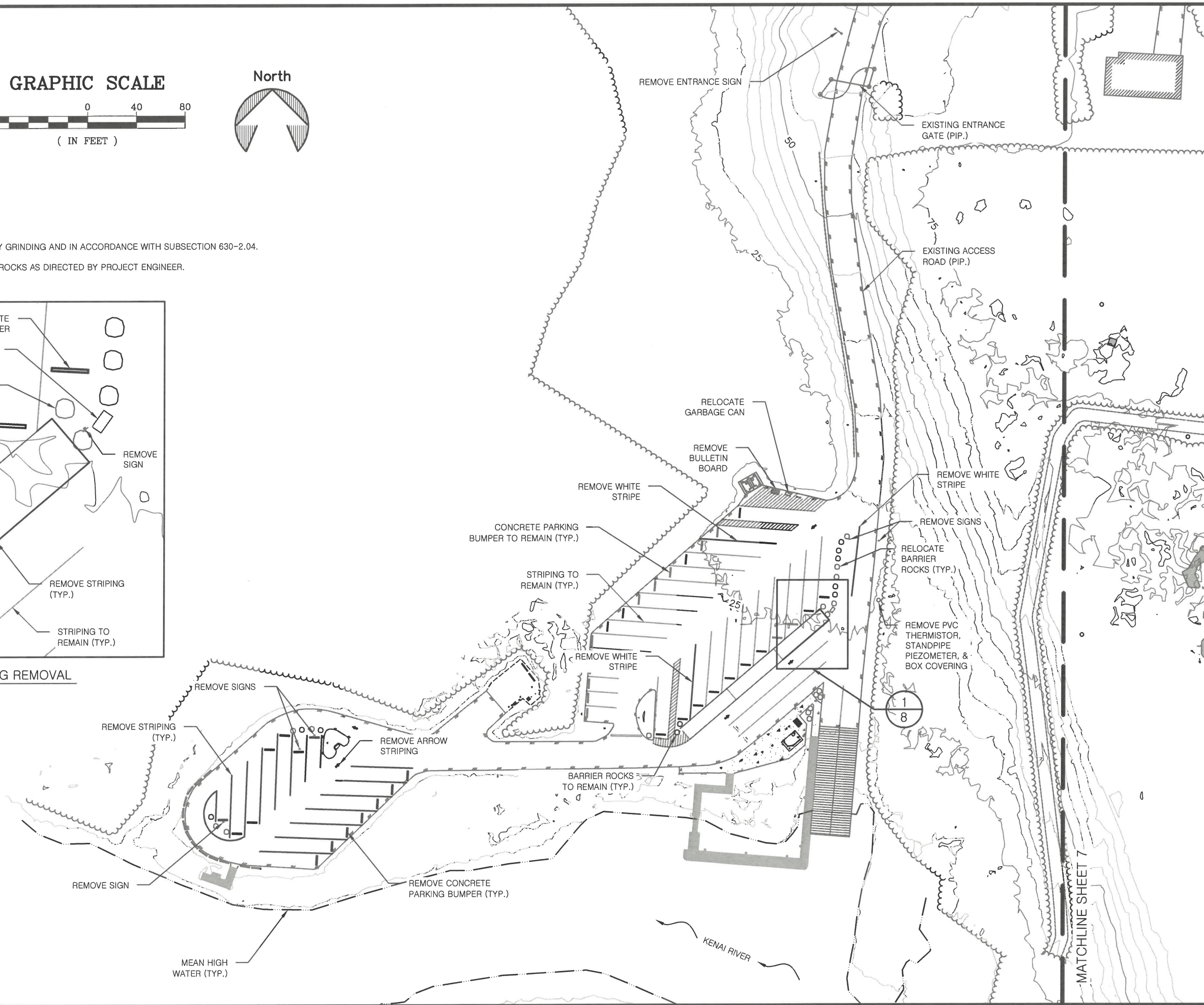


NOTES:

1. REMOVE STRIPING BY GRINDING AND IN ACCORDANCE WITH SUBSECTION 630-2.04.
2. RELOCATE BARRIER ROCKS AS DIRECTED BY PROJECT ENGINEER.



1
8
STRIPING REMOVAL
DETAIL



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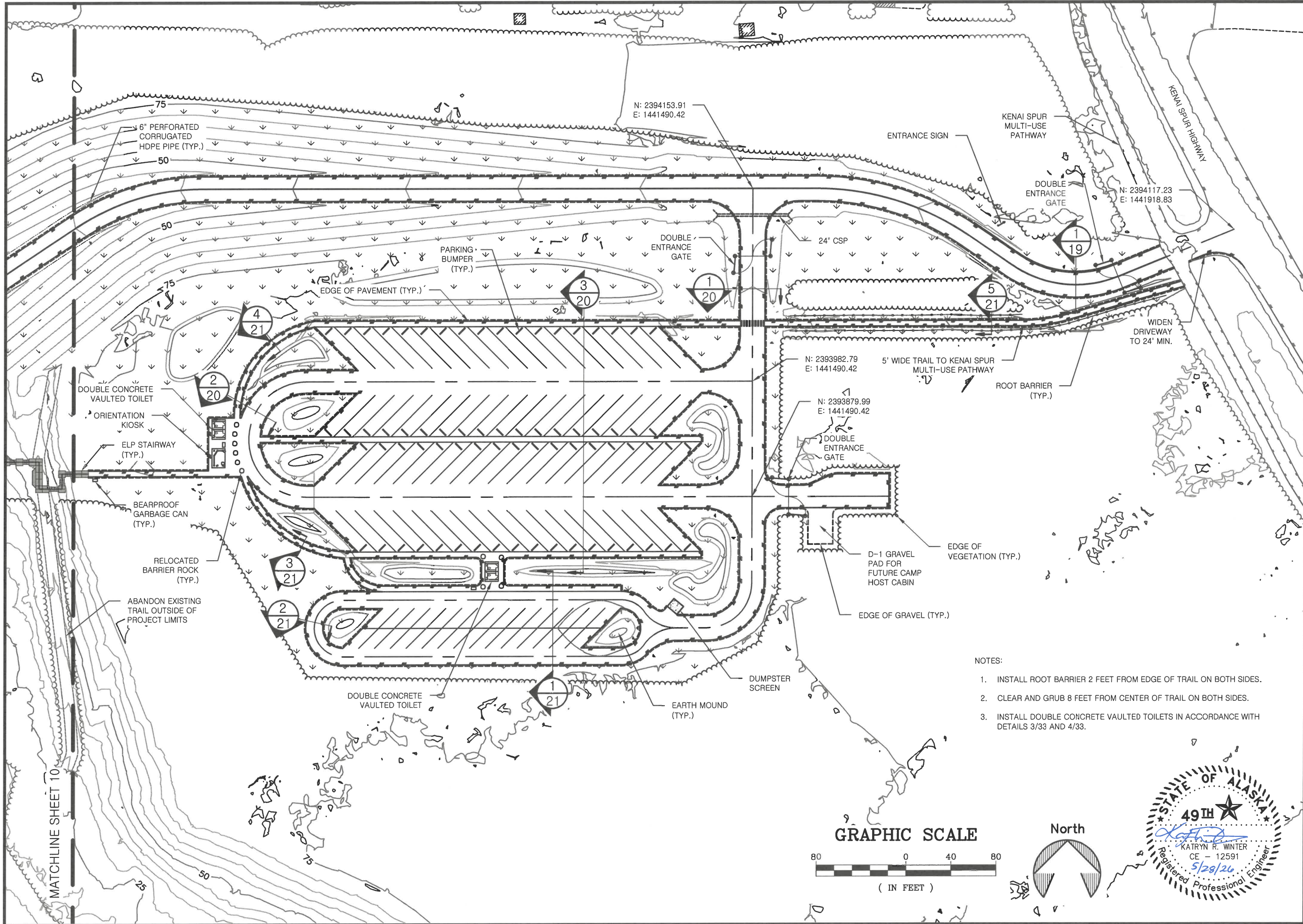
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SHEET

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 OF 34 SHEETS

KRSMA: EAGLE ROCK
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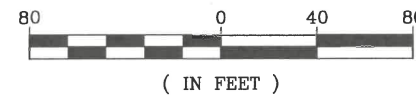
DEMOLITION PLAN -
 EXISTING PARKING



NOTES:

1. INSTALL ROOT BARRIER 2 FEET FROM EDGE OF TRAIL ON BOTH SIDES.
2. CLEAR AND GRUB 8 FEET FROM CENTER OF TRAIL ON BOTH SIDES.
3. INSTALL DOUBLE CONCRETE VAULTED TOILETS IN ACCORDANCE WITH DETAILS 3/33 AND 4/33.

GRAPHIC SCALE



North



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

SITE PLAN OVERVIEW



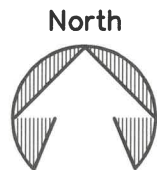
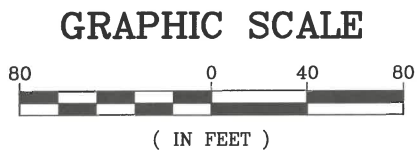
PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET

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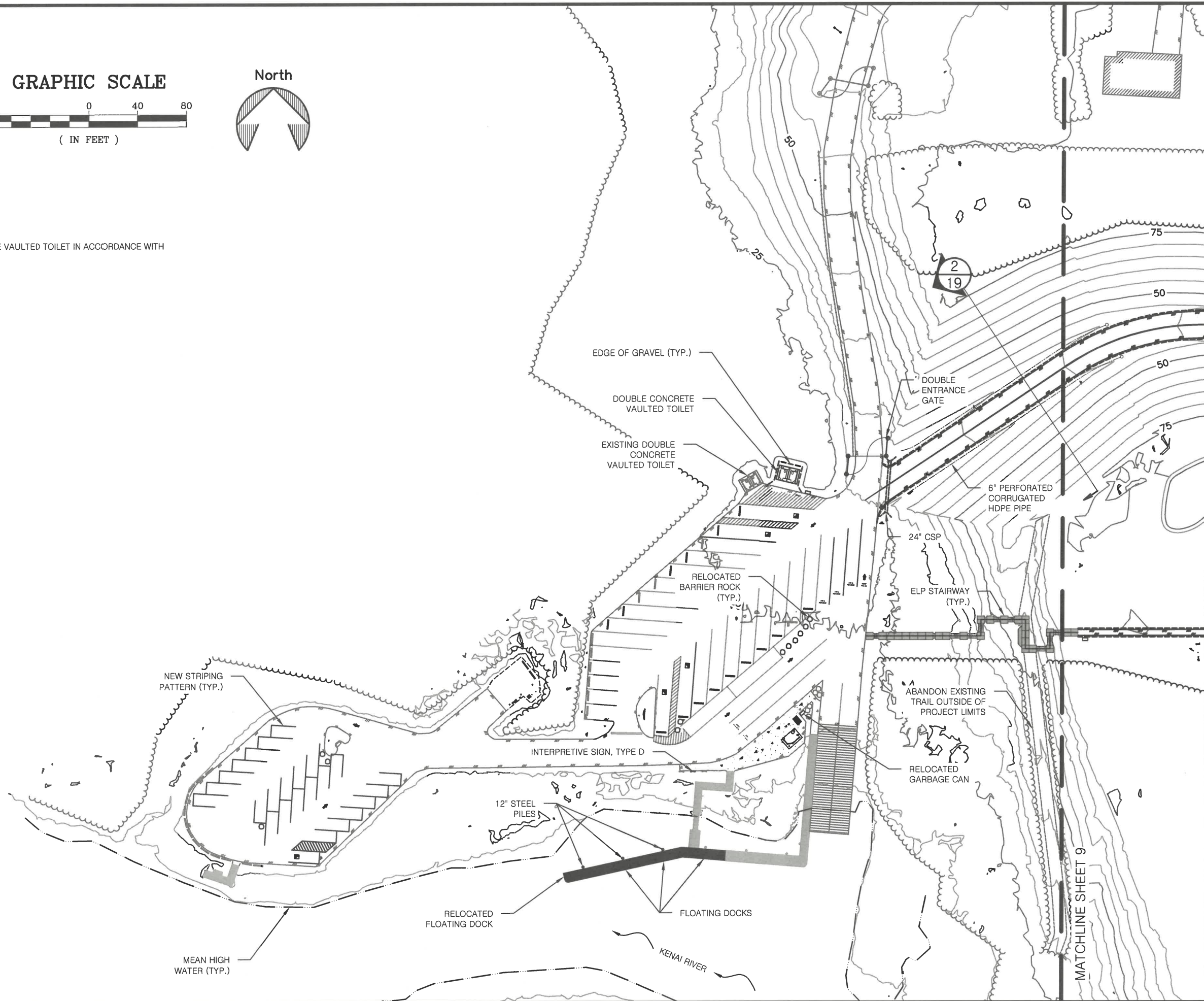
OF 34 SHEETS

MATCHLINE SHEET 10



NOTE:

1. INSTALL DOUBLE CONCRETE VAULTED TOILET IN ACCORDANCE WITH DETAILS 1/33 AND 2/33.



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SITE PLAN - UPDATED PARKING

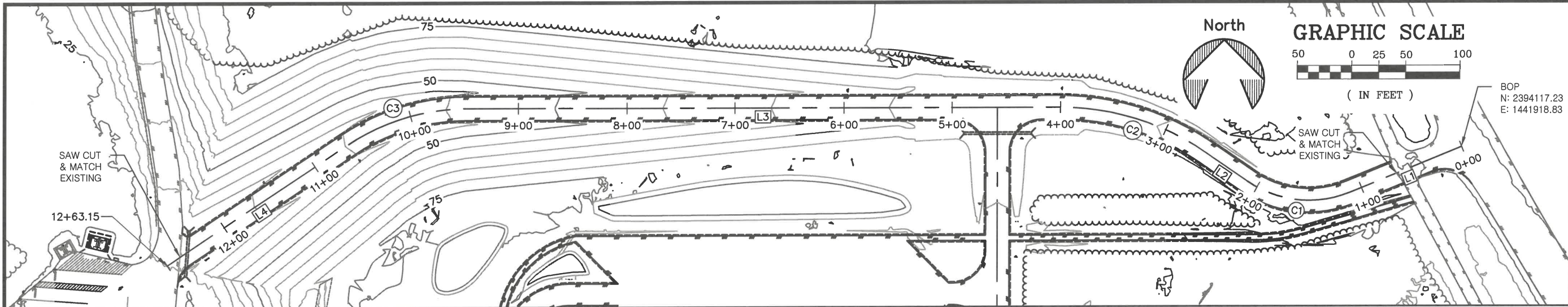


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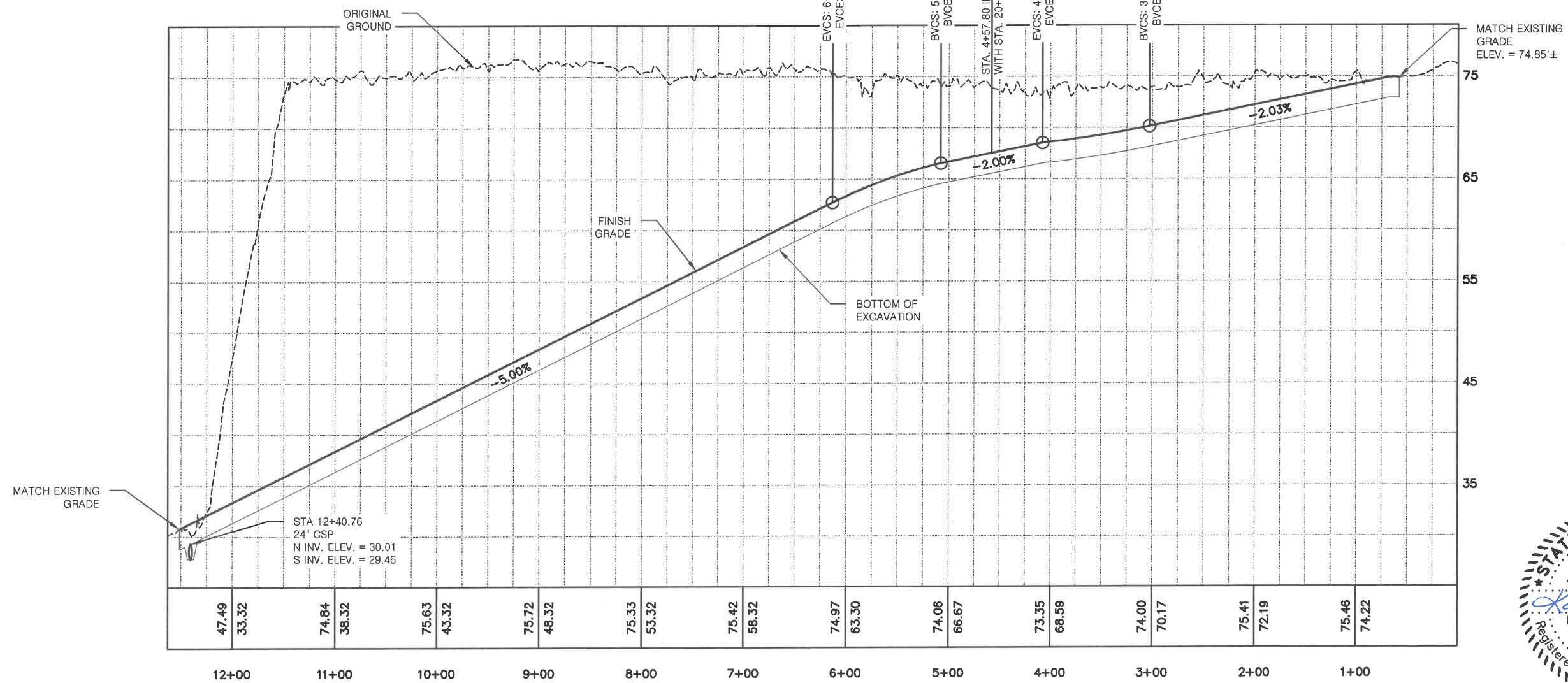
10

OF 34 SHEETS



HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L1	111.34'	S67° 52' 10.46"W
L2	47.06'	N55° 37' 49.44"W
L3	545.91'	N90° 00' 00.00"W
L4	198.34'	S56° 17' 06.40"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C1	1+11.34	2+09.95	100.00'	98.61'	56.5000°
C2	2+57.02	4+01.22	240.39'	144.20'	34.3696°
C3	9+47.13	10+64.81	200.00'	117.69'	33.7149°



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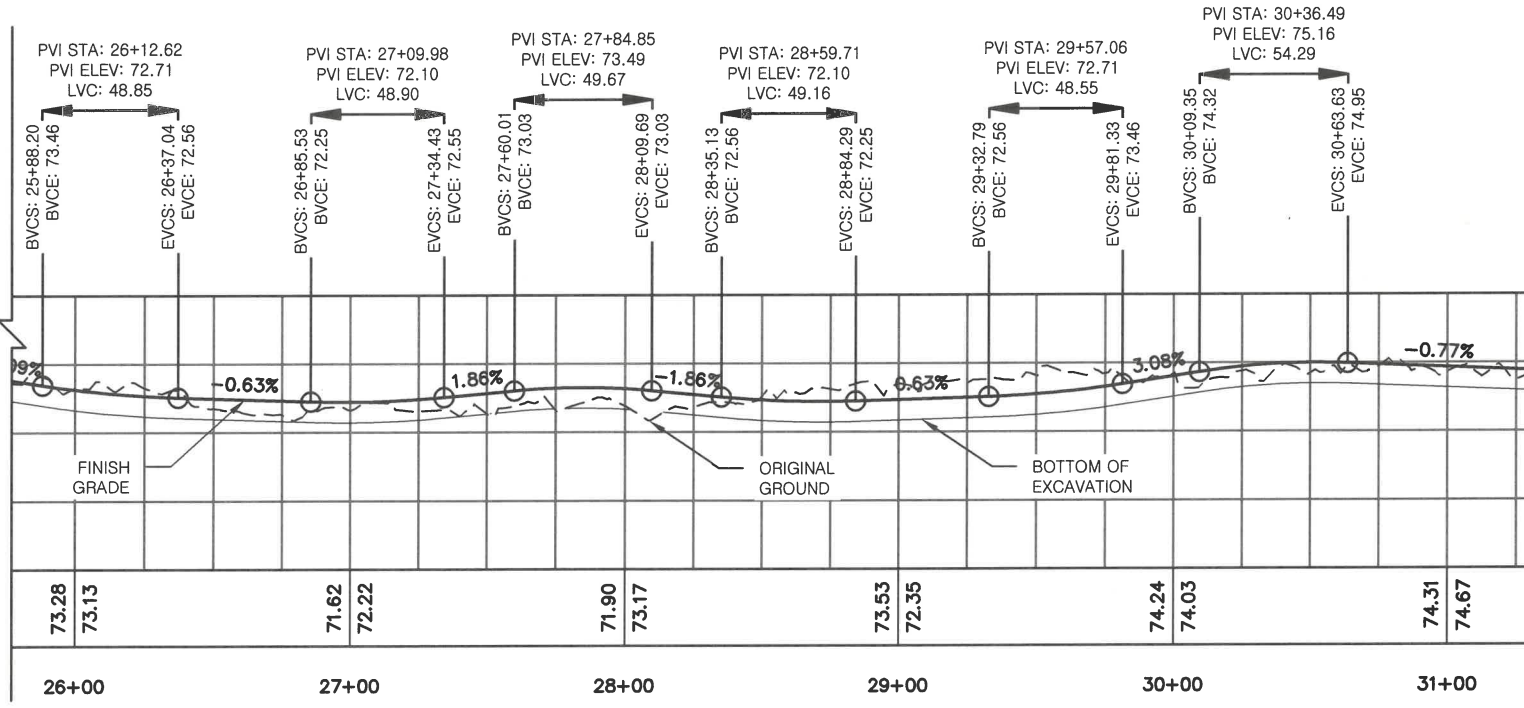
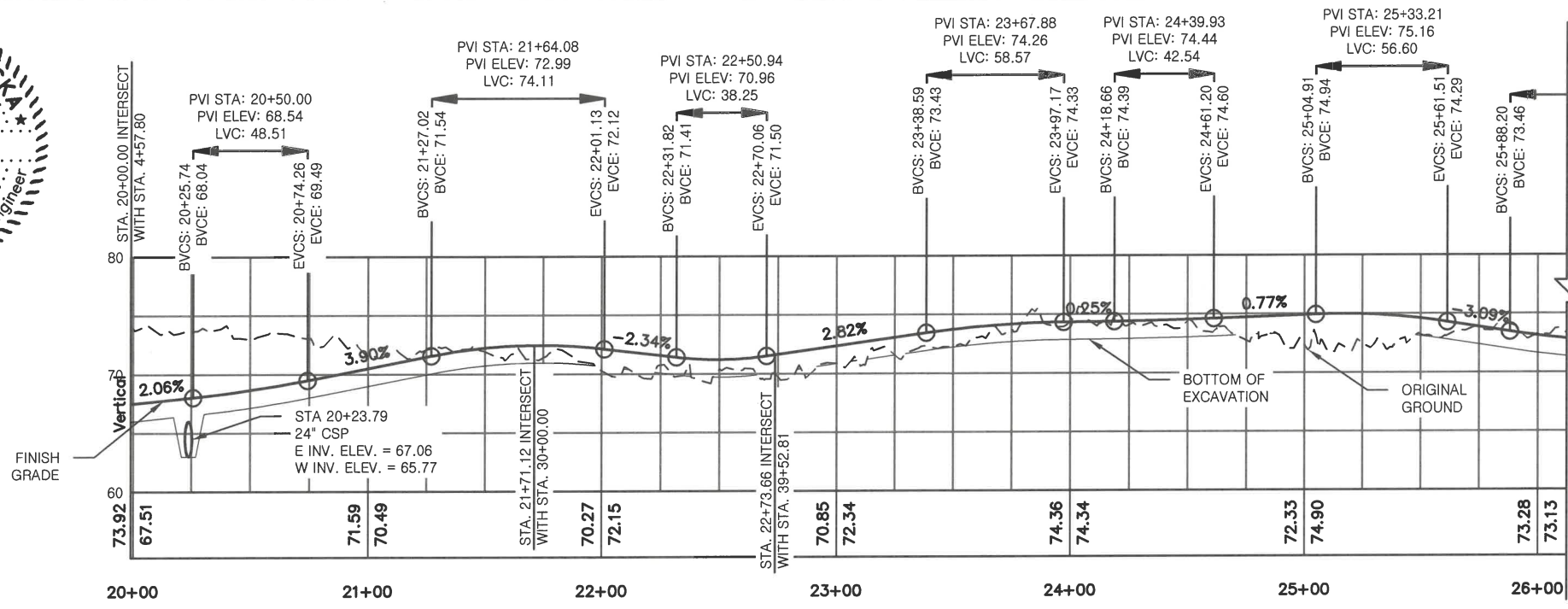
ENTRANCE ROAD PLAN & PROFILE

PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET

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OF 34 SHEETS

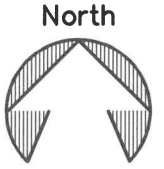
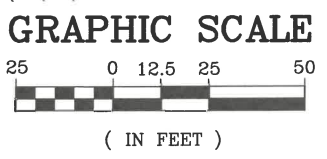
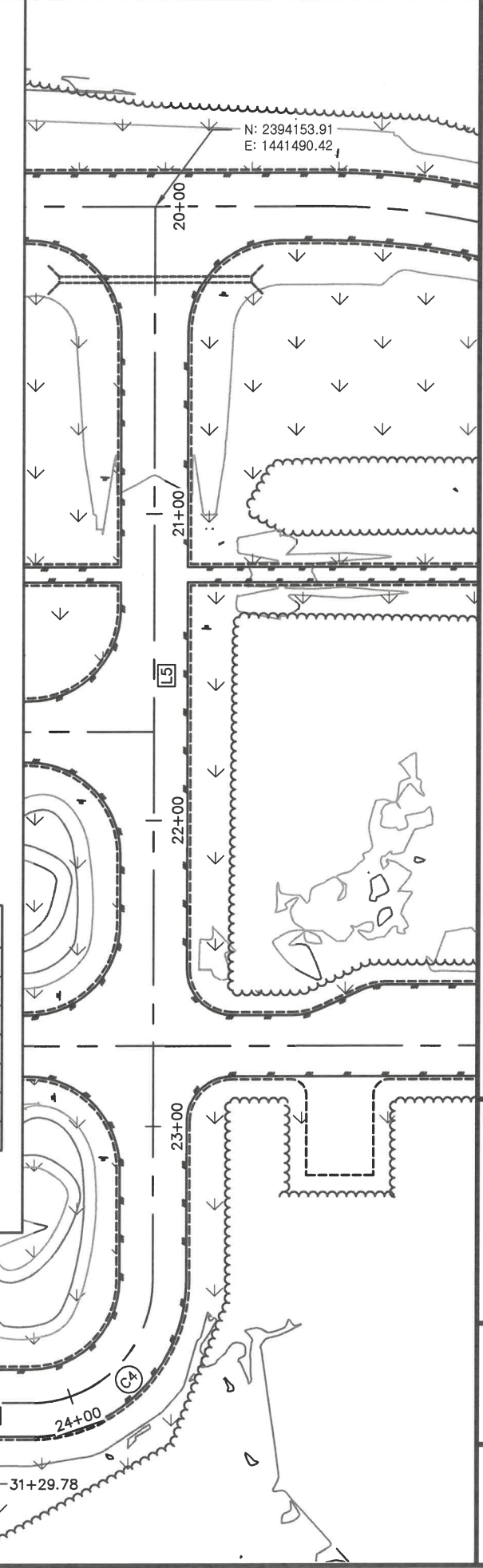


HORIZONTAL LINE DATA

LINE #	LENGTH	DIRECTION
L5	350.43'	S0° 00' 00.00"E
L6	26.68'	S89° 59' 35.70"W
L7	247.49'	N89° 59' 59.94"W
L8	247.49'	S89° 59' 59.94"E

HORIZONTAL CURVE DATA

CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C4	23+50.43	24+13.26	40.00'	62.83'	89.9932°
C5	24+39.93	24+70.01	35.00'	30.07'	49.2276°
C6	24+71.69	24+97.85	25.00'	26.16'	59.9516°
C7	27+45.34	28+24.36	25.18'	79.02'	179.8217°
C8	30+71.85	30+97.91	25.00'	26.06'	59.7329°
C9	30+99.63	31+29.78	35.00'	30.16'	49.3666°



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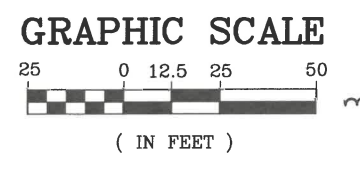
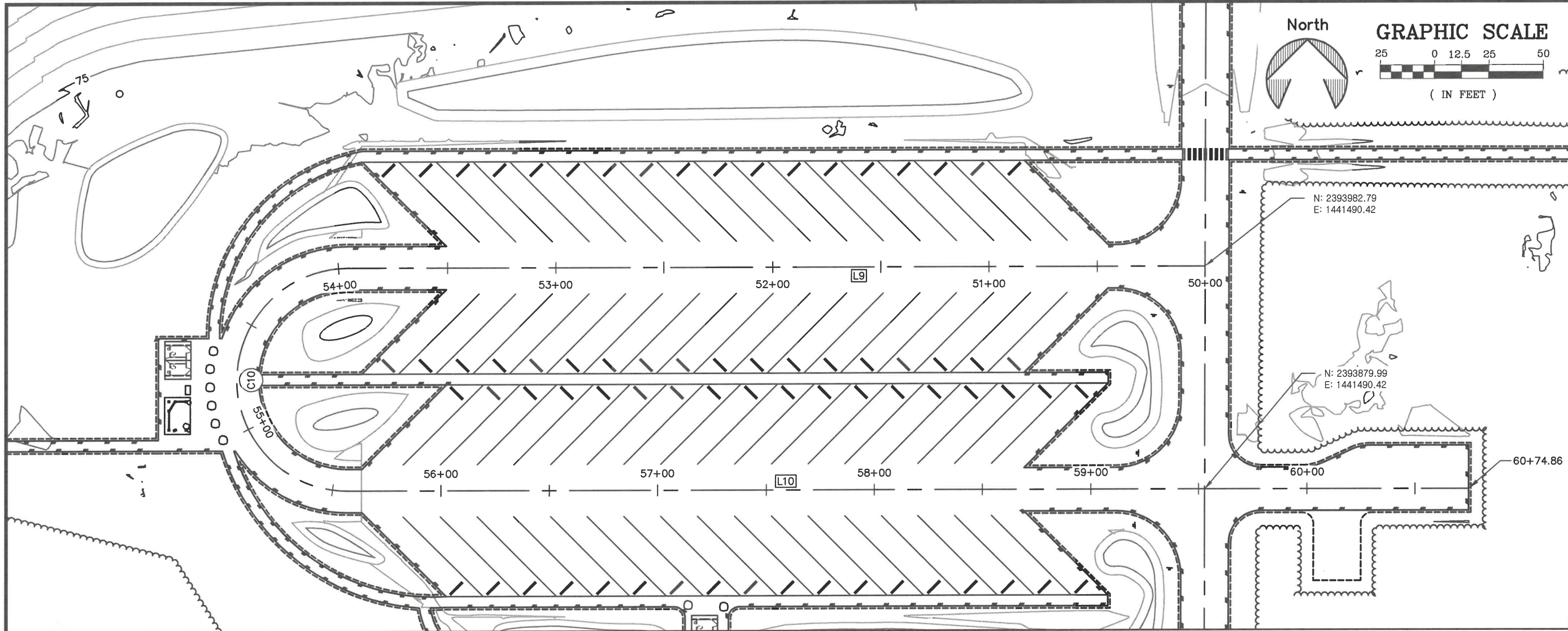
KRSM: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

PARKING ROAD PLAN & PROFILE



PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET
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 OF 34 SHEETS

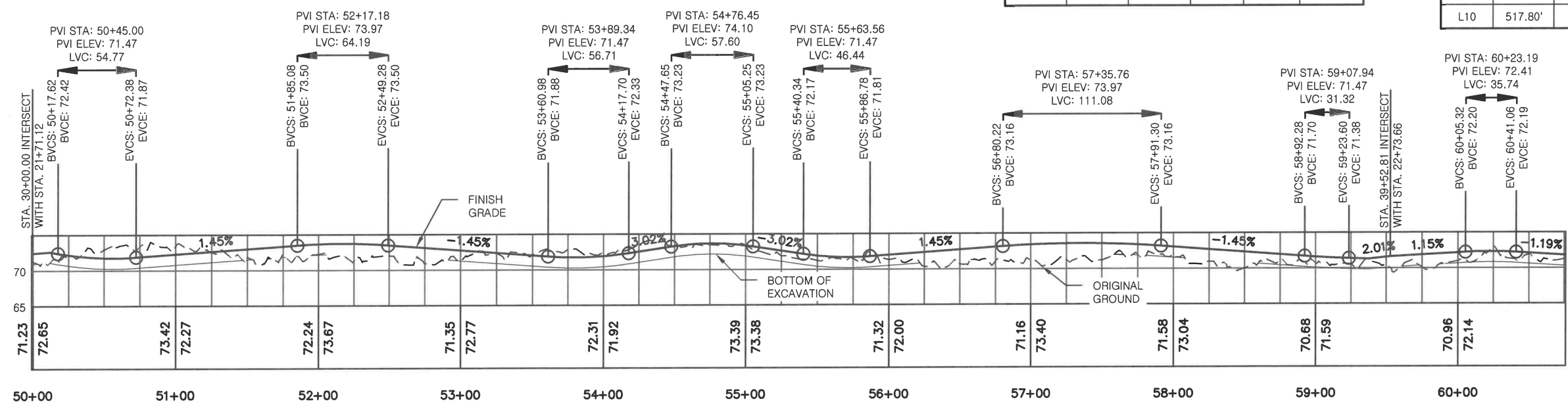


N: 2393982.79
E: 1441490.42

N: 2393879.99
E: 1441490.42

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C10	53+95.75	55+57.06	51.27'	161.30'	180.2627°

HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L9	395.75'	N90° 00' 00.00"W
L10	517.80'	N90° 00' 00.00"E



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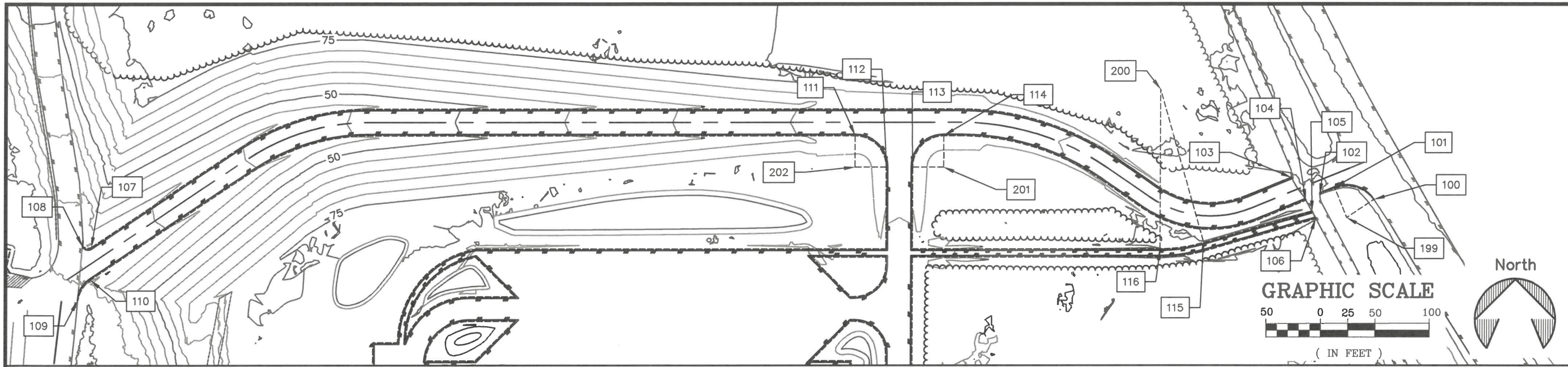
KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

PARKING AREA PLAN & PROFILE



PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET
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 OF 34 SHEETS



COORDINATE POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	2394083.24	1441928.13	76.45	EOP
101	2394094.39	1441891.87	75.55	EOP
102	2394087.90	1441878.56	74.87	EOS
103	2394103.30	1441852.72	74.62	EOS
104	2394082.68	1441865.73	74.66	EOS
105	2394072.05	1441871.52	75.06	EOS
106	2394065.76	1441874.95	75.05	EOS
107	2394039.17	1440746.93	31.64	EOS
108	2394040.47	1440738.88	31.02	EOP
109	2393990.98	1440734.47	29.10	EOP
110	2394009.79	1440746.15	30.79	EOS
111	2394141.91	1441449.42	66.45	EOS
112	2394112.91	1441478.42	68.03	EOS
113	2394112.91	1441502.42	68.11	EOS
114	2394141.91	1441531.42	68.28	EOS
115	2394044.67	1441771.45	75.20	EOS
116	2394037.56	1441731.24	75.68	EOS
117	2394037.56	1441502.42	70.89	EOS
118	2394030.56	1441502.42	71.16	EOS
119	2394037.56	1441478.42	70.89	EOS
120	2394030.56	1441478.42	71.16	EOS

COORDINATE POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
121	2394022.79	1441478.42	71.46	EOS
122	2393993.79	1441449.42	71.63	EOS
123	2393993.79	1441445.84	71.59	EOS
124	2394030.56	1441409.07	70.74	EOS
125	2393993.79	1441137.54	71.78	EOS
126	2394030.56	1441100.77	70.54	EOS
127	2394036.56	1441101.18	70.71	EOS
128	2393971.79	1441137.54	72.22	EOS
129	2393935.02	1441100.77	71.00	EOS
130	2393935.02	1441054.44	73.43	EOS
131	2393953.54	1441036.34	73.27	EOS
132	2393951.74	1441029.33	73.20	EOS
133	2393951.74	1441006.30	72.81	EOS
134	2393904.78	1441006.30	72.73	EOS
135	2393904.78	1440900.45	74.70	EOS
136	2393897.78	1440900.45	74.56	EOS
137	2393897.78	1441035.94	72.37	EOS
138	2393894.18	1441044.60	72.89	EOS
139	2393928.02	1441054.44	73.44	EOS
140	2393928.02	1441137.66	72.96	EOS
141	2393891.26	1441100.89	71.51	EOS
142	2393869.26	1441100.89	71.51	EOS
143	2393832.38	1441137.77	71.05	EOS
144	2393825.32	1441126.93	71.49	EOS
145	2393825.31	1441134.03	71.37	EOS
146	2393825.49	1441446.54	70.74	EOS

COORDINATE POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
147	2393831.90	1441446.54	70.79	EOS
148	2393869.26	1441409.19	71.78	EOS
149	2393891.26	1441409.19	72.22	EOS
150	2393928.61	1441446.54	72.40	EOS
151	2393935.02	1441446.54	72.56	EOS
152	2393935.02	1441409.07	72.95	EOS
153	2393971.79	1441445.84	71.59	EOS
154	2393971.79	1441449.42	71.63	EOS
155	2393942.79	1441478.42	71.65	EOS
156	2393920.25	1441478.42	71.13	EOS
157	2393891.26	1441449.41	71.25	EOS
158	2393869.26	1441449.42	71.25	EOS
159	2393840.26	1441478.42	72.49	EOS
160	2393905.26	1441502.42	70.73	EOS
161	2393891.26	1441516.42	71.45	EOS
162	2393891.26	1441536.14	71.90	EOS
163	2393901.26	1441566.80	71.87	EOS
164	2393900.26	1441612.47	71.39	EOP
165	2393869.26	1441613.47	71.37	EOS
166	2393869.26	1441567.47	72.25	EOS
167	2393864.26	1441562.47	72.25	EOS
168	2393837.98	1441562.47	72.25	EOG
169	2393837.98	1441540.47	72.25	EOG
170	2393864.26	1441540.47	72.25	EOS
171	2393869.26	1441535.47	70.48	EOS
172	2393869.26	1441516.42	71.68	EOS

COORDINATE POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
173	2393855.26	1441502.42	72.07	EOS
174	2393774.44	1441425.08	74.24	EOP
175	2393780.66	1441412.59	73.14	EOS
176	2393779.75	1441407.52	74.40	EOS
177	2393751.44	1441424.36	74.21	EOS
178	2393797.09	1441375.20	74.71	EOS
179	2393802.12	1441375.20	74.06	EOS
180	2393763.47	1441390.88	74.90	EOS
181	2393780.12	1441374.61	75.05	EOS
182	2393746.77	1441341.26	75.08	EOS
183	2393746.77	1441374.20	75.06	EOS
184	2393797.12	1441150.26	72.19	EOS
185	2393780.12	1441159.65	72.44	EOS
186	2393780.12	1441126.71	72.93	EOS
187	2393763.47	1441110.03	73.43	EOS
188	2393746.77	1441126.30	72.94	EOS
189	2393729.77	1441126.70	72.59	EOS
190	2393729.77	1441374.21	74.72	EOS
191	2393802.12	1441275.37	72.95	EOS
192	2393806.12	1441271.37	72.77	EOS
193	2393802.12	1441245.46	72.38	EOS
194	2393806.12	1441249.46	72.35	EOS
195	2393821.49	1441249.46	72.59	EOS
196	2393825.49	1441245.46	72.46	EOS
197	2393821.49	1441271.36	72.51	EOS
198	2393825.49	1441275.37	72.63	EOS



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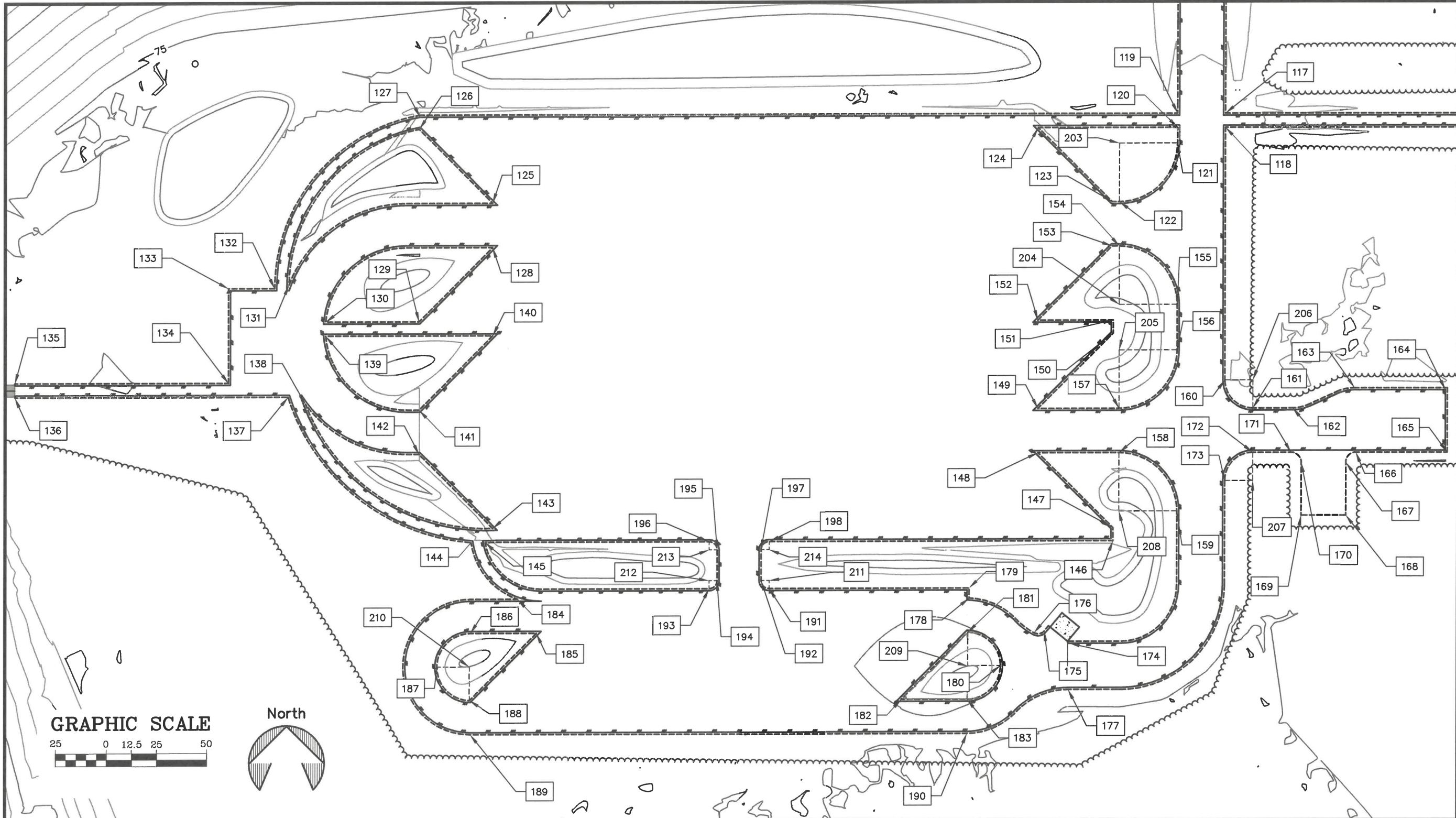
SHEET

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GRADING PLAN & POINT TABLE

KRSMA: EAGLE ROCK
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 PROJECT No. 72018-2



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GRADING PLAN &
 RADIUS POINT TABLE



PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
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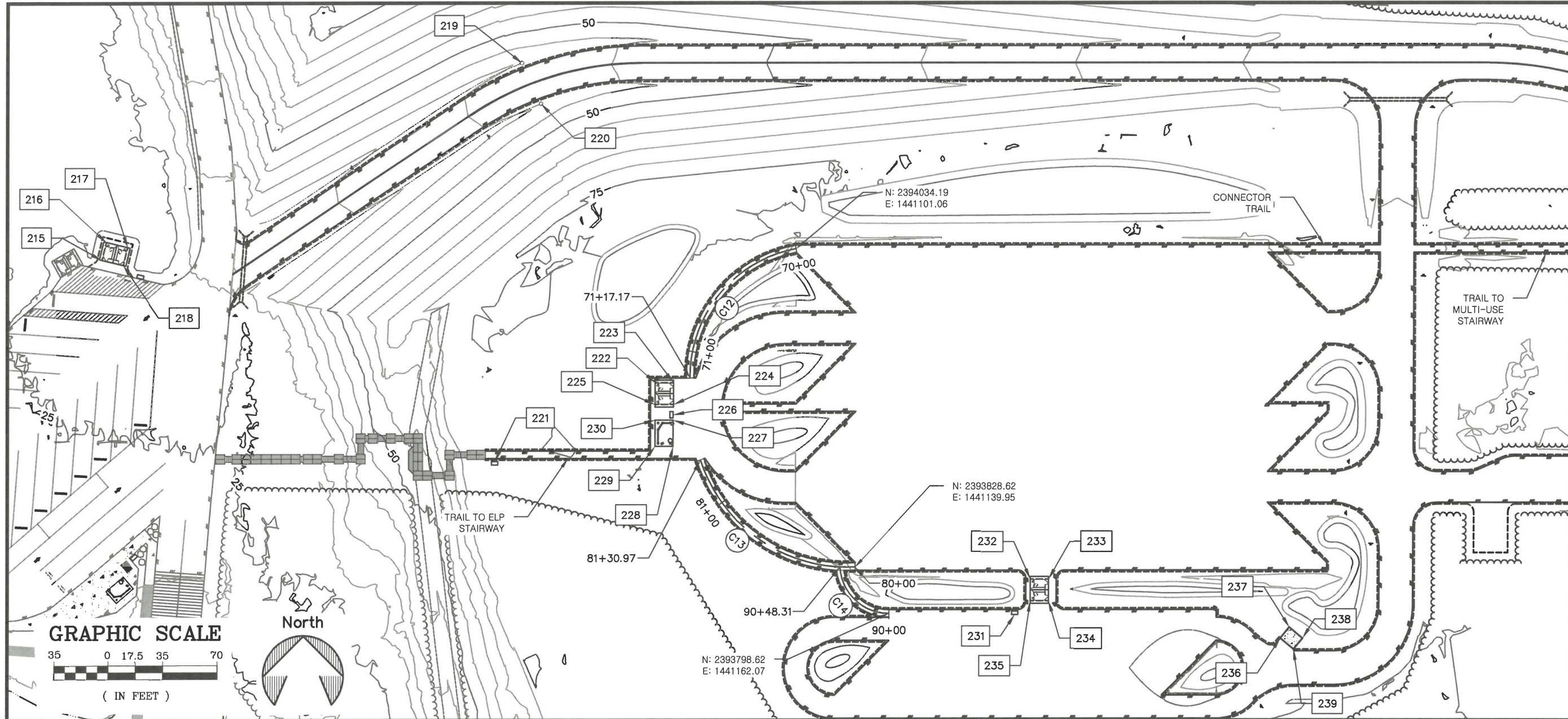
SHEET
15
 OF 34 SHEETS

RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
199	2394066.60	1441903.17	30'	TO EOP
200	2394184.07	1441731.25	146.5'	TO EOS
201	2394112.91	1441531.42	29'	TO EOS
202	2394112.91	1441449.42	29'	TO EOS
203	2394022.79	1441449.42	29'	TO EOS
204	2393942.79	1441449.42	29'	TO EOS

RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
205	2393920.26	1441449.42	29'	TO EOS
206	2393905.26	1441516.42	14'	TO EOS
207	2393855.26	1441516.42	14'	TO EOS
208	2393840.26	1441449.42	29'	TO EOS
209	2393763.24	1441374.61	16.7'	TO EOS

RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
210	2393763.47	1441126.30	16.7'	TO EOS
211	2393806.12	1441275.37	4'	TO EOS
212	2393806.12	1441245.46	4'	TO EOS
213	2393821.49	1441245.46	4'	TO EOS
214	2393821.49	1441275.37	4'	TO EOS





COORDINATE POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
215	2394027.10	1440652.98	27.00	TOILET CONCRETE PAD
216	2394038.68	1440655.76	27.00	TOILET CONCRETE PAD
217	2394035.39	1440669.46	27.00	TOILET CONCRETE PAD
218	2394023.81	1440666.68	27.00	TOILET CONCRETE PAD
219	2394153.88	1440923.48	40.71	CLEANOUT
220	2394127.58	1440935.90	40.96	CLEANOUT
221	2393896.87	1440906.32	74.19	BEARPROOF GARBAGE CAN
222	2393947.74	1441010.30	73.01	TOILET CONCRETE PAD
223	2393947.74	1441022.22	73.01	TOILET CONCRETE PAD
224	2393933.64	1441022.22	73.01	TOILET CONCRETE PAD
225	2393933.64	1441010.30	73.01	TOILET CONCRET PAD
226	2393927.01	1441022.03	73.23	BEARPROOF GARBAGE CAN

COORDINATE POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
227	2393923.64	1441022.03	72.99	KIOSK CONCRETE PAD
228	2393906.64	1441022.03	72.99	KIOSK CONCRETE PAD
229	2393906.64	1441010.30	72.99	KIOSK CONCRETE PAD
230	2393923.64	1441010.30	72.99	KIOSK CONCRETE PAD
231	2393797.85	1441243.43	72.44	BEARPROOF GARBAGE CAN
232	2393820.85	1441253.46	72.72	TOILET CONCRETE PAD
233	2393820.85	1441265.37	72.72	TOILET CONCRETE PAD
234	2393806.76	1441265.37	72.72	TOILET CONCRETE PAD
235	2393806.76	1441253.46	72.72	TOILET CONCRETE PAD
236	2393782.59	1441415.49	74.50	DUMPSTER CONCRETE PAD
237	2393789.64	1441421.35	74.50	DUMPSTER CONCRETE PAD
238	2393782.50	1441429.94	74.50	DUMPSTER CONCRETE PAD
239	2393775.45	1441424.08	74.50	DUMPSTER CONCRETE PAD

HORIZONTAL CURVE DATA

CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C12	70+00.00	71+17.17	83.49'	117.17'	80.4072°
C13	80+00.00	81+30.97	100.34'	130.97'	74.7837°
C14	90+00.00	90+48.31	31.97'	48.31'	86.5761°



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GRADING PLAN &
FEATURE POINT TABLE



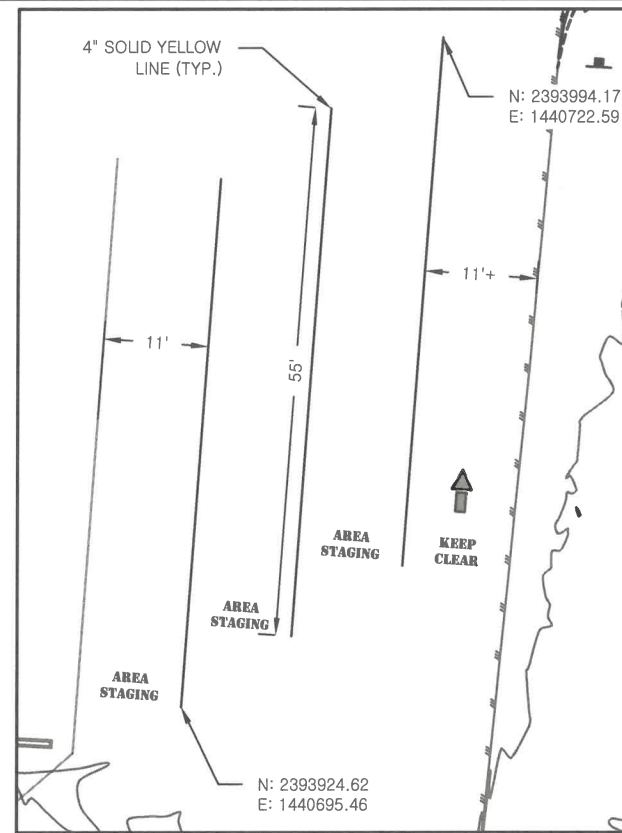
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SHEET

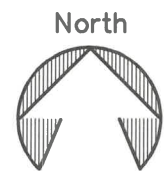
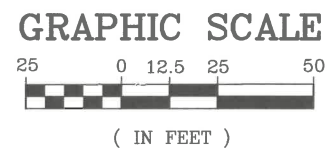
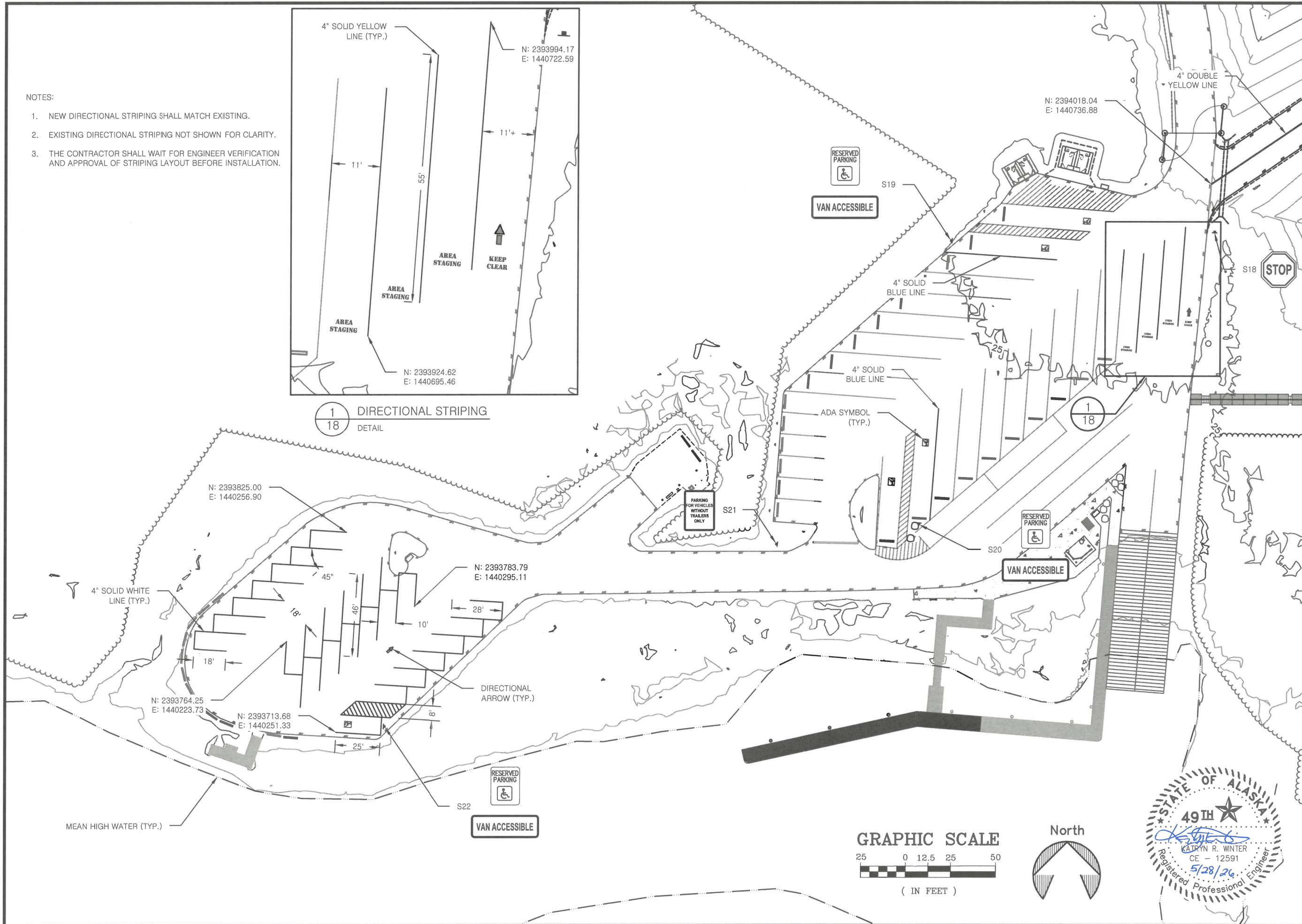
16

OF 34 SHEETS

- NOTES:
1. NEW DIRECTIONAL STRIPING SHALL MATCH EXISTING.
 2. EXISTING DIRECTIONAL STRIPING NOT SHOWN FOR CLARITY.
 3. THE CONTRACTOR SHALL WAIT FOR ENGINEER VERIFICATION AND APPROVAL OF STRIPING LAYOUT BEFORE INSTALLATION.



1/18 DIRECTIONAL STRIPING
DETAIL



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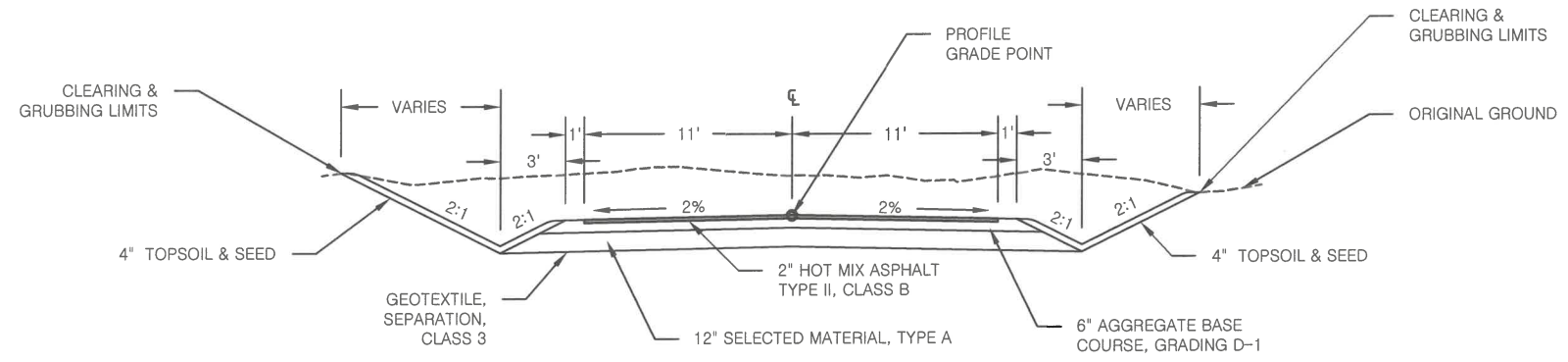
KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
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SIGN AND STRIPING PLAN -
 EXISTING PARKING

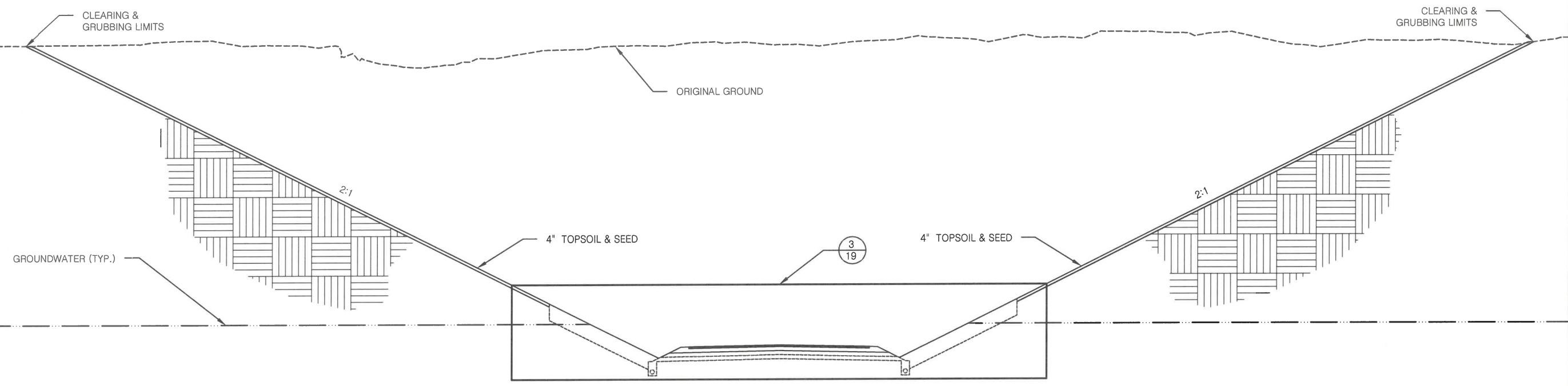


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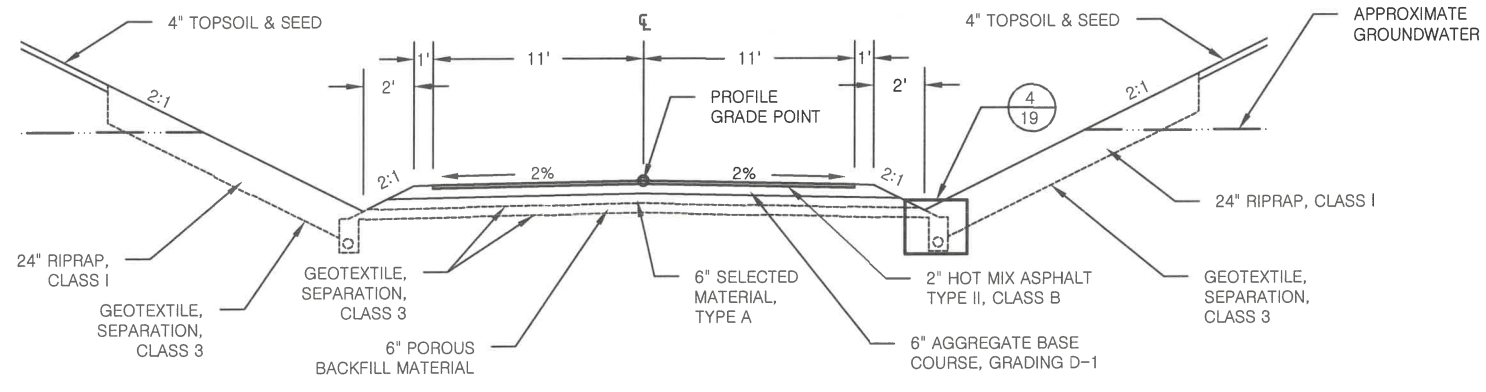
SHEET
 18
 OF 34 SHEETS



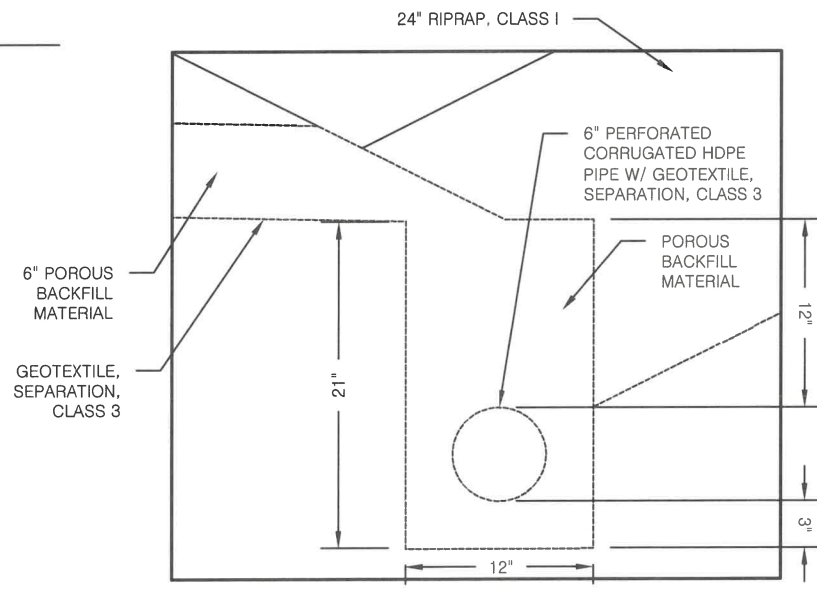
1
19 ENTRANCE ROAD
STA 0+65 TO 10+20



2
19 ENTRANCE ROAD
STA 10+20 TO 12+29



3
19 ENTRANCE ROAD
STA 10+20 TO 12+29



4
19 PERFORATED CORRUGATED HDPE PIPE
DETAIL



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 PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
 550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

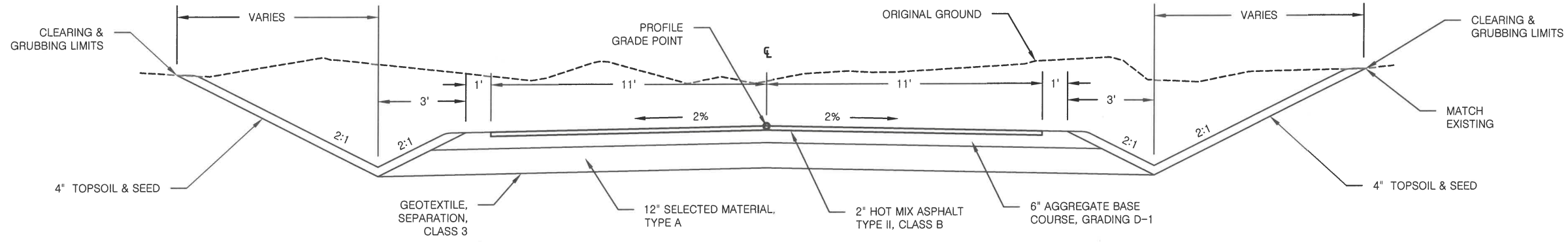
KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

ENTRANCE ROAD
 TYPICAL SECTIONS

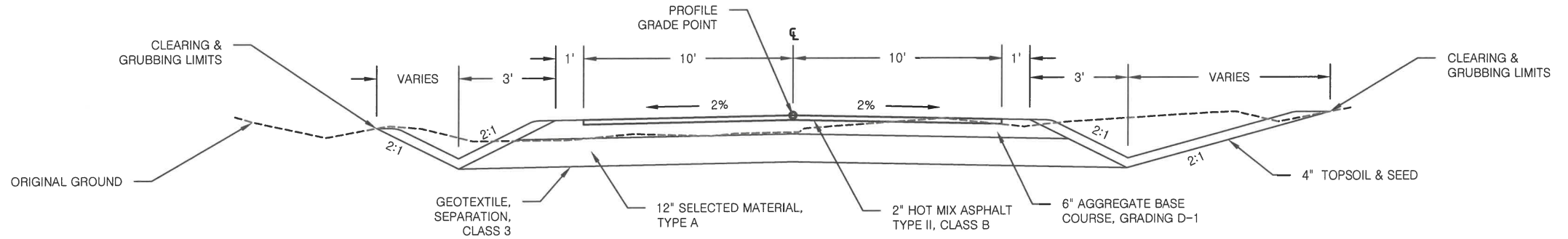


PREPARED: FWS
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 REVIEWED: KRW
 DATE: MAY 2026

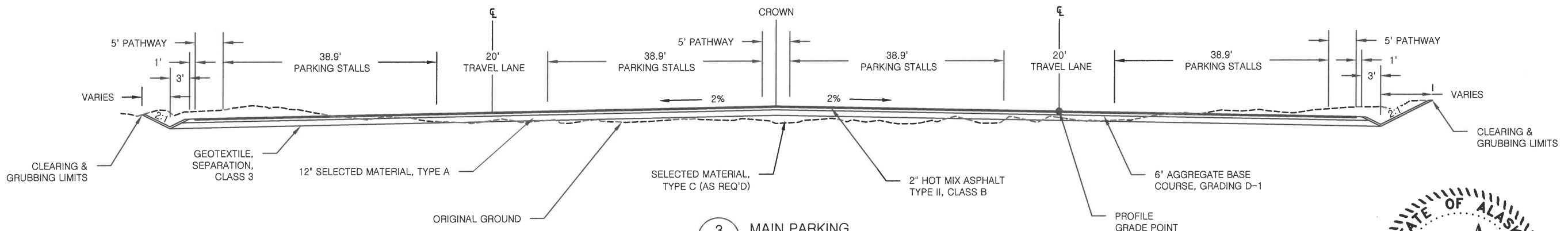
SHEET
 19
 OF 34 SHEETS



1
20 PARKING ROAD
STA 20+41 TO 24+39



2
20 MAIN PARKING
STA 53+50 TO 55+64
STA 58+69 TO 59+12
STA 59+79 TO 59+99



3
20 MAIN PARKING
STA 50+84 TO 53+50



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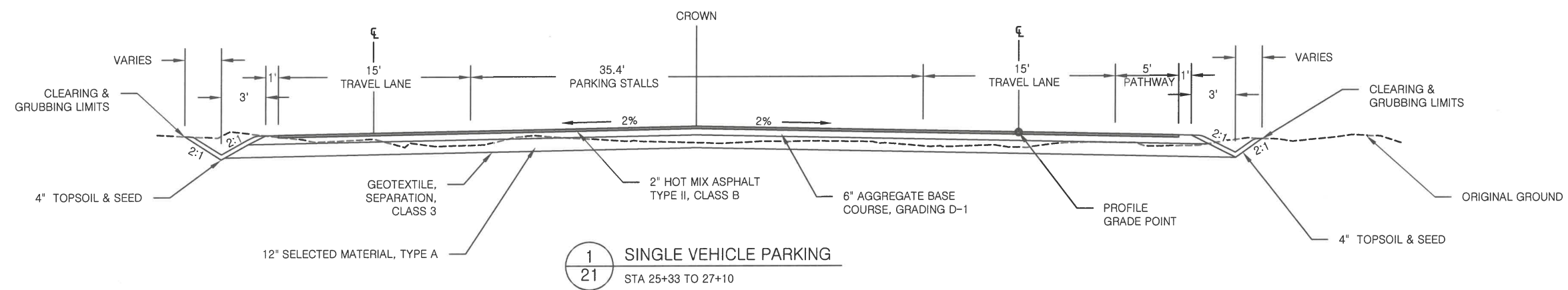
KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

PARKING
 TYPICAL SECTIONS

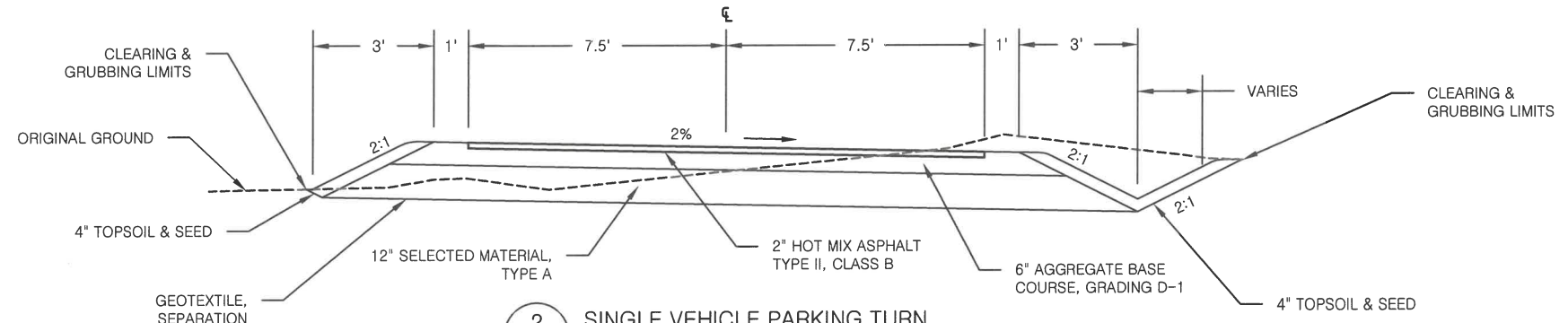


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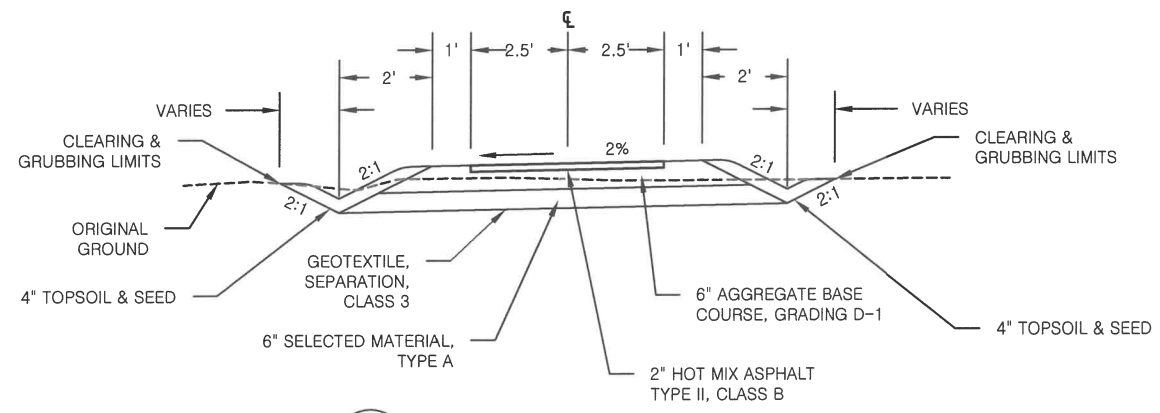
SHEET
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 OF 34 SHEETS



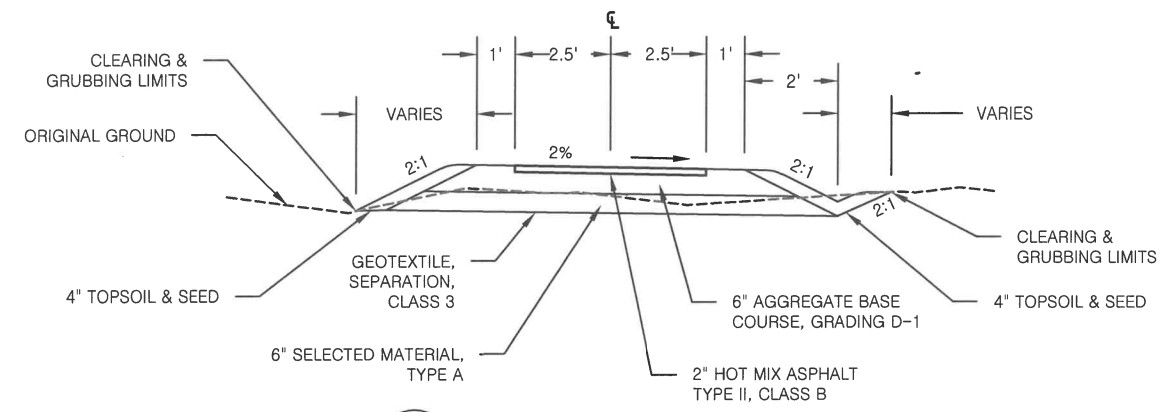
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21 SINGLE VEHICLE PARKING
STA 25+33 TO 27+10



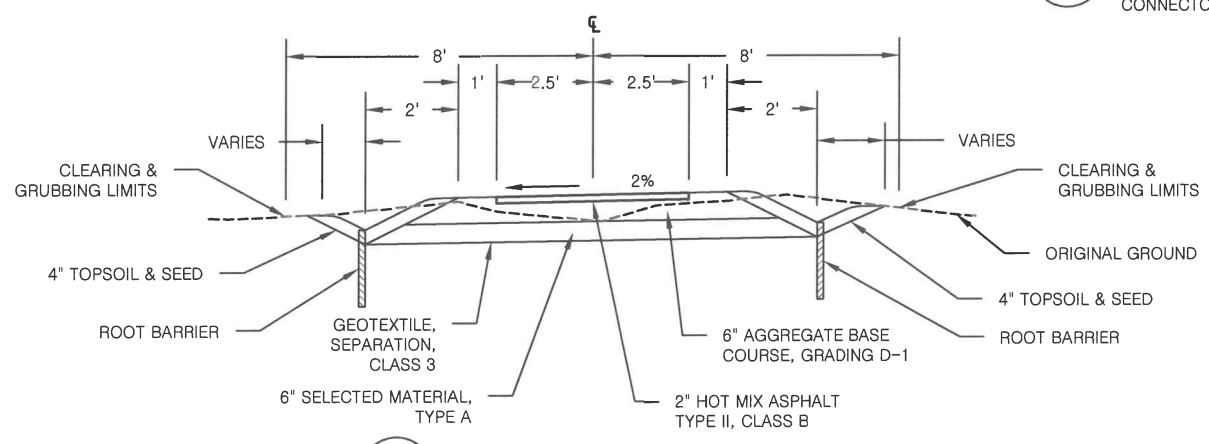
2
21 SINGLE VEHICLE PARKING TURN
STA 27+10 TO 28+24



3
21 TRAIL
STA 80+00 TO 81+31
STA 90+00 TO 90+48
TRAIL TO ELP STAIRWAY



4
21 TRAIL
STA 70+00 TO 71+17
CONNECTOR TRAIL



5
21 TRAIL
TRAIL TO MULTI-USE PATHWAY

- NOTES:
1. ROOT BARRIER SHALL EXTEND 2 FEET BELOW FINISH GRADE.
 2. ROOT BARRIER SHALL ONLY BE PLACED WHEN TRAIL IS ADJACENT TO TREE LINE.



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KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

SINGLE PARKING & TRAIL
 TYPICAL SECTIONS

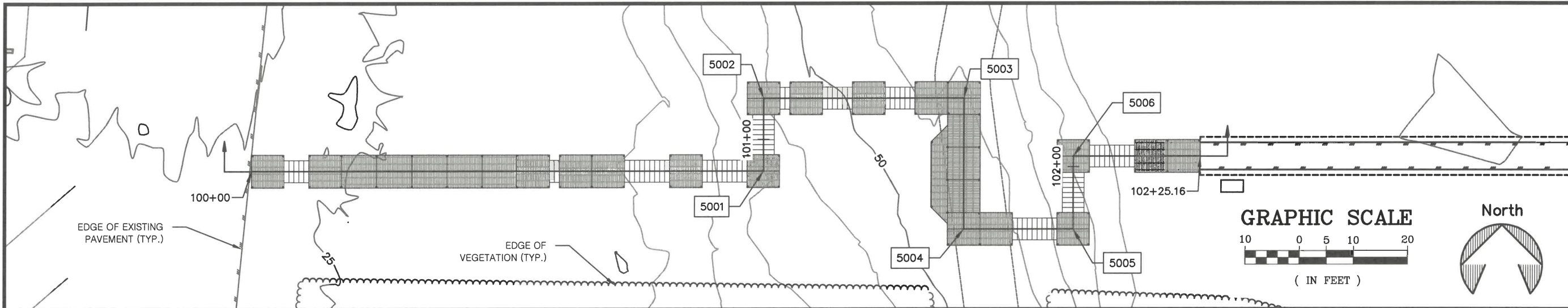


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SHEET

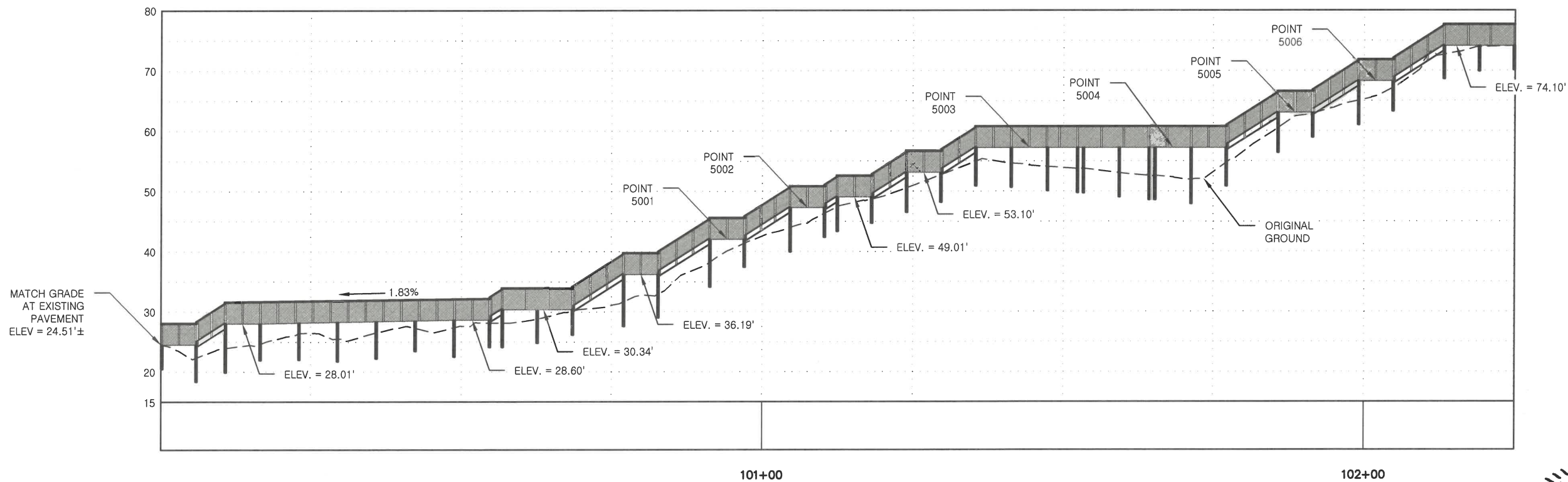
21

OF 34 SHEETS



COORDINATE POINT TABLE				
POINT #	NORTHING	EASTING	TOP OF PILE CAP ELEVATION	DESCRIPTION
5001	2393898.61	1440820.13	42.02	ELP TURN
5002	2393911.95	1440820.13	47.26	ELP TURN
5003	2393911.95	1440856.95	57.18	ELP TURN
5004	2393887.95	1440856.95	57.18	ELP TURN
5005	2393887.95	1440877.20	63.01	ELP TURN
5006	2393901.28	1440877.20	68.27	ELP TURN

1
22 ELP WALKWAY & STAIRWAY
PLAN VIEW



2
22 ELP WALKWAY & STAIRWAY
PROFILE VIEW



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 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

ELP WALKWAY & STAIRWAY -
 PLAN & PROFILE

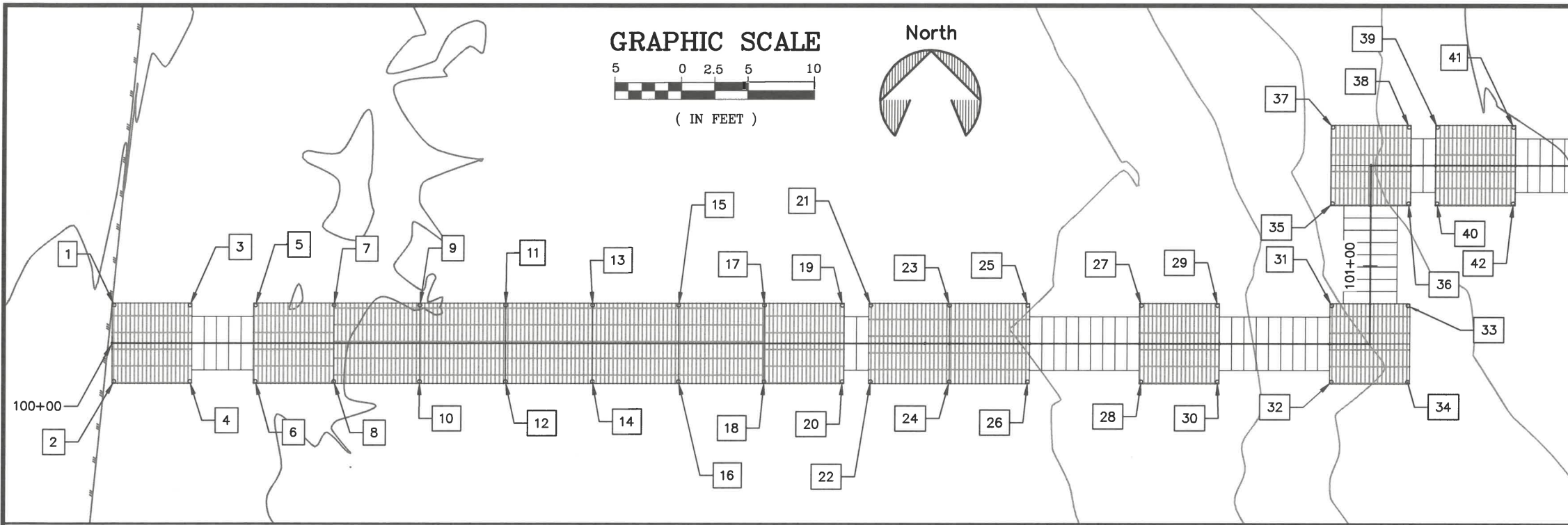


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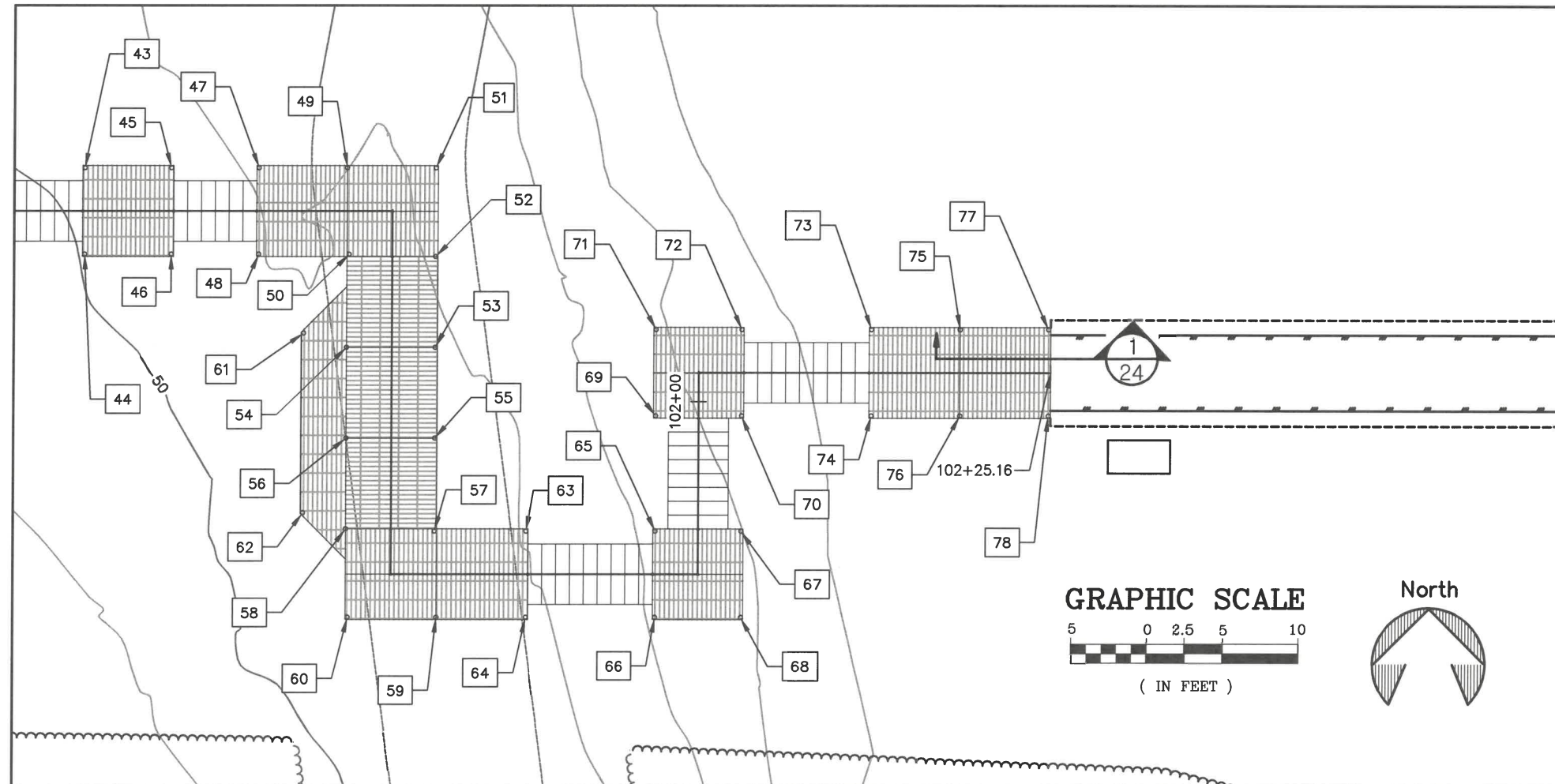
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22

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1
23 PILE LOCATIONS STA. 100+00 TO 101+25
PLAN VIEW



2
23 PILE LOCATIONS STA 101+25 TO 102+25
PLAN VIEW



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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KRSMA: EAGLE ROCK
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ELP WALKWAY & STAIRWAY -
 PILE PLAN



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 REVIEWED: KRW
 DATE: MAY 2026

SHEET
23
 OF 34 SHEETS

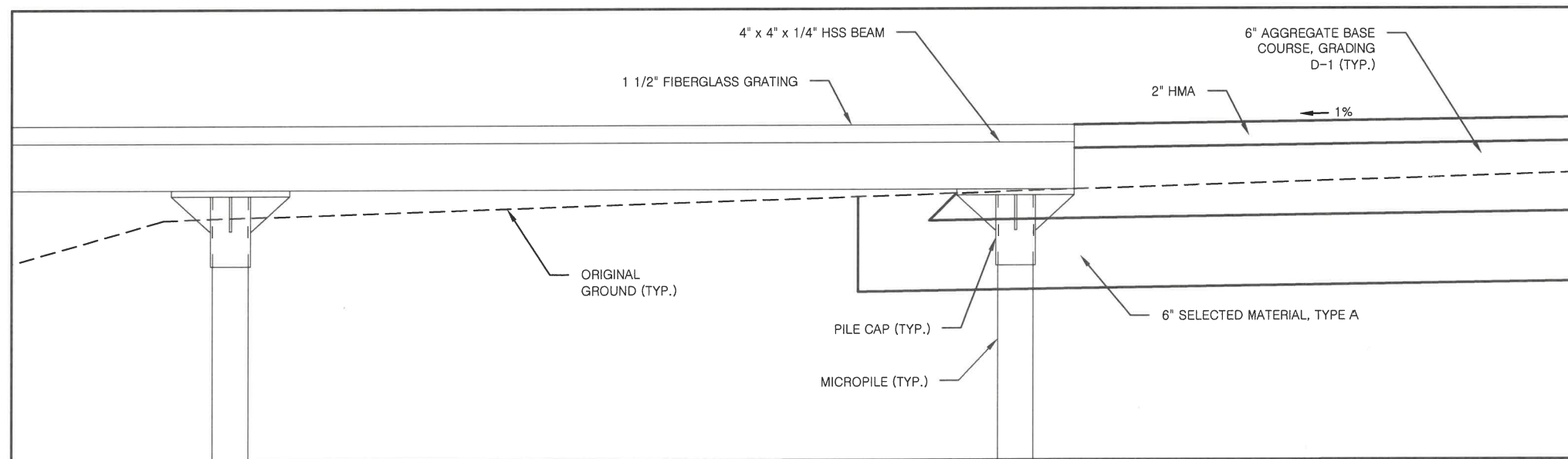
COORDINATE POINT TABLE			
PILE #	NORTHING	EASTING	TOP OF PILE CAP ELEVATION
1	2393901.47	1440726.10	24.51
2	2393895.76	1440726.10	24.51
3	2393901.47	1440731.81	24.51
4	2393895.76	1440731.81	24.51
5	2393901.47	1440736.69	28.01
6	2393895.76	1440736.69	28.01
7	2393901.47	1440742.54	28.01
8	2393895.76	1440742.54	28.01
9	2393901.47	1440749.00	28.13
10	2393895.76	1440749.00	28.13
11	2393901.47	1440755.45	28.25
12	2393895.76	1440755.45	28.25
13	2393901.47	1440761.90	28.37
14	2393895.76	1440761.90	28.37
15	2393901.47	1440768.34	28.49
16	2393895.76	1440768.34	28.49
17	2393901.47	1440774.79	28.60
18	2393895.76	1440774.79	28.60
19	2393901.47	1440780.64	28.60
20	2393895.76	1440780.64	28.60

COORDINATE POINT TABLE			
PILE #	NORTHING	EASTING	TOP OF PILE CAP ELEVATION
21	2393901.47	1440782.77	30.34
22	2393895.76	1440782.77	30.34
23	2393901.47	1440788.62	30.34
24	2393895.76	1440788.62	30.34
25	2393901.47	1440794.47	30.34
26	2393895.76	1440794.47	30.34
27	2393901.47	1440803.02	36.19
28	2393895.76	1440803.02	36.19
29	2393901.47	1440808.72	36.19
30	2393895.76	1440808.72	36.19
31	2393901.47	1440817.27	42.02
32	2393895.76	1440817.27	42.02
33	2393901.47	1440822.97	42.02
34	2393895.76	1440822.97	42.02
35	2393909.09	1440817.27	47.26
36	2393909.09	1440822.97	47.26
37	2393914.80	1440817.27	47.26
38	2393914.80	1440822.97	47.26
39	2393914.80	1440825.10	49.01
40	2393909.09	1440825.10	49.01

COORDINATE POINT TABLE			
PILE #	NORTHING	EASTING	TOP OF PILE CAP ELEVATION
41	2393914.80	1440830.81	49.01
42	2393909.09	1440830.81	49.01
43	2393914.80	1440836.60	53.10
44	2393909.09	1440836.60	53.10
45	2393914.80	1440842.31	53.10
46	2393909.09	1440842.31	53.10
47	2393914.80	1440848.10	57.18
48	2393909.09	1440848.10	57.18
49	2393914.80	1440853.95	57.18
50	2393909.09	1440854.10	57.18
51	2393914.80	1440859.81	57.18
52	2393908.95	1440859.81	57.18
53	2393902.95	1440859.81	57.18
54	2393902.95	1440853.95	57.18
55	2393896.95	1440859.81	57.18
56	2393896.95	1440853.95	57.18
57	2393890.80	1440859.81	57.18
58	2393890.95	1440853.95	57.18
59	2393885.09	1440859.95	57.18
60	2393885.09	1440854.10	57.18

COORDINATE POINT TABLE			
PILE #	NORTHING	EASTING	TOP OF PILE CAP ELEVATION
63	2393890.80	1440865.81	57.18
64	2393885.09	1440865.81	57.18
65	2393890.80	1440874.35	63.01
66	2393885.09	1440874.35	63.01
67	2393890.80	1440880.06	63.01
68	2393885.09	1440880.06	63.01
69	2393898.43	1440874.35	68.27
70	2393898.43	1440880.06	68.27
71	2393904.14	1440874.35	68.27
72	2393904.14	1440880.06	68.27
73	2393904.14	1440888.60	74.10
74	2393898.43	1440888.60	74.10
75	2393904.14	1440894.45	74.10
76	2393898.43	1440894.45	74.10
77	2393904.14	1440900.31	74.10
78	2393898.43	1440900.31	74.10

- NOTES:
- FIBERGLASS GRATING SHALL BE INSTALLED AFTER HMA IS PLACED.



1
24 TRAIL TO ELP WALKWAY TRANSITION
DETAIL



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 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

ELP WALKWAY & STAIRWAY -
 PILE COORDINATE TABLE &
 TRANSITION DETAIL

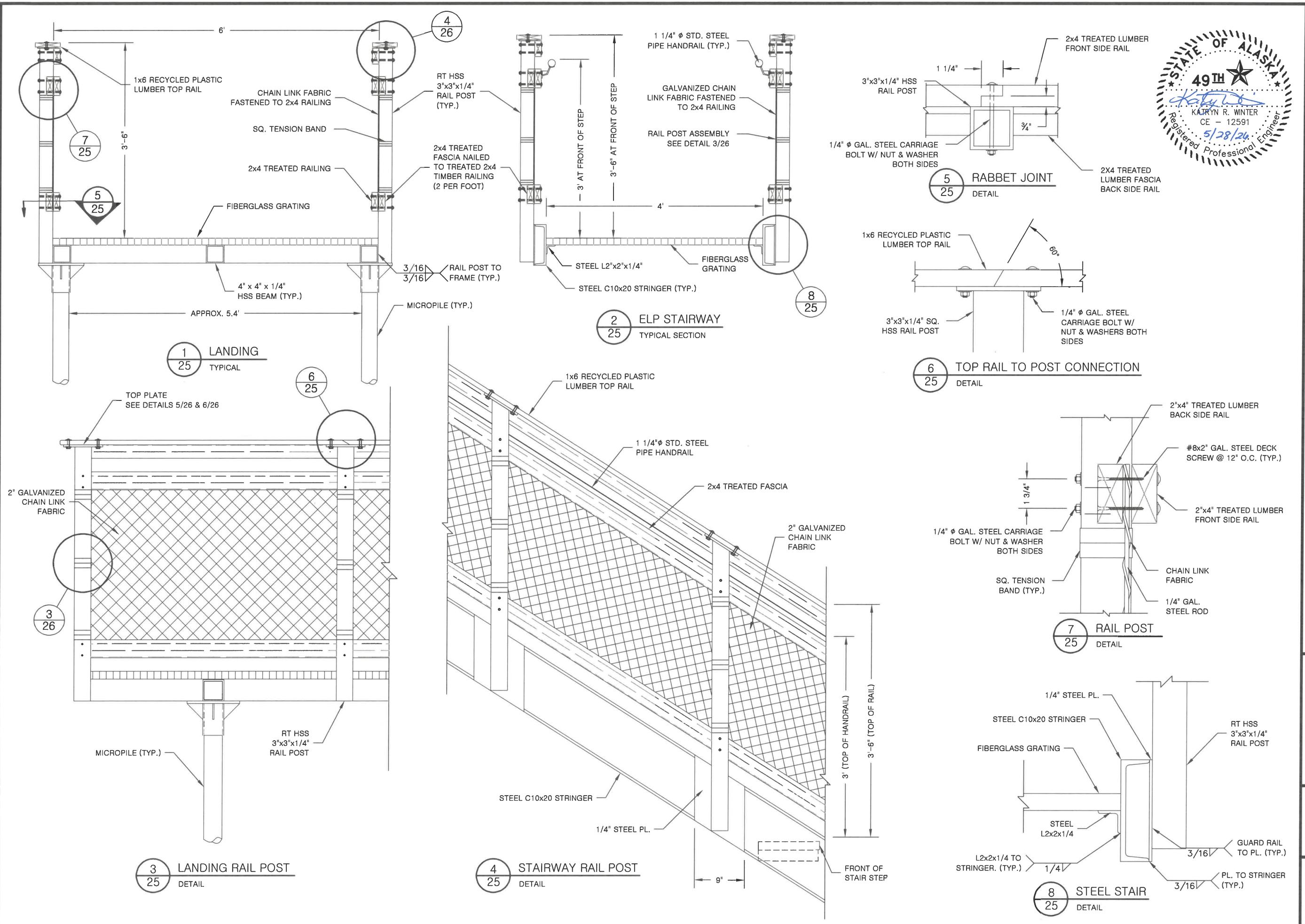


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SHEET

24

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PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
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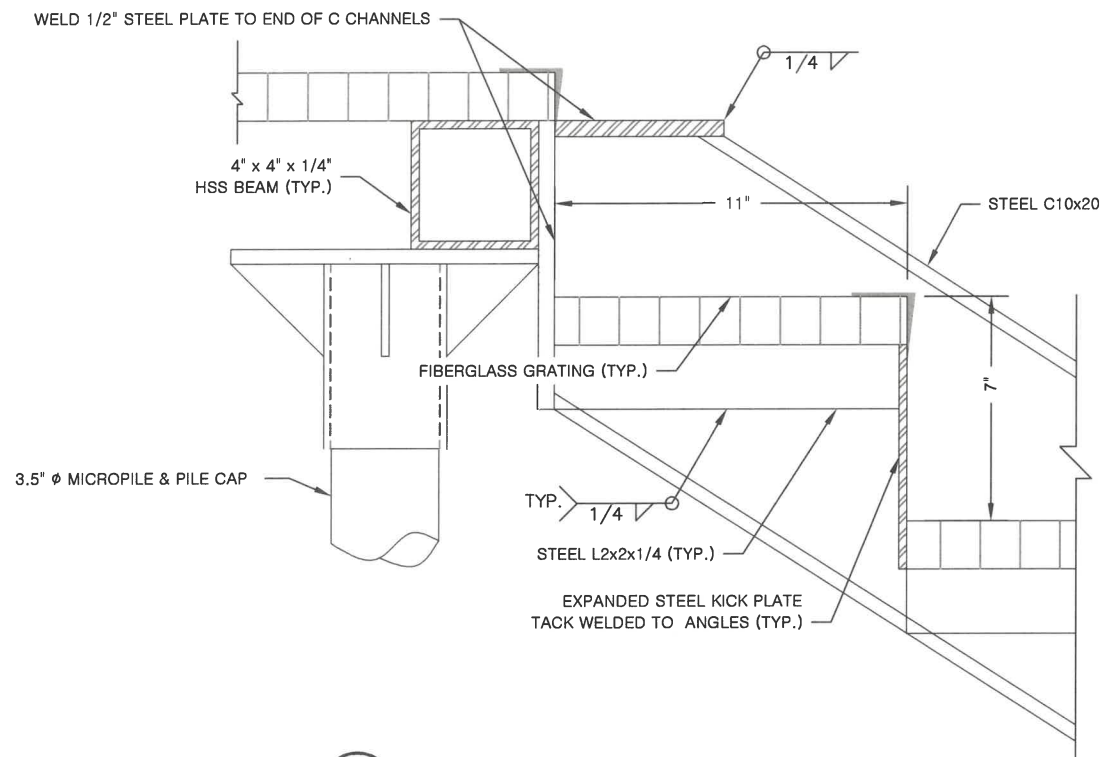


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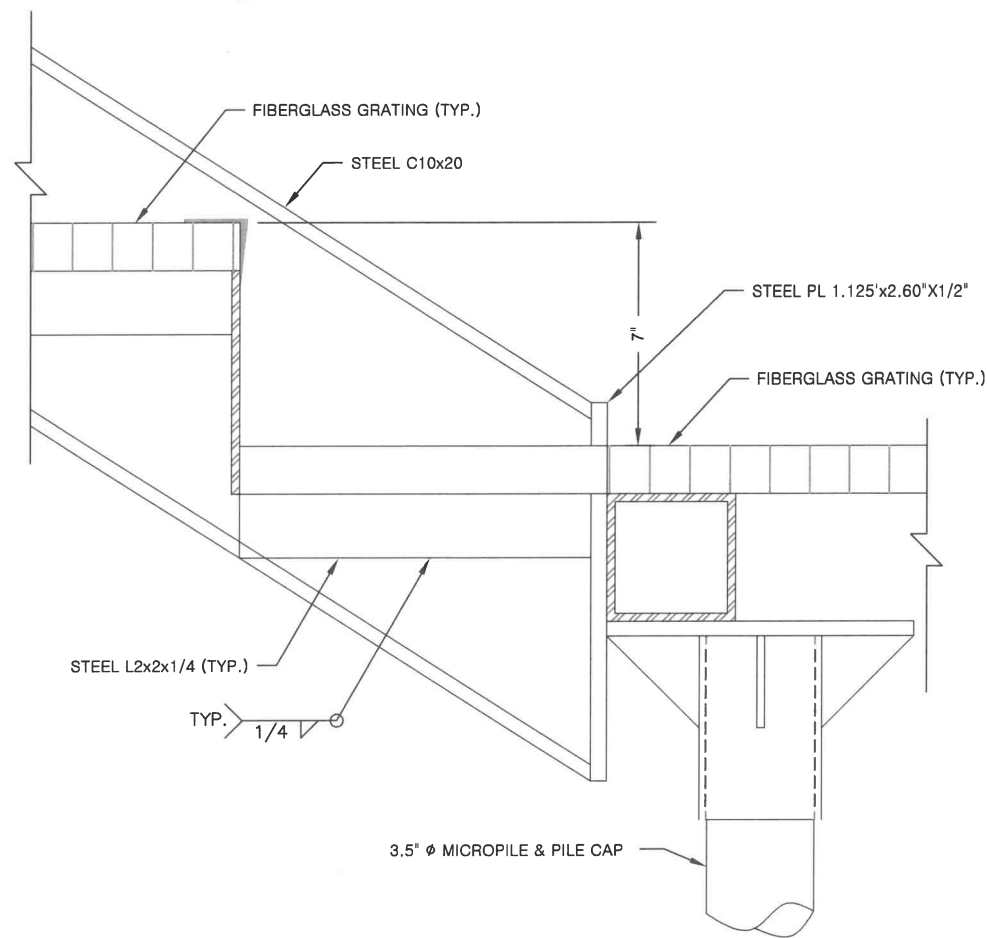
SHEET
25
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ELP LANDING & STAIRS DETAILS

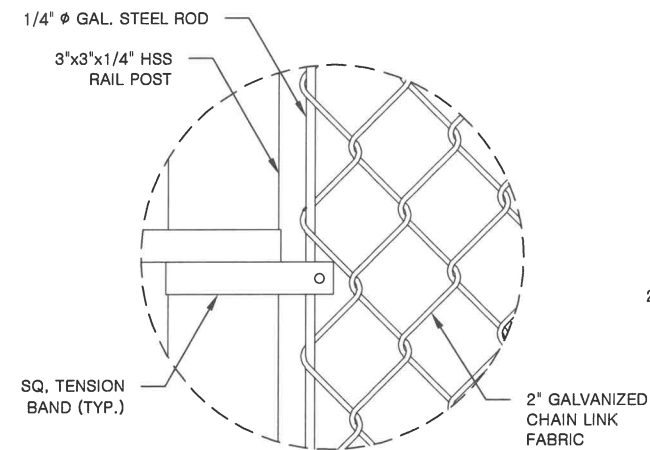
KRMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2



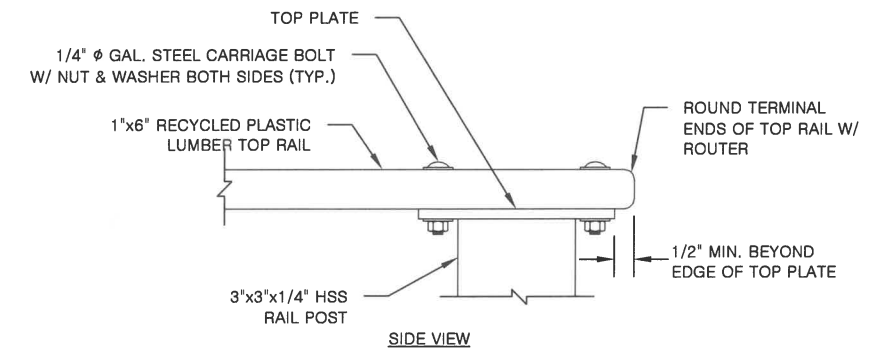
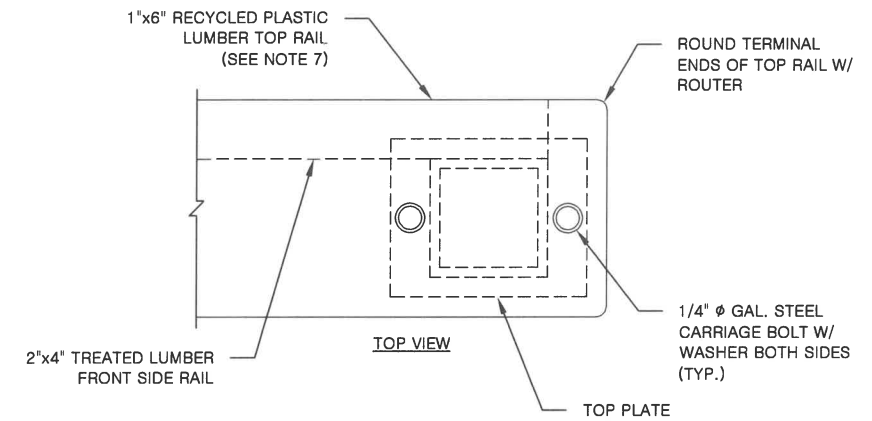
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26
STEEL STAIR TO LANDING CONNECTION
SECTION VIEW



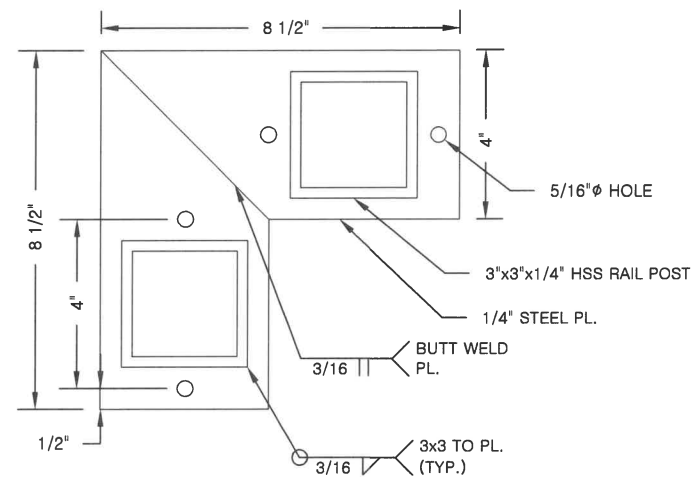
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26
STEEL STAIR TO LANDING CONNECTION
SECTION VIEW



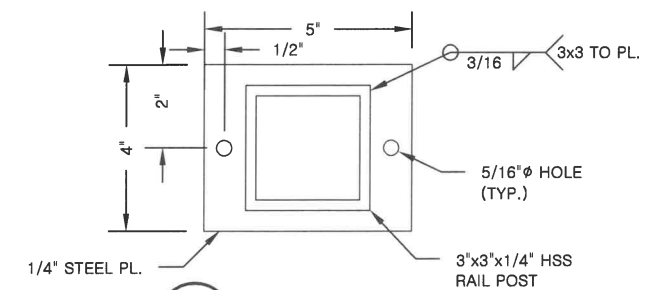
3
26
RAIL POST ASSEMBLY
DETAIL



4
26
TOP RAIL & TOP PLATE
DETAIL



5
26
OUTSIDE CORNER TOP PLATE
DETAIL

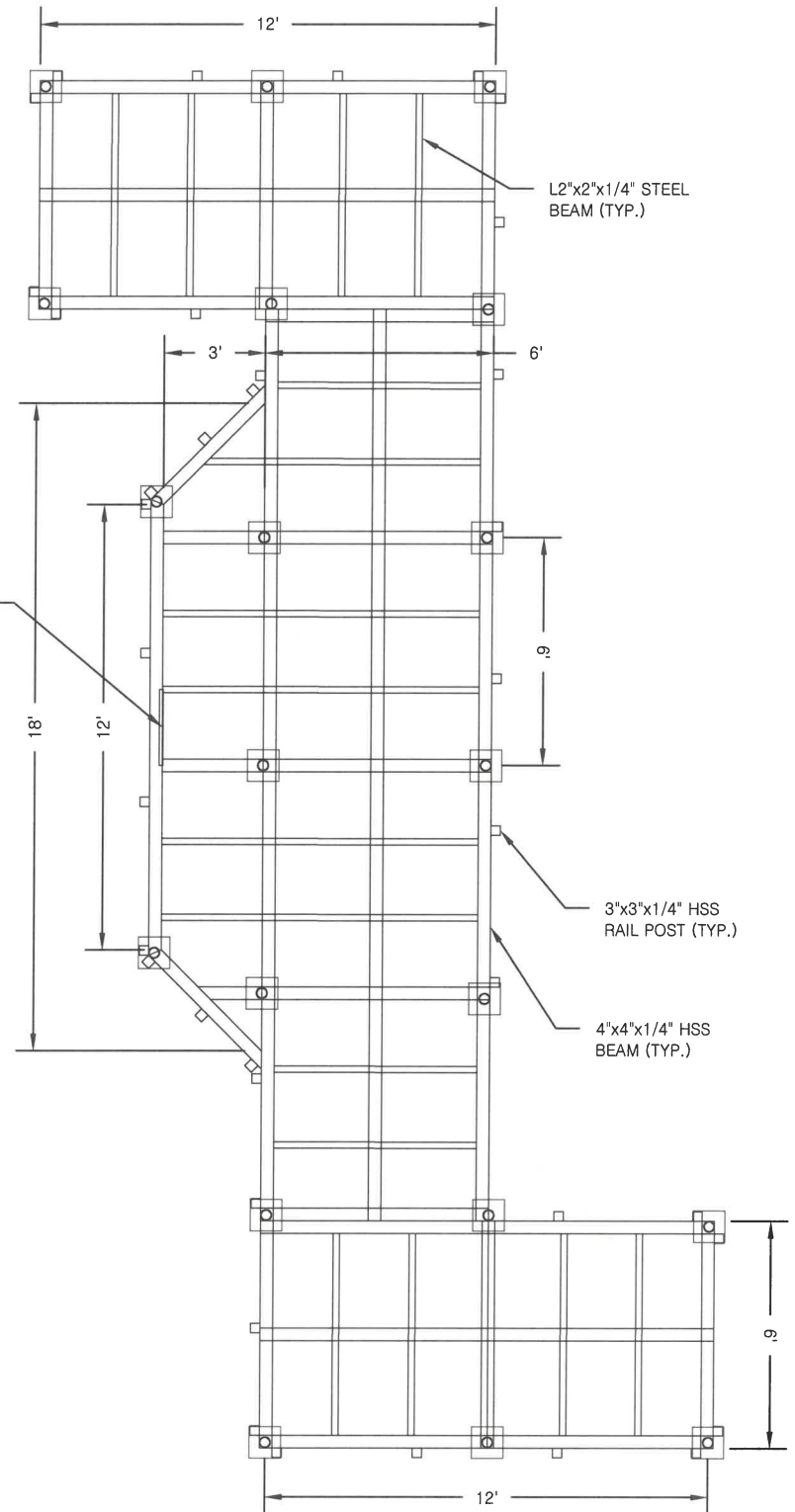
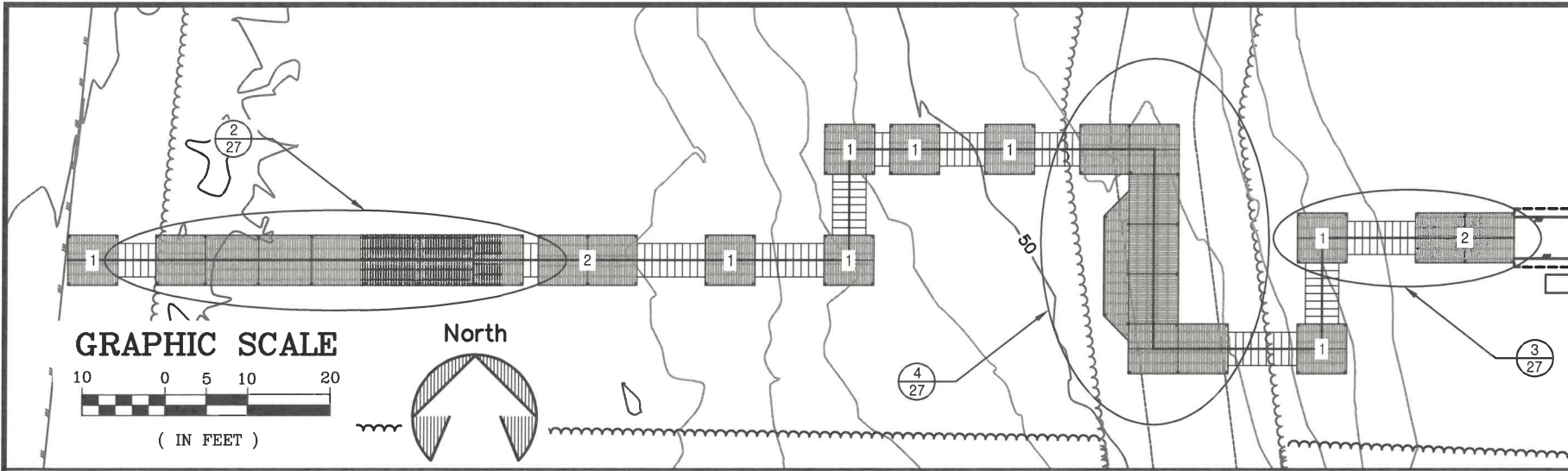


6
26
TOP PLATE
DETAIL

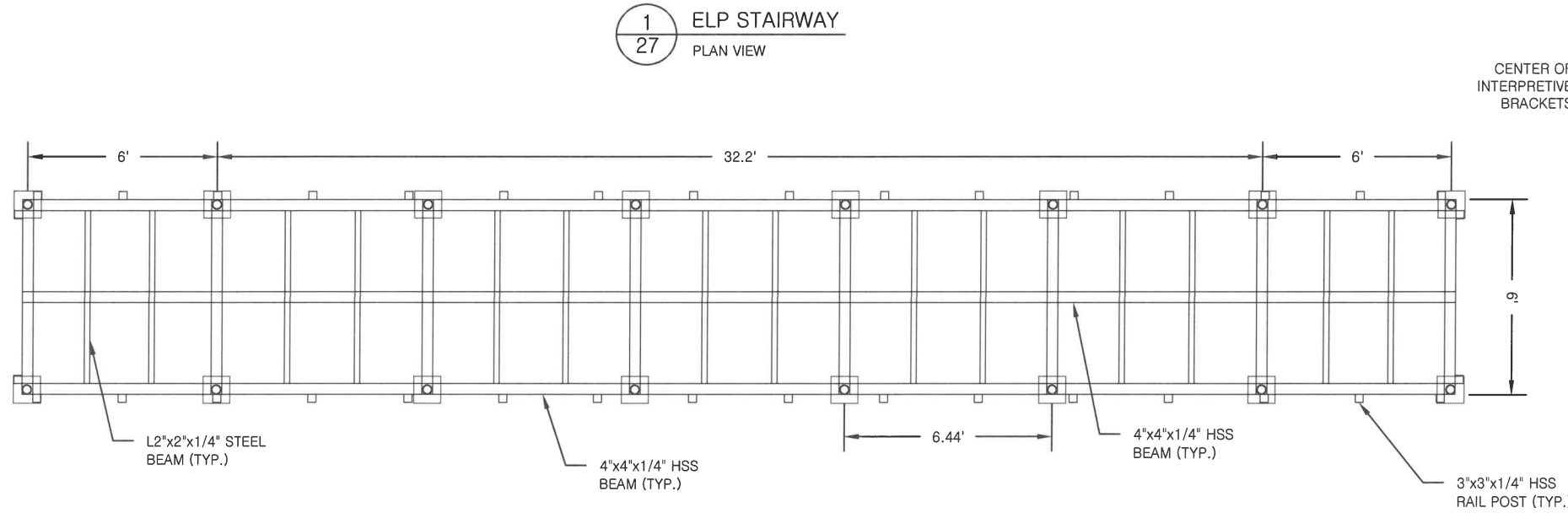
NOTES:

- FIBERGLASS GRATING TO BE 1 1/2" THICK GRATING, ALLOWING 40% LIGHT PENETRATING.
- CHAIN LINK SHALL BE FASTENED TO RAIL POST VIA STEEL ROD AND TENSION BANDS, THREE PER SIDE. CHAIN LINK FABRIC SHALL BE FASTENED SECURELY TO FRONT SIDE RAILS VIA 8 GAUGE, U-SHAPED FENCE STAPLES, SPACED EVERY FOOT.
- USE BARBED SELVAGES OR KNUCKLE SELVAGES TO PREVENT RAVELING WHEN NECESSARY.
- TOP RAILS SHALL BE INSTALLED FLUSH TO THE FACE OF THE FRONT SIDE RAIL. SIDE RAIL BENEATH TOP RAIL SHALL BE NOTCHED TO ENSURE TOP RAIL SITS FLUSH AGAINST SIDE RAIL.
- CARE SHALL BE TAKEN TO ENSURE NO GAPS ARE PRESENT BETWEEN TOP RAIL AND FRONT SIDE RAIL. USE WOOD SHIMS TO FILL IN GAPS.

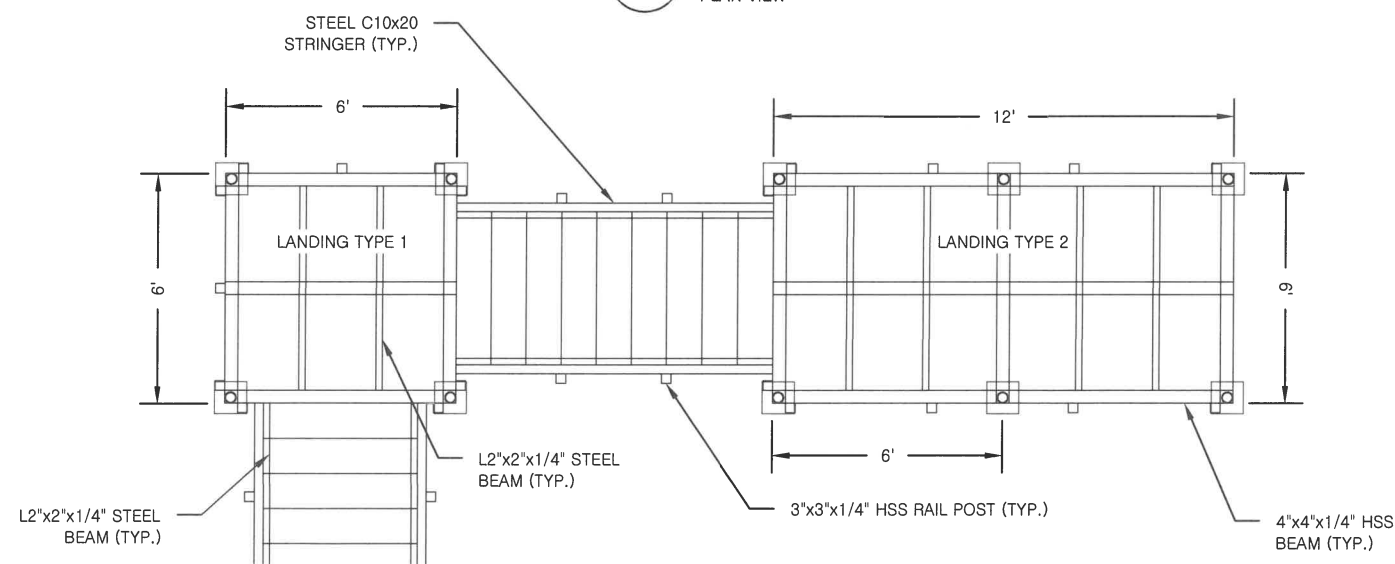




4 ELP DECK
27 PLAN VIEW



1 ELP STAIRWAY
27 PLAN VIEW



3 ELP DECK
27 PLAN VIEW



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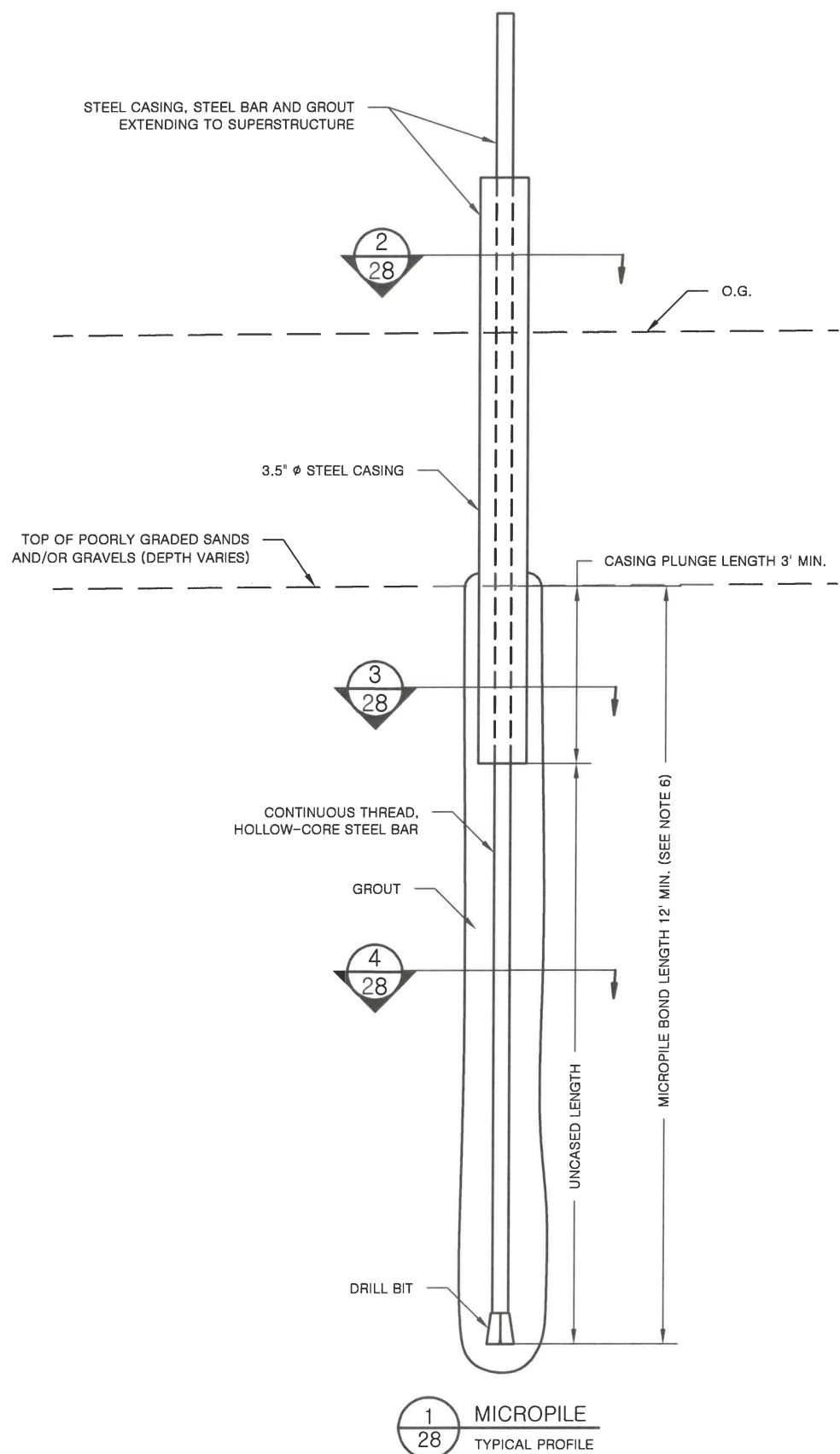
SHEET

27

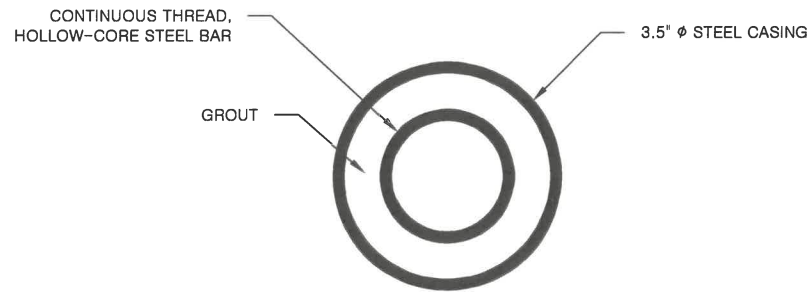
OF 34 SHEETS

ELP WALKWAY & STAIRWAY -
FRAMING DETAILS

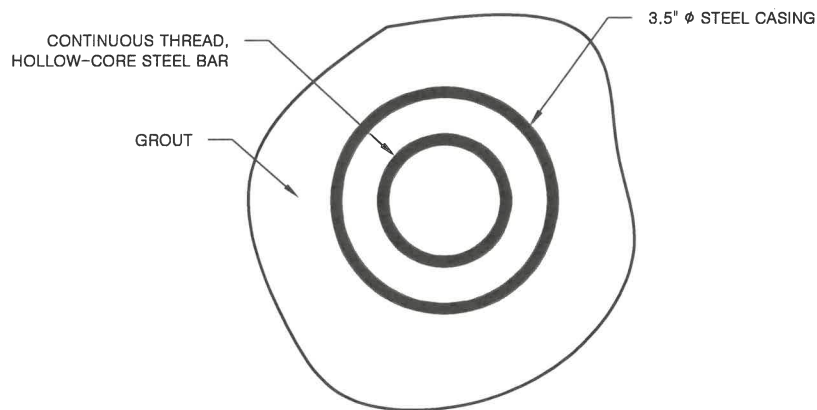
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 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2



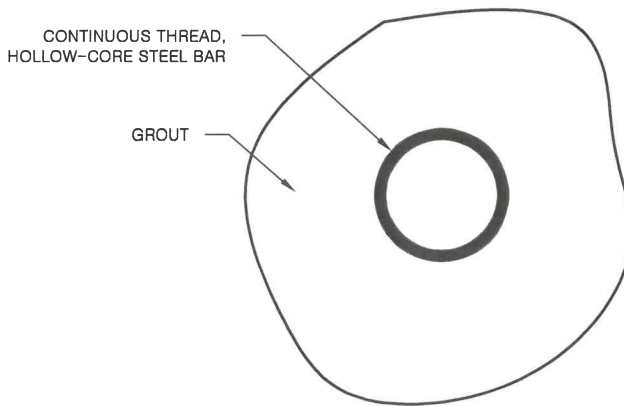
1 MICROPILE
28 TYPICAL PROFILE



2 MICROPILE
28 SECTION VIEW



3 MICROPILE
28 SECTION VIEW



4 MICROPILE
28 SECTION VIEW

NOTES:

- PILE DESIGN LOADS (UNFACTORED)
DEAD LOAD = 24 PSF
LIVE LOAD = 100 PSF
SNOW LOAD = 70 PSF

ULTIMATE AXIAL CAPACITY = 64.6 KIPS
- STEEL CASING PROPERTIES:

STEEL TYPE: ASTM A618 GRADE I/II OR ASTM A500 GRADE B
OUTSIDE DIAMETER: 3-1/2 INCHES
WALL THICKNESS: 0.211 INCHES (STANDARD)
SURFACE TREATMENT: GALVANIZED (ASTM A123)
- HOLLOW CORE STEEL BAR PROPERTIES:

STEEL YIELD STRENGTH: 40.5 KSI
OUTSIDE DIAMETER: 1.18 INCHES
INSIDE DIAMETER: 0.63 INCHES
COUPLING SYSTEM: PER MANUFACTURER
SURFACE TREATMENT: GALVANIZED (ASTM A123)
DRILL BIT DIAMETER: 2 INCHES
- GROUT PROPERTIES:

GROUT MATERIAL: NEAT CEMENT
CEMENT TYPE: ASTM C150 TYPE I/II
WATER-CEMENT RATIO: 0.40 TO 0.50
28-DAY COMPRESSIVE STRENGTH, f'_c : 4000 PSI (MIN.)
- ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AWS STRUCTURAL WELDING CODE, AWS D1.1 PUBLISHED BY THE AMERICAN WELDING SOCIETY.
- IF BEDROCK IS ENCOUNTERED, EMBED MICROPILE THE LESSER OF 5' INTO BEDROCK OR 8' TOTAL BONDED LENGTH.
- GROUT OR WASTE MATERIAL FROM DRILLING AND/OR GROUTING ACTIVITIES SHALL NOT BE ALLOWED TO ENTER ADJACENT BODIES OF WATER, REFER TO THE PROJECT SWPPP FOR DETAILS.
- FILL MICROPILE WITH GROUT UP TO SUPERSTRUCTURE.
- WAIT AT LEAST 72 HOURS AFTER MICROPILE INSTALLATION BEFORE APPLYING LOADS ON THE MICROPILE.
- REFER TO APPENDIX D OF THE SPECIAL PROVISIONS FOR SOILS INFORMATION USED FOR FOUNDATION DESIGN.



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UPPER PARKING IMPROVEMENTS
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MICROPILE DETAILS

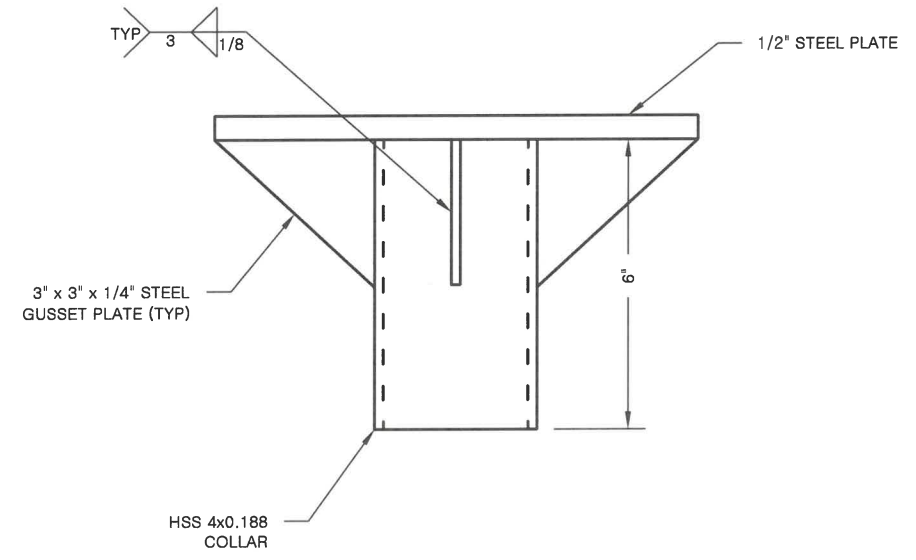
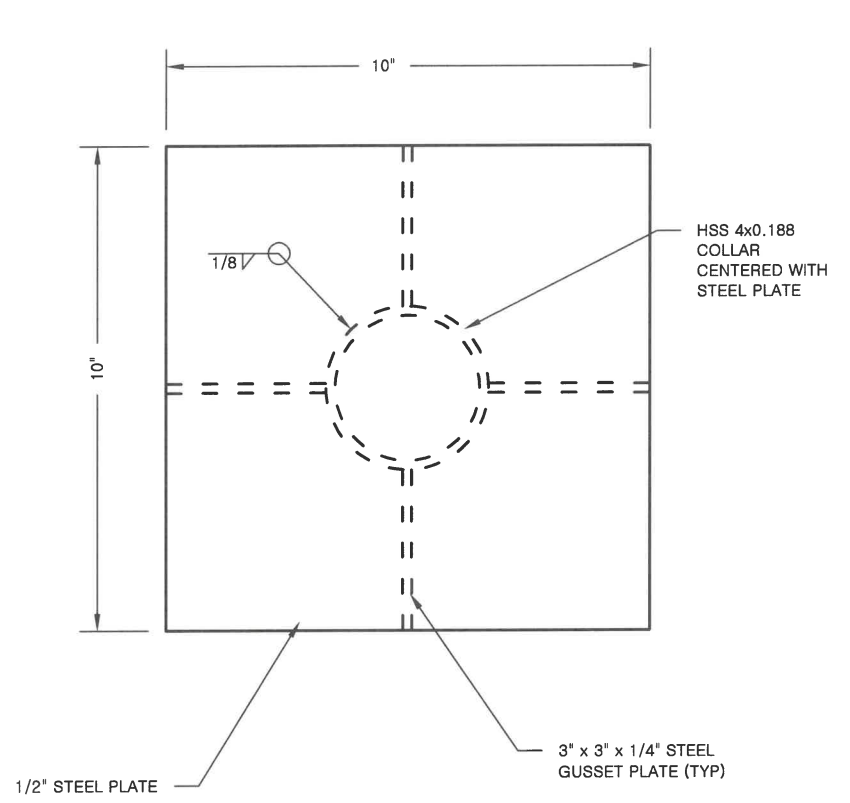


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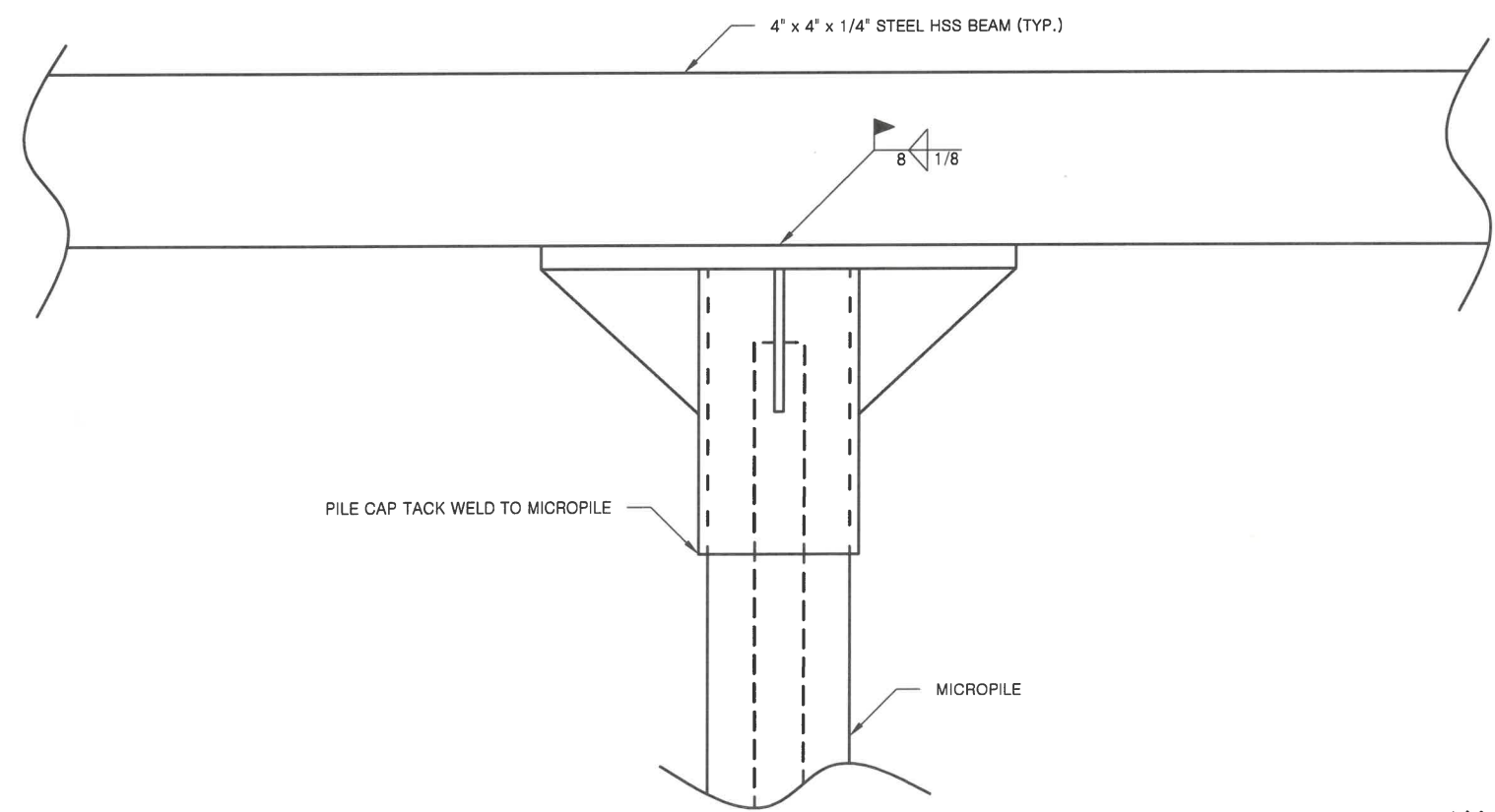
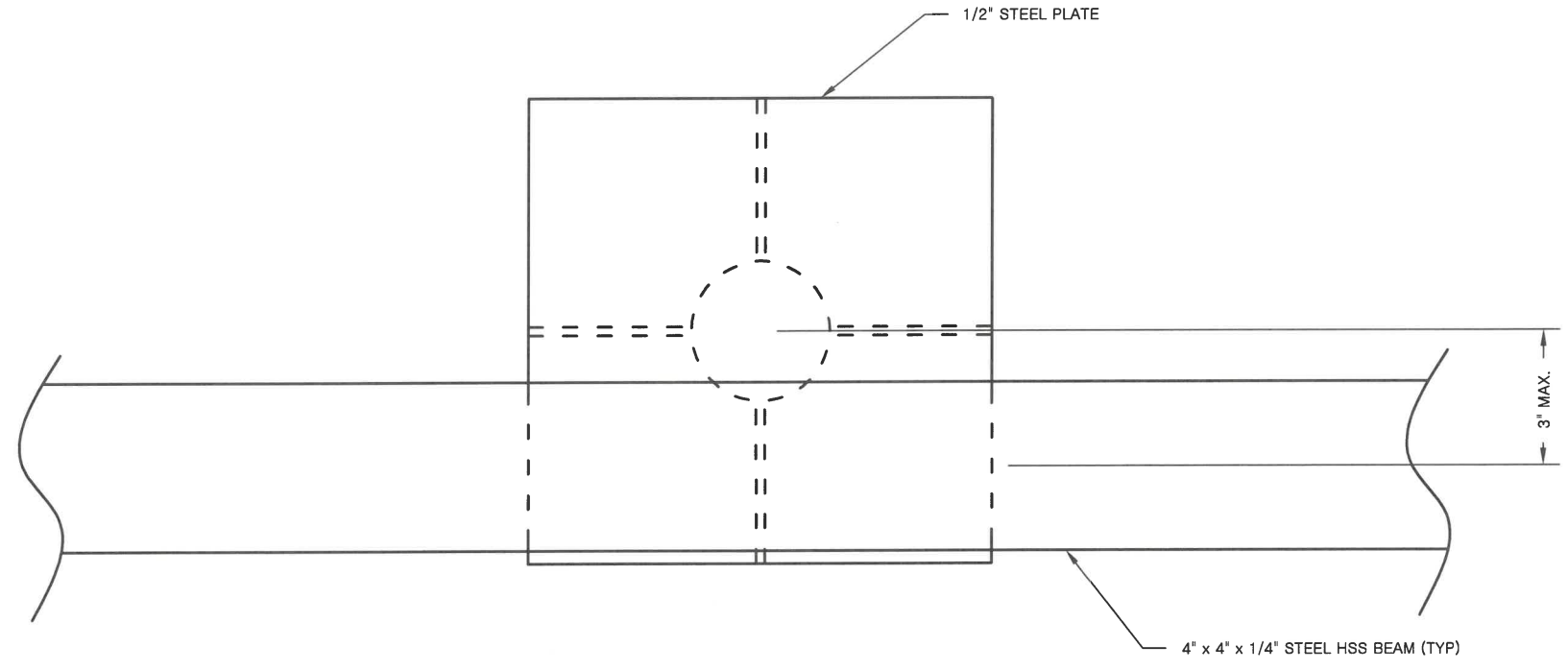
SHEET

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1 PILE CAP
29 DETAILS



2 PILE CAP CONNECTION
29 DETAILS

NOTE:

1. APPLY PRIMER AND ENAMEL PAINT TO STEEL PLATES, GUSSETS, AND COLLARS AFTER COMPLETION OF WELDS.



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KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
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PILE CAP DETAILS

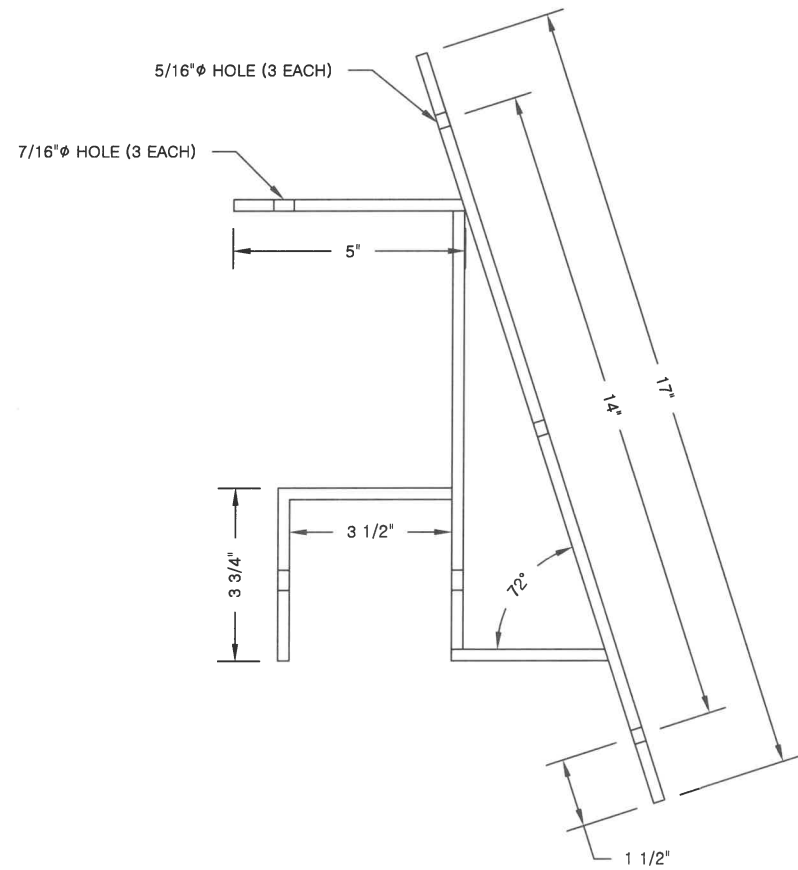


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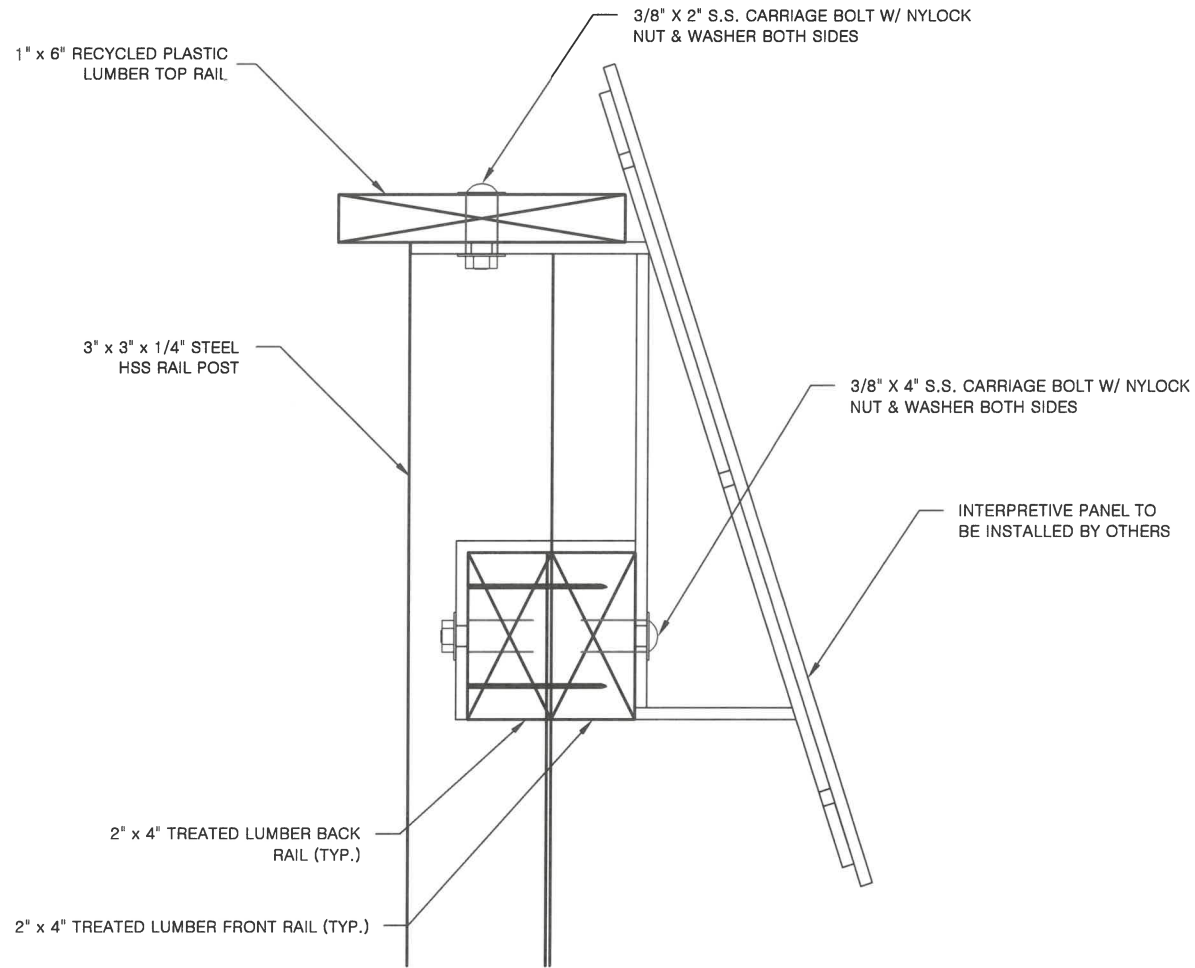
SHEET
29
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NOTES:

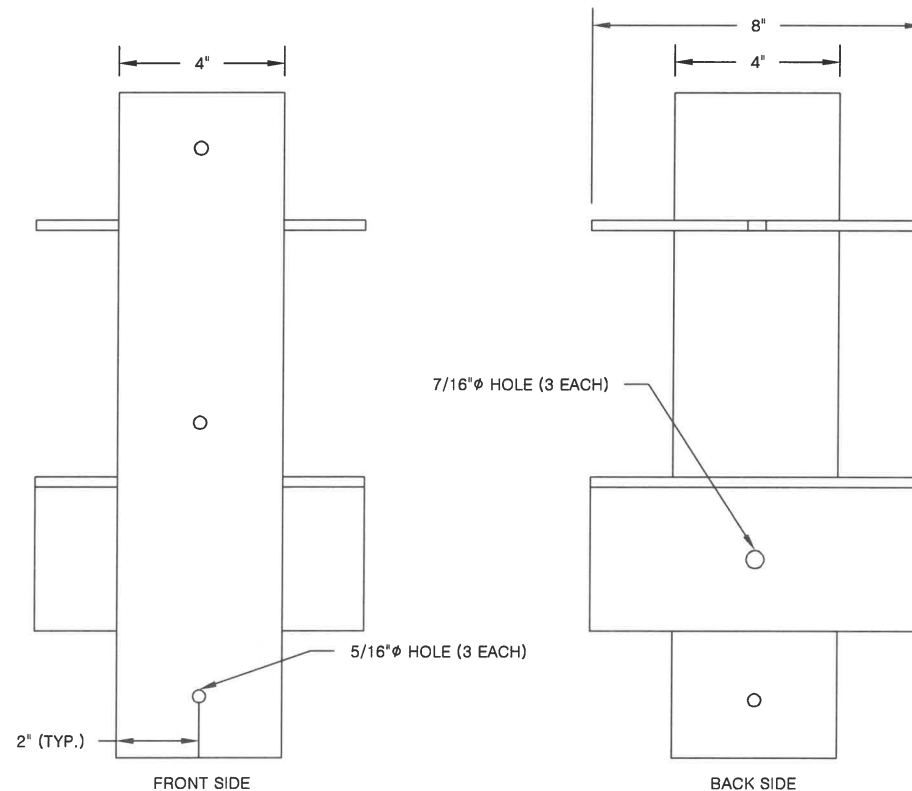
1. ALL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
2. BRACKETS SHALL BE CONSTRUCTED USING $\frac{1}{4}$ " STEEL PLATE TO THE DIMENSIONS SHOWN.
3. SIGN BRACKETS SHALL BE CENTERED ON TREATED 2x4 RAIL POST.
4. SIGN BRACKETS SHALL BE COATED WITH DIRECT TO METAL ENAMEL PAINT, FINAL COLOR TO BE BLACK.
5. INTERPRETIVE BRACKETS SHALL BE INSTALLED BEFORE TOP RAIL.



1 INTERPRETIVE BRACKET
30 SIDE VIEW DETAIL



2 INTERPRETIVE BRACKET
30 MOUNTING DETAIL



3 INTERPRETIVE BRACKET
30 DETAIL



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KRMA: EAGLE ROCK
UPPER PARKING IMPROVEMENTS
PROJECT No. 72018-2

INTERPRETIVE BRACKET DETAILS

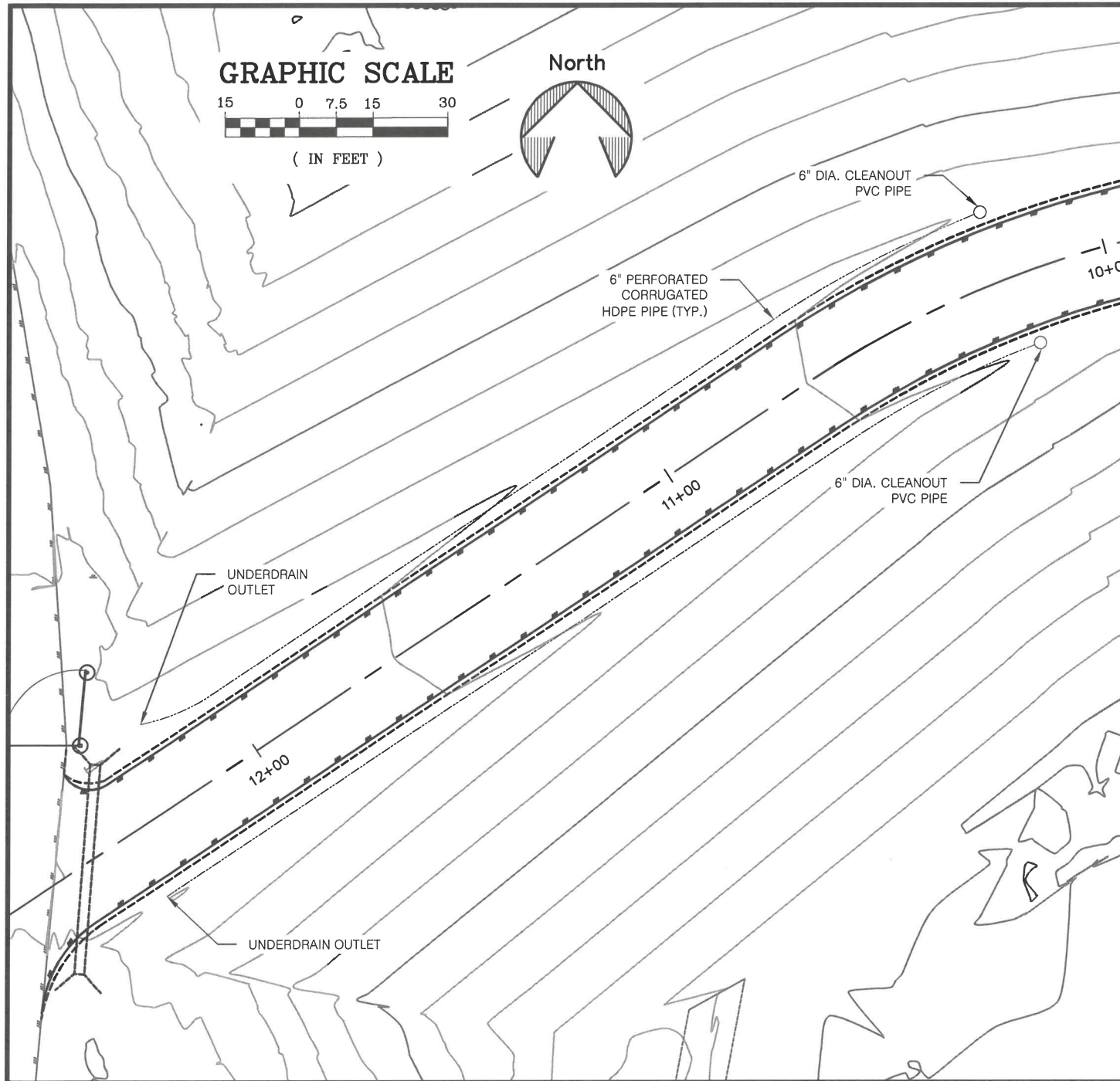


PREPARED: FWS
DRAWN: FWS
REVIEWED: KRW
DATE: MAY 2026

SHEET

30

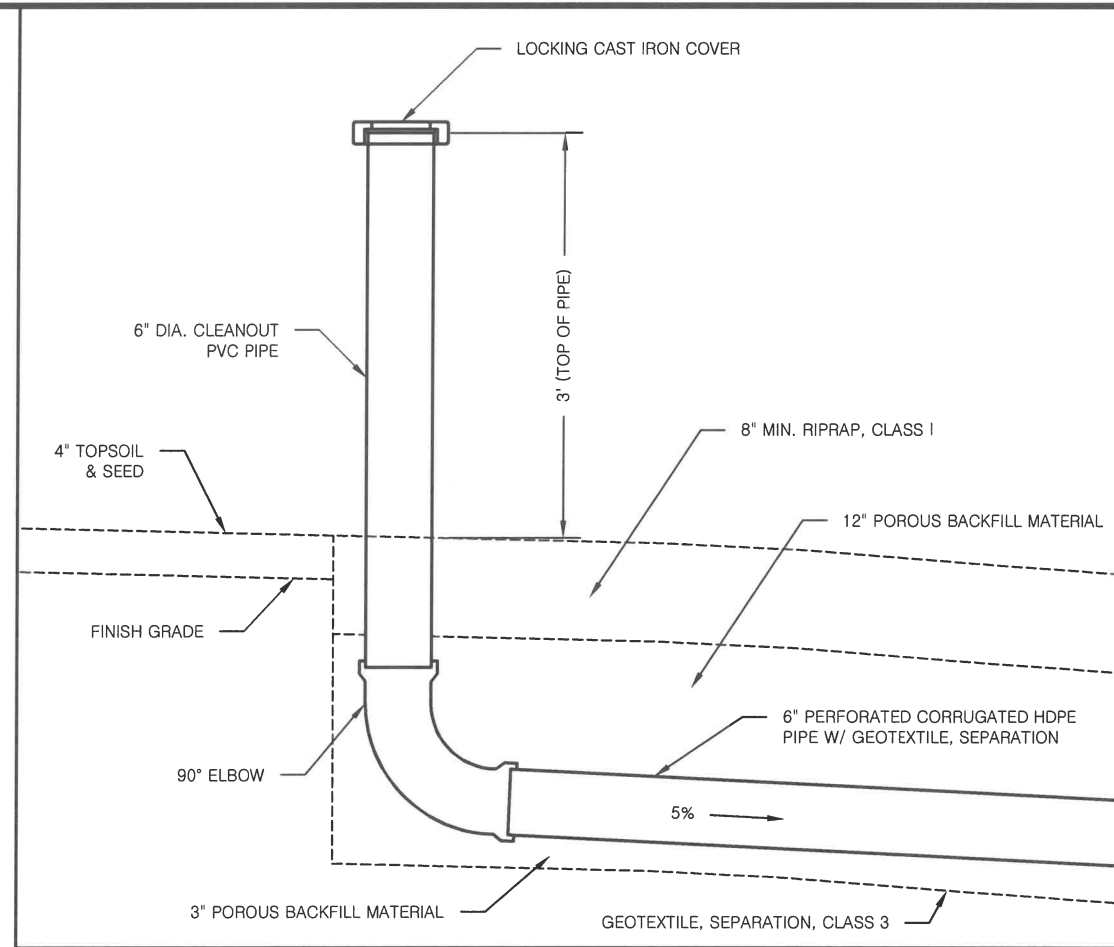
OF 34 SHEETS



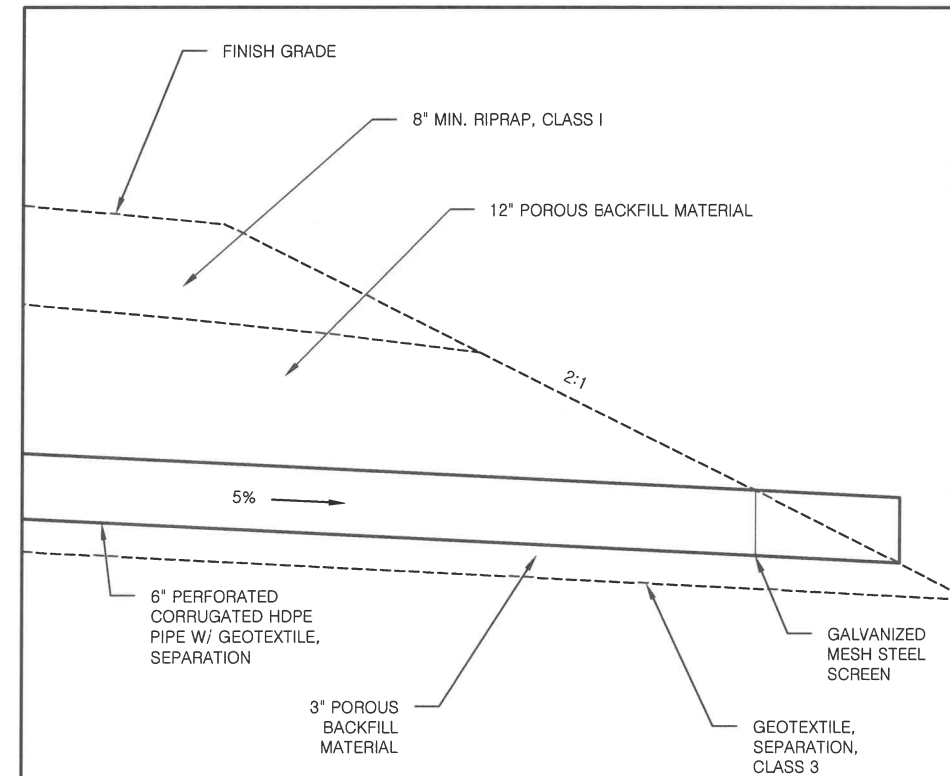
1 UNDERDRAINS
31 PLAN VIEW

NOTES:

1. PLACE POROUS BACKFILL MATERIAL ONTO GEOTEXTILE FABRIC AT A DROP HEIGHT OF 3' OR LESS.
2. REPLACE OR REPAIR DAMAGED GEOTEXTILE FABRIC IN ACCORDANCE WITH SUBSECTION 630-3.01.
3. PLACE PIPE WITH THE PERFORATIONS FACING DOWN.



2 CLEANOUT
31 DETAIL



3 UNDERDRAIN OUTLET
31 DETAIL

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KRMA: EAGLE ROCK
UPPER PARKING IMPROVEMENTS
PROJECT No. 72018-2

UNDERDRAIN DETAILS



PREPARED: FWS
DRAWN: FWS
REVIEWED: KRW
DATE: MAY 2026

SHEET

31

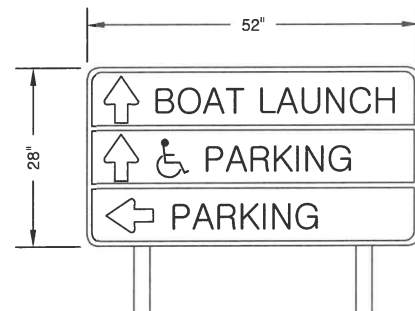
OF 34 SHEETS

ITEM NO. 615(1) STANDARD SIGN - SIGN SUMMARY								
SIGN NO.	FACING	TYPE/ LOCATION	LEGEND	SIZE (INxIN)	AREA (S.F.)	SIGN POST DATA		
						TYPE	SIZE (IN.)	NO.
S1	SOUTH WEST	R1-1		30 X 30	6.25	PT	2.5 x 2.5	1
		0+26.97						
		17.9' L						
S8	SOUTH	R1-1		30 X 30	6.25	PT	2.5 x 2.5	1
		20+28.96						
		22.5' L						
S18	SOUTH	R1-1		30 X 30	6.25	PT	2.5 x 2.5	1
		N: 2393991.09						
		E: 1440738.78						
S2	EAST	R2-1		18 X 24	3.0	PT	2.5 x 2.5	1
		1+62.42						
		15.5' R						
S3	SOUTH WEST	R2-1		18 X 24	3.0	PT	2.5 x 2.5	1
		2+80.91						
		17' L						
S5	EAST	R2-1		18 X 24	3.0	PT	2.5 x 2.5	1
		5+96.37						
		16' R						
S6	SOUTH WEST	R2-1		18 X 24	3.0	PT	2.5 x 2.5	1
		10+62.62						
		18' L						
S9	NORTH	R2-1		18 X 24	3.0	PT	2.5 x 2.5	1
		20+88.14						
		16.3' R						
S10	SOUTH	R2-1		18 X 24	3.0	PT	2.5 x 2.5	1
		21+37.47						
		17.1' L						
S4	EAST	CS-1	SEE DETAIL 1/32 AND NOTE 6	28 X 52	10.11	PT	2.5 x 2.5	2
		3+98.32						
		17.2' R						
S7	NORTH EAST	R3-2		24 X 24	4.0	PT	2.5 x 2.5	1
		11+46.57						
		14.6' R						
S11	NORTH	R6-2R		18 X 24	3.0	PT	2.5 x 2.5	1
		21+93.44						
		23.8' R						
S15	EAST	R6-2R		18 X 24	3.0	PT	2.5 x 2.5	1
		24+66.86						
		13.7' L						
SUB TOTALS					56.86			14

ITEM NO. 615(1) STANDARD SIGN - SIGN SUMMARY (CONT.)								
SIGN NO.	FACING	TYPE/ LOCATION	LEGEND	SIZE (INxIN)	AREA (S.F.)	SIGN POST DATA		
						TYPE	SIZE (IN.)	NO.
S12	EAST	R5-1		30 X 30	6.25	PT	2.5 x 2.5	1
		22+57.12						
		30.7' R						
S13	EAST	R5-1		30 X 30	6.25	PT	2.5 x 2.5	1
		22+90.43						
		32.3' R						
S16	NORTH EAST	R5-1		30 X 30	6.25	PT	2.5 x 2.5	1
		30+92.96						
		11.1' L						
S17	NORTH EAST	R5-1		30 X 30	6.25	PT	2.5 x 2.5	1
		30+95.55						
		13.2' R						
S14	NORTH	CS-2		18 X 24	3.0	PT	2.5 x 2.5	1
		23+10.07						
		16.3' R						
S21	EAST	CS-2		18 X 24	3.0	PT	2.5 x 2.5	1
		N: 2393818.25						
		E: 1440496.48						
S19	NORTH	R7-8		12 X 18	1.5	PT	2.5 x 2.5	1
		N: 2393928.11						
		E: 1440690.15						
	NORTH	R7-8aP		12 X 6	.5			
		N: 2393928.11						
E: 1440690.15								
S20	EAST	R7-8		12 X 18	1.5	PT	2.5 x 2.5	1
		N: 2393987.01						
		E: 1440593.01						
EAST	R7-8aP		12 X 6	.5				
	N: 2393987.01							
	E: 1440593.01							
S22	WEST	R7-8		12 X 18	1.5	PT	2.5 x 2.5	1
		N: 2393717.01						
		E: 1440277.88						
	WEST	R7-8aP		12 X 6	.5			
		N: 2393717.01						
E: 1440277.88								
SUB TOTALS					37.0			9
PROJECT TOTALS					93.86			23

NOTES:

- SEE SIGN AND STRIPING PLAN FOR APPROXIMATE SIGN LOCATIONS; THE ENGINEER IN CONJUNCTION WITH THE CONTRACTOR WILL FIELD LOCATE FINAL SIGN LOCATIONS.
- ALL SIGNS SHALL CONFORM TO THE SOA, DOT&PF, ALASKA SIGN DESIGN SPECIFICATIONS.
- ALL SIGNS SHALL HAVE CONCRETE FOUNDATION.
- FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM.
- PT DENOTES PERFORATED STEEL TUBE.
- SIGN S4 SHALL CONFORM TO DIRECTIONAL SIGN D1-3 EXCEPT COLOR SHALL BE WHITE LETTERS AND SYMBOLS ON BROWN BACKGROUND. LETTER SIZE SHALL BE 4 INCHES.



1
32 S4 - DIRECTIONAL SIGN
DETAIL



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 550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

SIGN SUMMARY

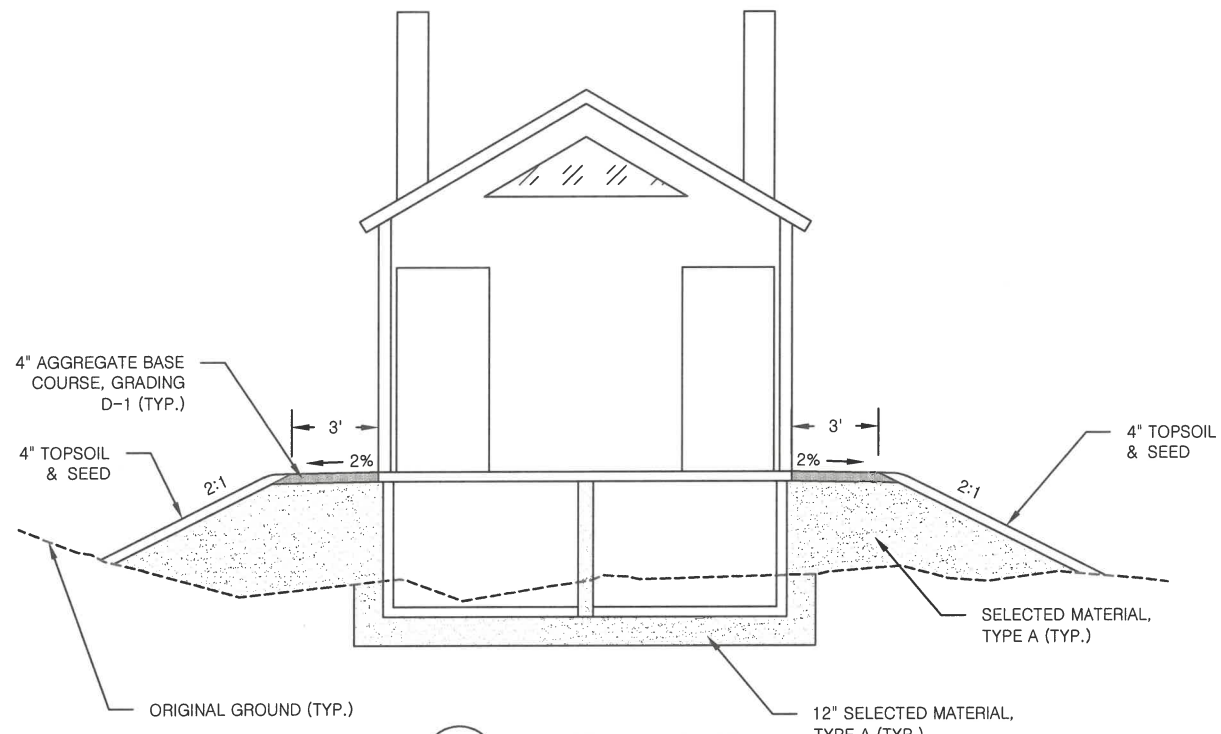


PREPARED: FWS
 DRAWN: OLM
 REVIEWED: KRW
 DATE: MAY 2026

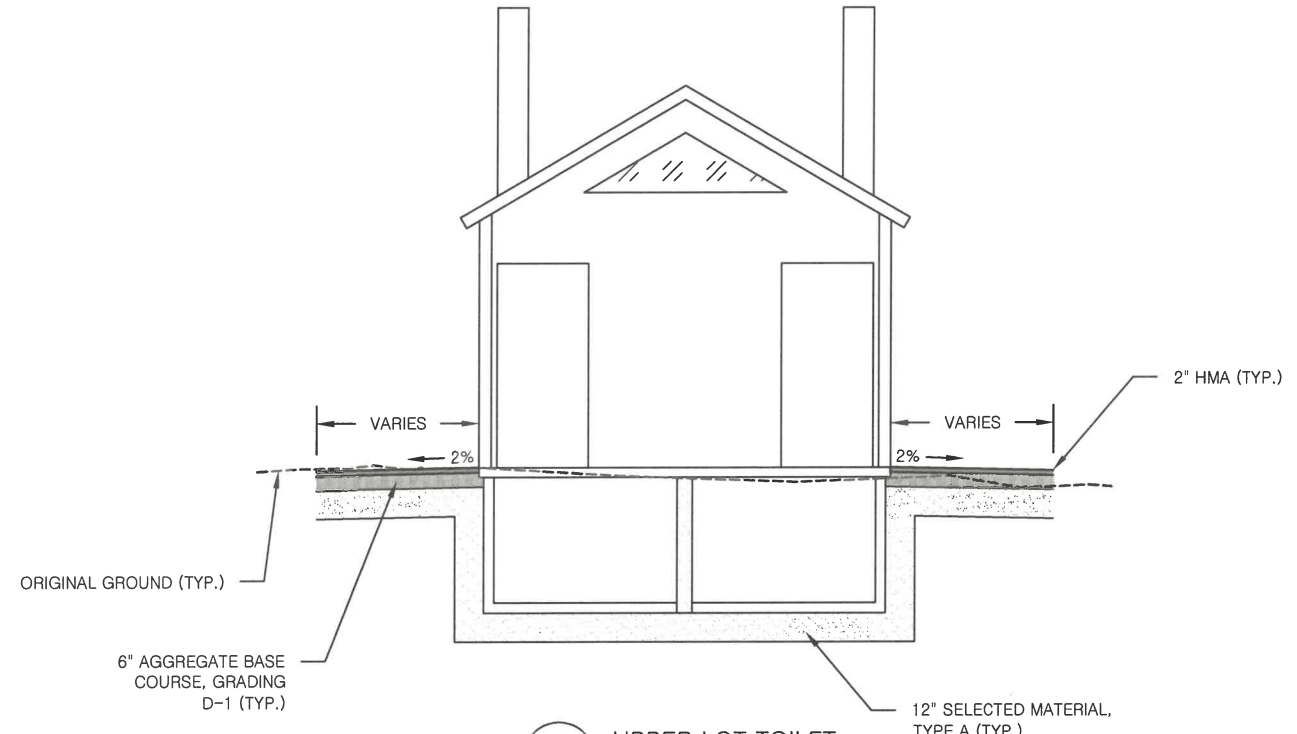
SHEET

32

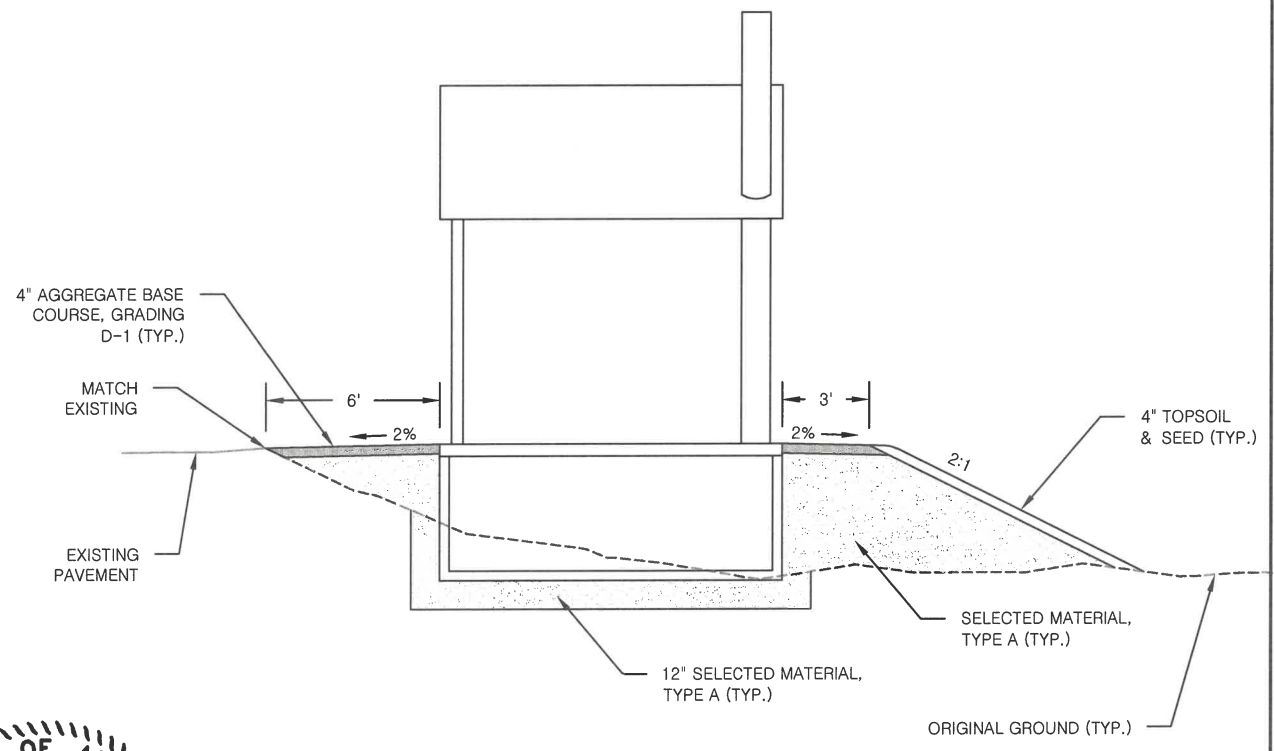
OF 34 SHEETS



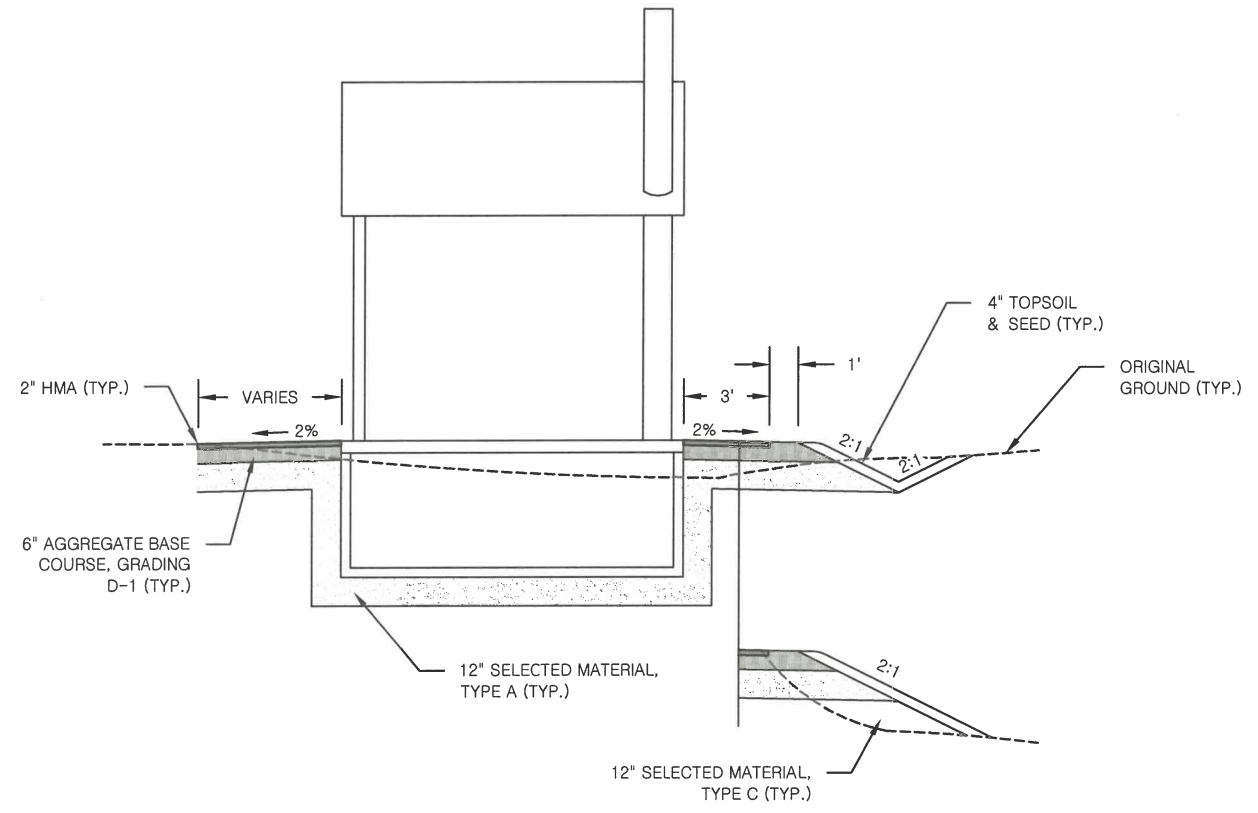
1
33 LOWER LOT TOILET
FRONT VIEW



3
33 UPPER LOT TOILET
FRONT VIEW



2
33 LOWER LOT TOILET
PROFILE VIEW



4
33 UPPER LOT TOILET
PROFILE VIEW



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
 550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

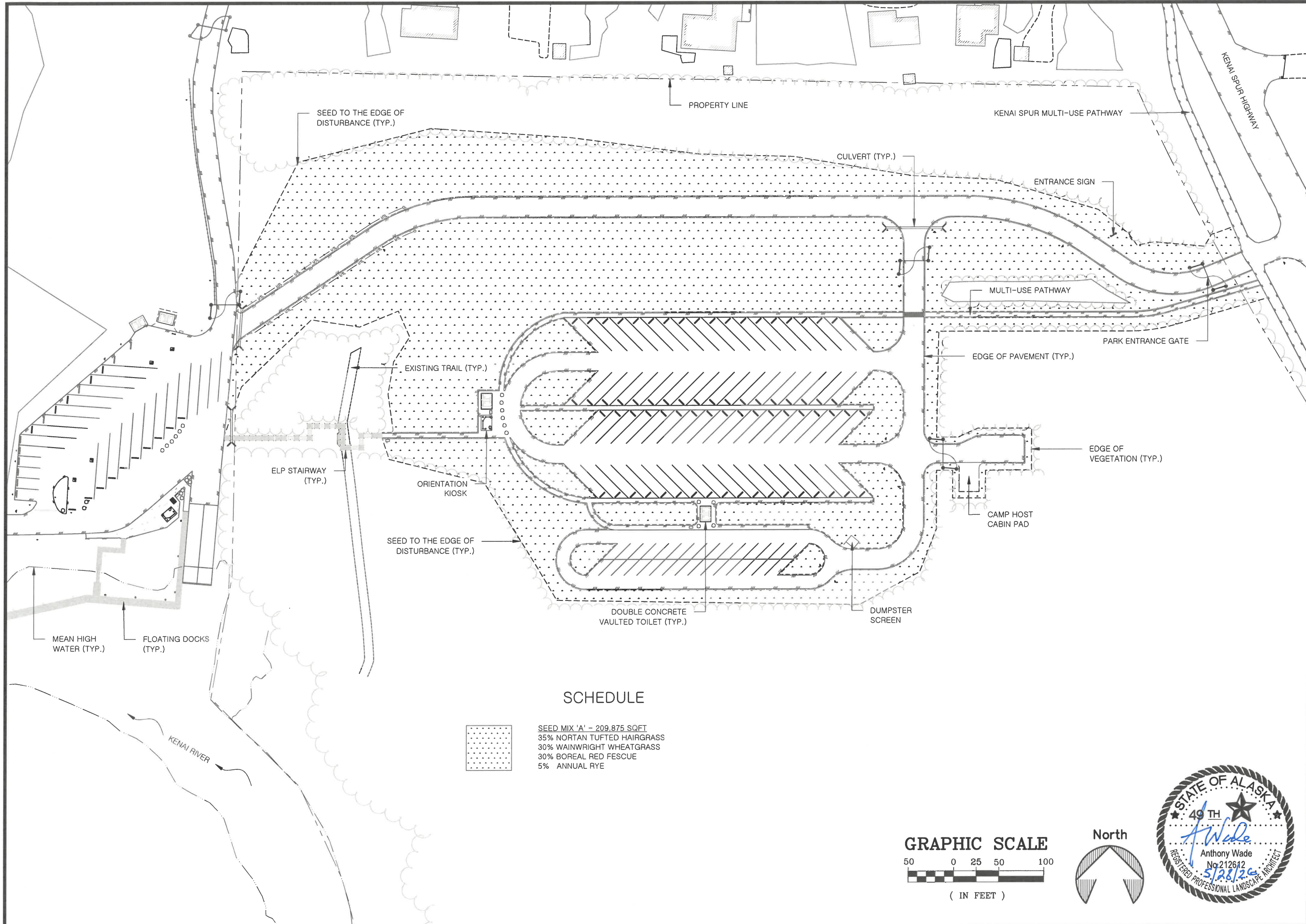
KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

DOUBLE CONCRETE VAULTED TOILET
 INSTALLATIONS

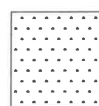


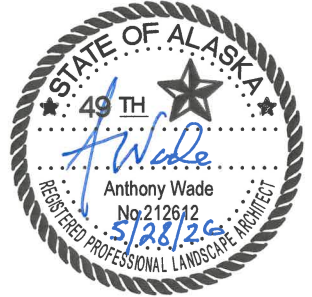
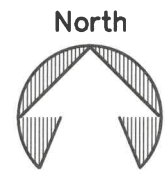
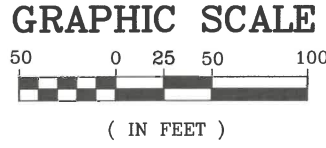
PREPARED: FWS
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET
33
 OF 34 SHEETS



SCHEDULE


SEED MIX 'A' - 209.875 SQFT
 35% NORTAN TUFTED HAIRGRASS
 30% WAINWRIGHT WHEATGRASS
 30% BOREAL RED FESCUE
 5% ANNUAL RYE



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
 PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
 550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KRMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

PLANTING PLAN



PREPARED: AJW
 DRAWN: FWS
 REVIEWED: KRW
 DATE: MAY 2026

SHEET
34
 OF 34 SHEETS

GENERAL NOTES

GENERAL

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO REQUIREMENTS OF THE INTERNATIONAL CODE COUNCIL INTERNATIONAL BUILDING CODE (IBC) 2021 EDITION. WHERE EXPLICIT DETAILS ARE NOT SHOWN OR DESCRIBED, THE MINIMUM REQUIREMENTS OF THE ABOVE CODE SHALL APPLY. UNLESS OTHERWISE NOTED, ALL CODES, STANDARDS AND OTHER PUBLICATIONS CITED SHALL REFER TO THE LATEST EDITION.

STRUCTURAL STEEL

STRUCTURAL STEEL SHALL CONFORM TO IBC CHAPTER 22, FOR ASTM SPECIFICATION A-36, FY = 36 K.S.I. EXCEPT WHERE NOTED OTHERWISE. HOLLOW SECTION STEEL (HSS) TUBING SHALL CONFORM TO ASTM A500, GRADE B, FY = 46 K.S.I. DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE IBC CHAPTER 22, DIVISION IX, ALLOWABLE STRESS DESIGN. ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY D1.1. WELD ALL FAYING SURFACES WITH CONTINUOUS 1/4" FILLET WELD (MINIMUM) UNLESS OTHERWISE NOTED. ALL ELECTRODES SHALL HAVE A MINIMUM YIELD STRENGTH OF 70 KSI. ALL STEEL SHALL BE PRIMED & PAINTED TO PAINTING SPECIFICATIONS.

STRUCTURAL ALUMINUM AND CONNECTORS

STRUCTURAL ALUMINUM SHALL CONFORM TO IBC CHAPTER 20. ALL PLATES, AND SHAPES SHALL CONFORM TO ASTM SPECIFICATION 6061-T6, EXCEPT WHERE NOTED OTHERWISE. PONTOON PLATE SHALL CONFORM TO ASTM SPECIFICATION 5052 H32, EXCEPT WHERE NOTED OTHERWISE. DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE IBC CHAPTER 20, ALLOWABLE STRESS DESIGN. ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY D1.2. WELD ALL FAYING SURFACES WITH CONTINUOUS 3/16" FILLET WELD (MINIMUM) UNLESS OTHERWISE NOTED. FILLER METAL SHALL BE ER 5356 FILLER MATERIAL.

STAINLESS STEEL CONNECTORS AND PLATES

STAINLESS STEEL BOLTS, NUTS, AND WASHERS SHALL BE 316 SERIES STAINLESS STEEL BOLTS EXCEPT WHERE NOTED OTHERWISE. ALL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM STANDARD F593 ALLOY GROUP 2 (OR F593G FRO BOLT DIAMETERS 1/4" TO 5/8" AND F593H FOR BOLTS DIAMETER 3/4" TO 1 1/2"). ALL NUTS SHALL BE HEX HEAD NUTS AND SHALL CONFORM TO ASTM STANDARD F594. STAINLESS STEEL PLATE SHALL CONFORM TO ASTM STANDARD 304.

LIFTING EYEBOLT

EYEBOLTS SHALL BE FORGED CARBON STEEL AND HOT GALVANIZED FINISH. THE BOLT SHANK SHALL BE 5/8"x10" LONG WITH A 1-3/8"Ø EYELET AND SHOULDER. GRAINGER PART NUMBER '3LVY5', OR APPROVED EQUAL.

PILE FOUNDATIONS

ALL FOUNDATION PILES SHALL CONFORM TO THE REQUIREMENTS OF IBC CHAPTER 18, SOILS AND FOUNDATIONS. PILES SHALL BE DRIVEN BELOW FINISH GRADE TO MINIMUM DEPTHS INDICATED ON THE DRAWINGS. ALL PILES SHALL BE DRIVEN WITH EITHER VIBRATORY OR IMPACT HAMMERS.

- PROVIDE PILE DRIVING RECORDS INCLUDING:
 - SIZE, LENGTH, AND LOCATIONS OF PILES.
 - SEQUENCE OF DRIVING.
 - NUMBER OF BLOWS PER FOOT, FOR EACH FOOT, FOR FINAL 3 FEET OF DRIVING.
 - IDENTIFY DRIVING CONDITIONS FOR EACH PILE: OBSTRUCTIONS OR OTHER ANOMALIES.
 - FINAL PILE TIP AND TOP CUTOFF ELEVATIONS
 - DRIVING ENERGY OF PILE HAMMER.
- PROVIDE STEEL MILL CERTIFICATIONS FOR COMPLIANCE, AND TEST RESULTS.
- PILES AND PILE CAP MATERIAL:
 - ASTM A 53 GRADE B STANDARD STEEL PIPE, MINIMUM 35KSI YIELD STRENGTH.
 - SIZE: 12" GALVANIZED STANDARD (0.375" MIN. WALL)
- PILE TIPS: PROVIDE CONICAL POINT PILE TIPS OR OPEN PILE SHOE IF DRIVING CONDITIONS PREVENT DRIVING PILES TO REQUIRED MINIMUM DEPTHS AND CAPACITIES WITHOUT DAMAGE.
- INSTALLATION:
 - MINIMUM EMBEDMENT LENGTH SHOWN IS DEPTH BELOW FINISH GRADE.
 - INSTALL PILES WITHOUT PRE-DRILLING, PROVIDED THAT DRIVING RESISTANCE DOES NOT RESULT IN DAMAGE TO PILE.
 - PROVIDE FULL LENGTH PIPE WITH MAXIMUM OF 1 SPLICE. ALL SPLICES SHALL BE FULL PENETRATION WELDED.
 - DO NOT DAMAGE PILES DURING DRIVING.
 - PROVIDE RESTRAINING DEVICES AS REQUIRED TO MAINTAIN PILE ALIGNMENT.
 - CUT OFF PILES TO ACHIEVE ELEVATION INDICATED AND PREPARE PILE TOP TO RECEIVE PILE CAP.
- TOLERANCES:
 - VARIATION FROM VERTICAL: 1 IN 200.
 - TOP CUT OFF ELEVATION: MAXIMUM 0.125 INCH.
 - HORIZONTAL LOCATION: MAXIMUM 1.0 INCH.
- FIELD QUALITY CONTROL: CONSULT WITH ENGINEER TO VERIFY PILE BEARING CAPACITY WITH ENGINEERING NEWS RECORD FORMULA USING BLOW COUNTS OBTAINED DURING DRIVING OF PILE.
- UNACCEPTABLE PILES:
 - PILES THAT FAIL TESTS, ARE PLACED OUT OF POSITION, BELOW CUTOFF ELEVATION, OR DAMAGED.
 - PROVIDE ADDITIONAL PILES OR REPLACE PILES TO CONFORM TO SPECIFIED REQUIREMENTS.

FIBERGLASS GRATING

ALL GRATING SHALL BE GATOR DECK FIBERGRATE PULTRUDED FIBERGLASS GRATING OR ENGINEER APPROVED EQUAL. 1" THICK GRATING SHALL BE SERIES I-4010 DECKING 1 1/2" THICK GRATING SHALL BE SERIES I-4015 DECKING. ALL GRATING SHALL BE DARK GREY IN COLOR. ATTACH GRATING TO THE SUBSTRUCTURE W/ CLIPS & STAINLESS SELF DRILLING & TAPPING SCREWS PROVIDED BY MANUFACTURER.

GRIP TAPE

ALL GRIP TAPE SHALL BE ANTISLIP TAPE, GRAINGER PART # "1AJY8", COMMERCIAL GRADE OR ENGINEER APPROVED EQUAL. GRIP TAPE SHALL BE PLACED ON AND COVER ALL EXPOSED ALUMINUM FRAME MEMBERS THAT COULD BE USED AS A WALKING SURFACE. GRIP TAPE SHALL BE YELLOW AND BLACK STRIPE PATTERN. INSTALL ALL GRIP TAPE PER THE MANUFACTURER'S RECOMMENDATIONS.

ALUMINUM CLEATS

ALL ALUMINUM CLEATS SHALL BE PERKO, INC ITEM # 0530 BOLT-ON DECK CLEATS OR ENGINEER APPROVED EQUAL. ALL CLEATS SHALL BE MOUNTED TO PERIMETER ALUMINUM RECTANGULAR TUBE WITH (2) STAINLESS MACHINE SCREWS. MACHINE SCREWS SHALL BE 316 STAINLESS STEEL WITH FLATHEAD TO MATCH CLEAT. CLEAT IDENTIFIER
CLEATS SHALL BEAR ON 9"x3"x1/2" YELLOW HDPE WITH 4-1/4"x2-1/2" CUT-OUT FOR CLEAT MOUNTING BOLTS. PROVIDE 1/2" ROUNDED CORNERS TO HDPE PLATE.

HEAVY DUTY ALUMINUM PIANO HINGES


ALL HEAVY DUTY PIANO HINGES SHALL BE PIANO TYPE CONTINUOUS HINGE- NO HOLES WITH FULL HARD ALUMINUM PINS. HINGES SHALL BE MADE OF 5052-H32 ALUMINUM. HINGE PLATES SHALL BE A MINIMUM OF 1-1/16" LONG BY 0.040" THICK WITH 0.09" DIAMETER PIN.

RUBBER BUMPERS

ALL RUBBER BUMPERS SHALL BE C-MARINE DU-48F DOCK BUMPER OR ENGINEER APPROVED EQUAL.

CONSTRUCTION DOCUMENTS

CONSULTING ENGINEERS
STRUCTURAL/CIVIL
155 BIDARCA ST
KENAI, AK 99611
TEL: (907) 283-3583
NELSONENGINEER@ALASKA.NET
AK CORP. AUTHORIZATION AECC.1291




PREPARED: ZSR
DRAWN: CAM
REVIEWED: MJD
DATE: 05/13/26

SHEET

S1.1

OF 7 SHEETS

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES

FLOATING DOCK
NOTES & SPECIFICATIONS

KRSMA: EAGLE ROCK
UPPER PARKING IMPROVEMENTS
PROJECT No. 72018-2

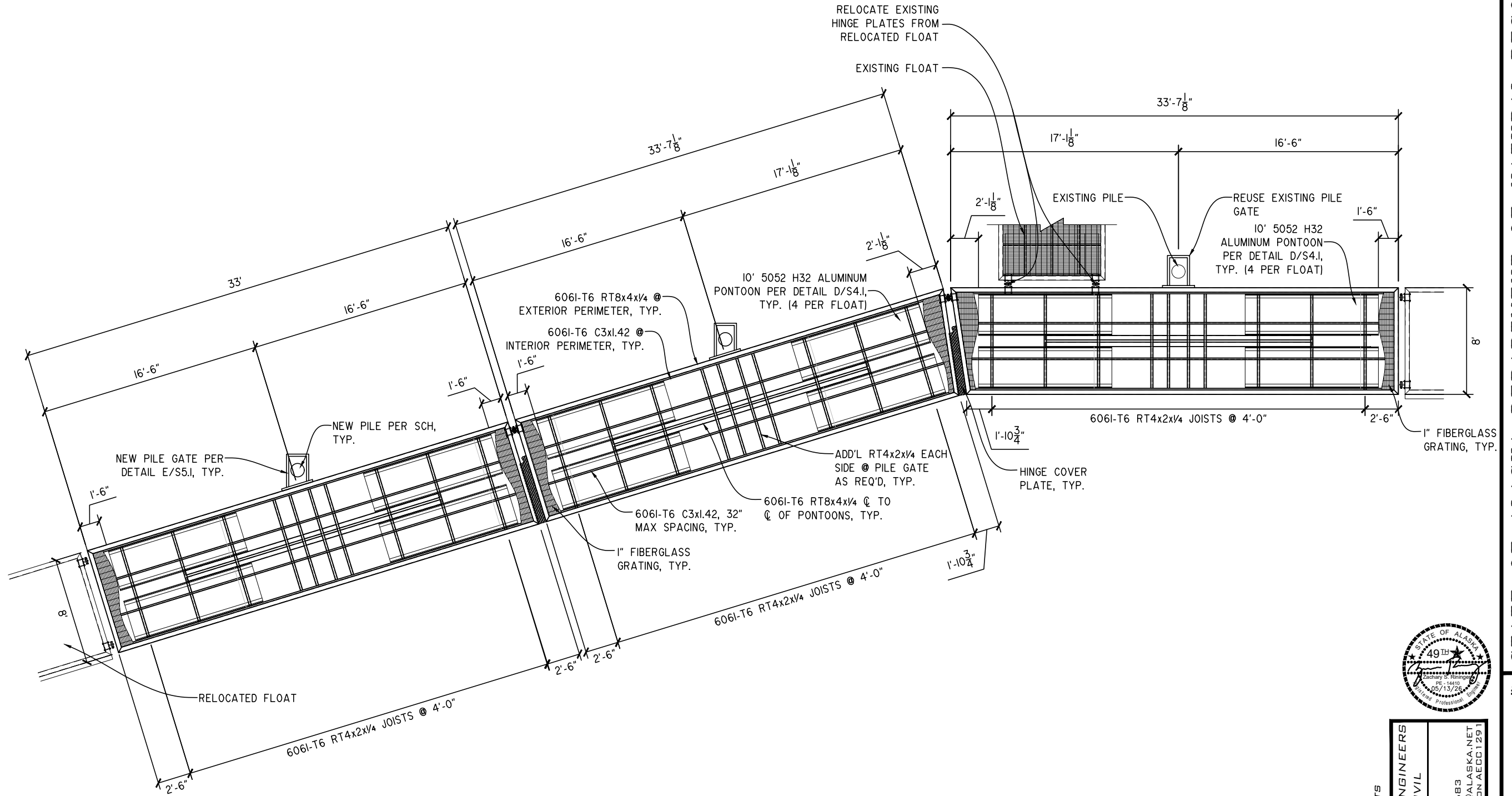
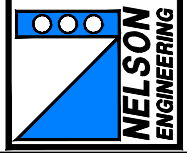


PREPARED: ZSR
DRAWN: CAM
REVIEWED: MJD
DATE: 05/13/26

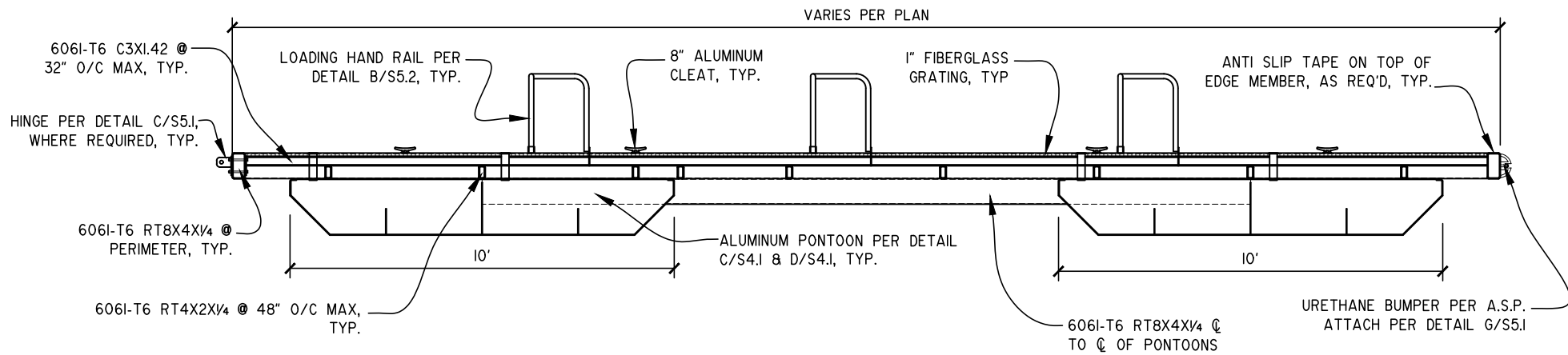
SHEET
S3.1
OF 7 SHEETS



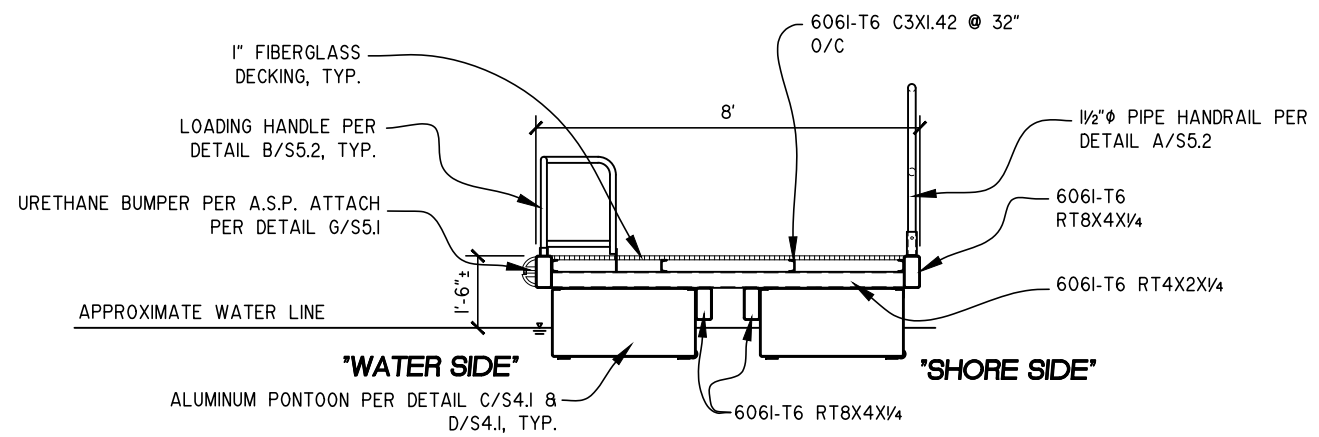
CONSTRUCTION DOCUMENTS
CONSULTING ENGINEERS
STRUCTURAL/CIVIL
155 BIDARCA ST
KENAI, AK 99611
TEL: (907) 283-3583
NELSONENGINEER@ALASKA.NET
AK CORP. AUTHORIZATION AEC001291



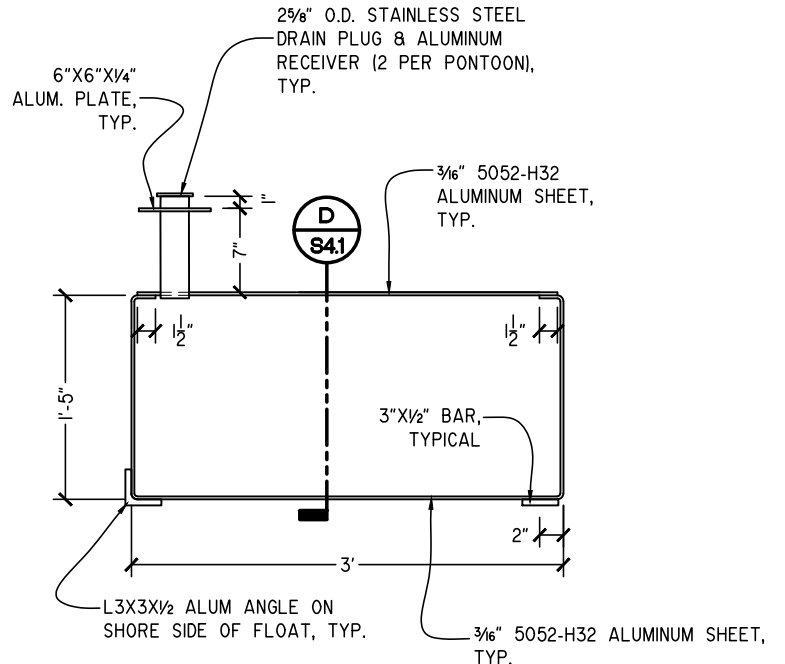
A DOCK FLOAT PLAN
SCALE: 1/8"=1'-0"



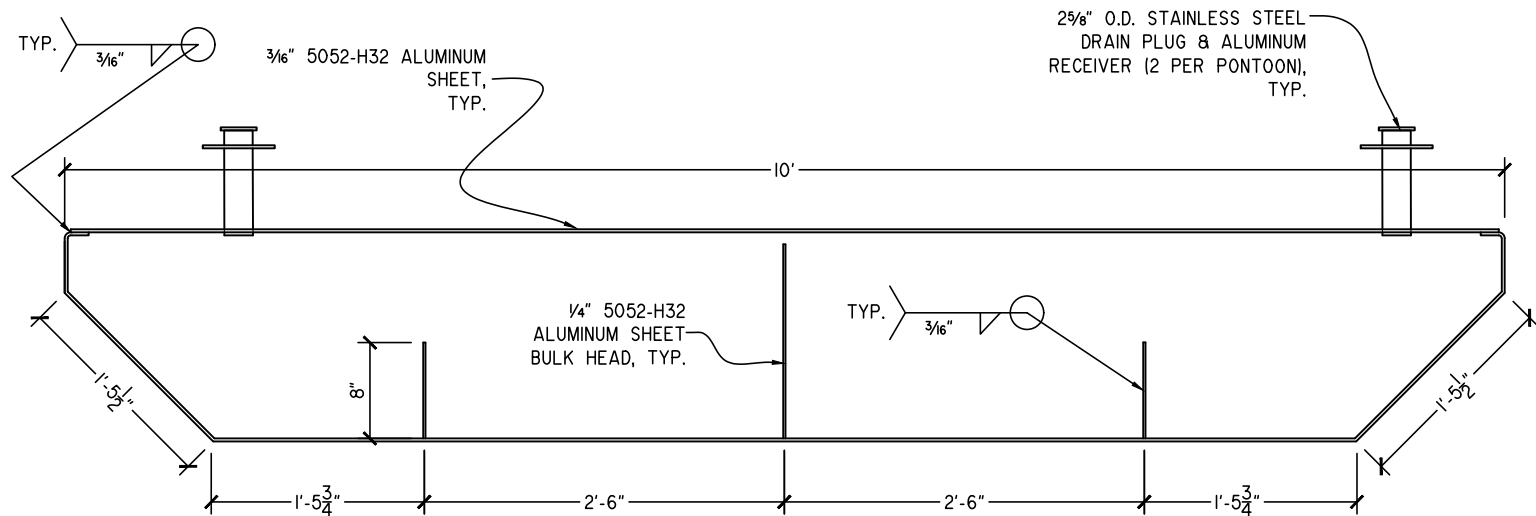
A TYP. DOCK FLOAT SECTION
 S41 SCALE: 1/4"=1'-0"



B TYP. DOCK FLOAT SECTION
 S41 SCALE: 1/4"=1'-0"



C DOCK PONTOON SECTION
 S41 SCALE: 3/4"=1'-0"



D DOCK PONTOON SECTION
 S41 SCALE: 3/4"=1'-0"

NOTE:
 LOCATE STEEL DRAIN PLUGS PER PLAN ON SHEETS S3.2

CONSTRUCTION DOCUMENTS

CONSULTING ENGINEERS
 STRUCTURAL/CIVIL

155 BIDARCA ST
 KENAI, AK 99611
 TEL: (907) 283-3583
 NELSONENGINEER@ALASKA.NET
 AK CORP. AUTHORIZATION AECC.1291

NELSON ENGINEERING

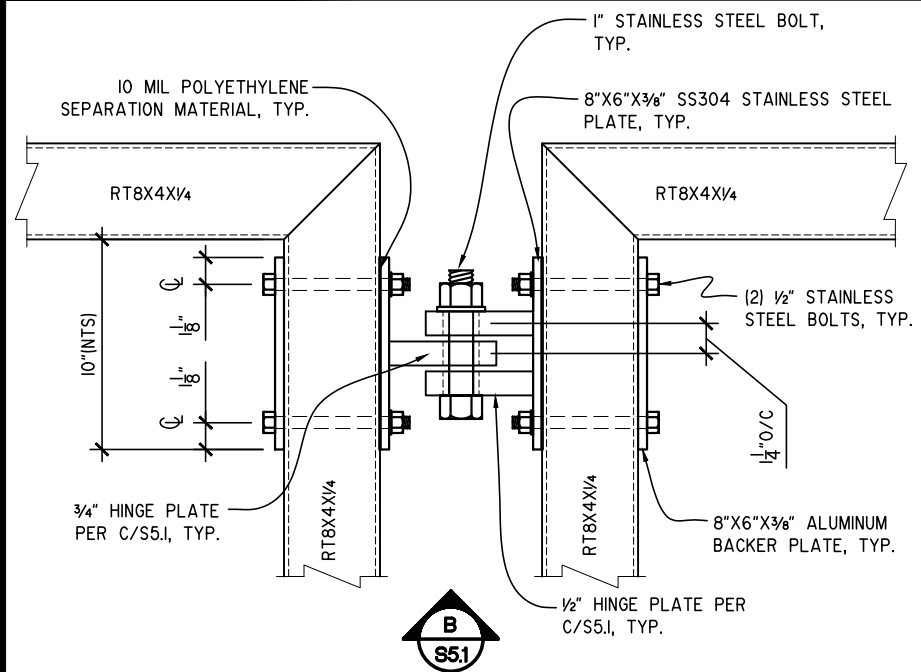
STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES

KRSMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

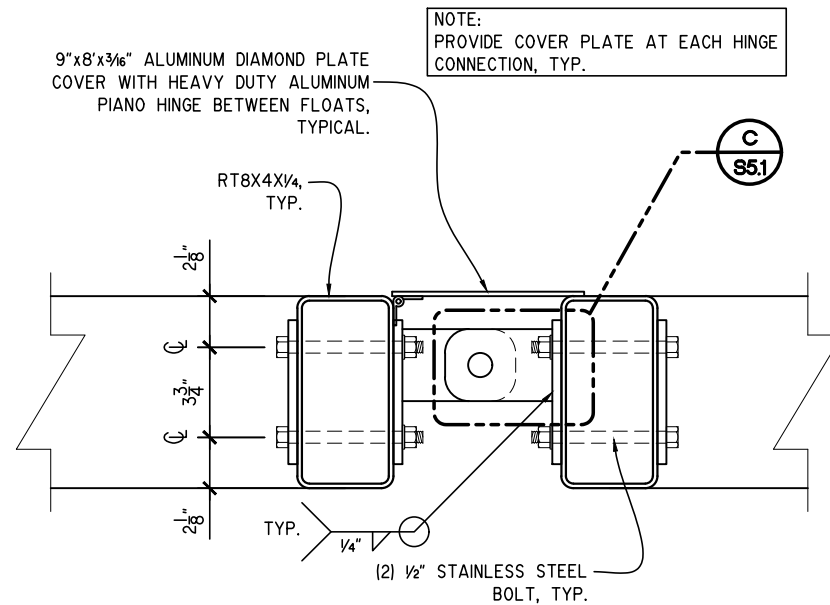


PREPARED: ZSR
 DRAWN: CAM
 REVIEWED: MJD
 DATE: 05/13/26

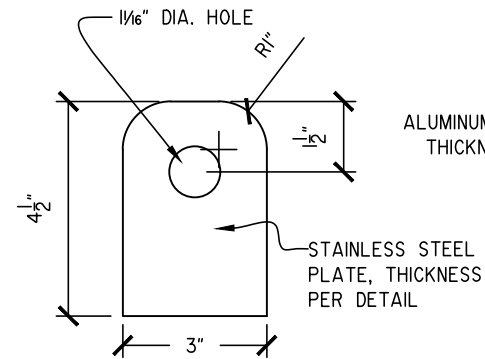
SHEET
 S4.1
 OF 7 SHEETS



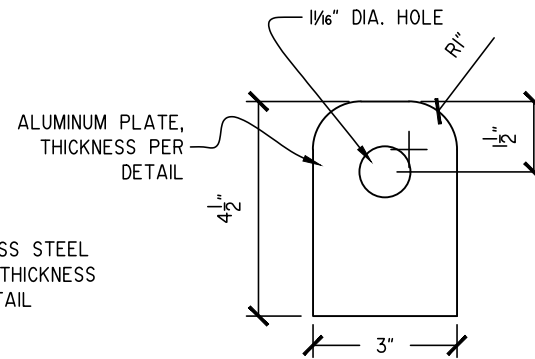
A TYP. HINGE CONNECTION
S5.1 SCALE: 1-1/2"=1'-0"



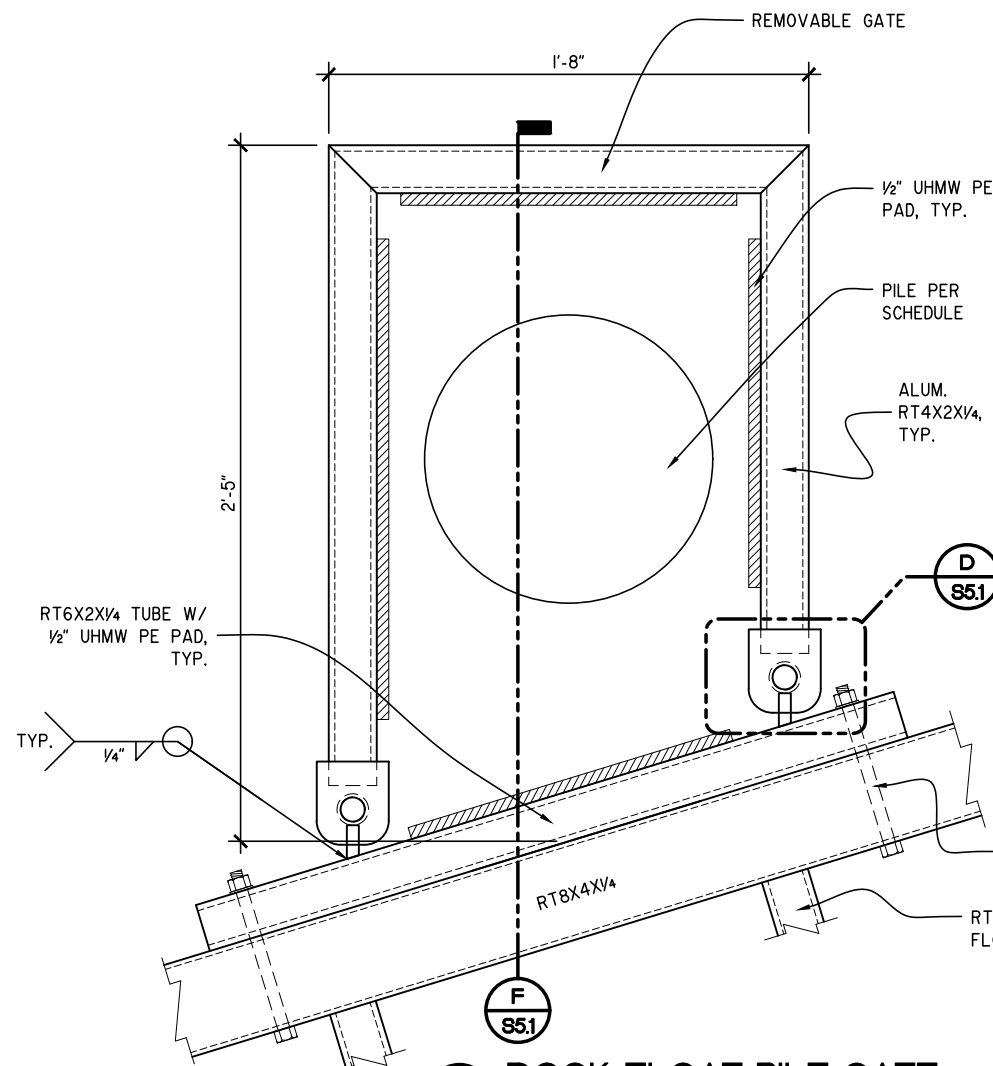
B TYP. HINGE SECTION
S5.1 SCALE: 1-1/2"=1'-0"



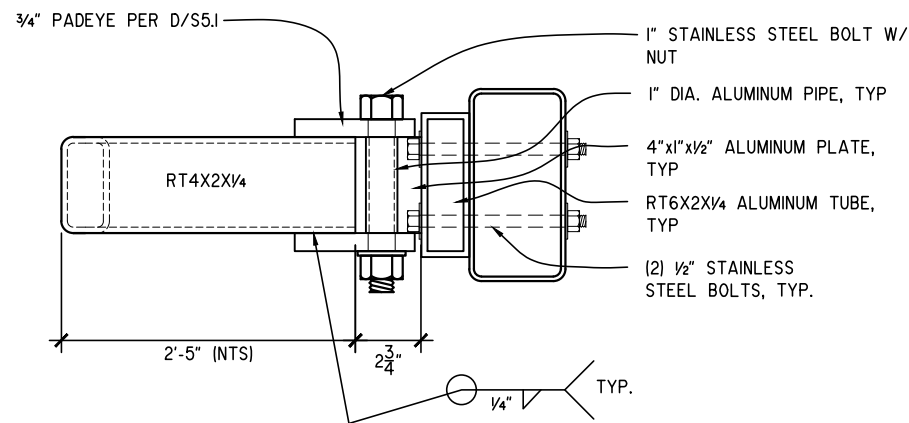
C HINGE PLATE
S5.1 SCALE: 3"=1'-0"



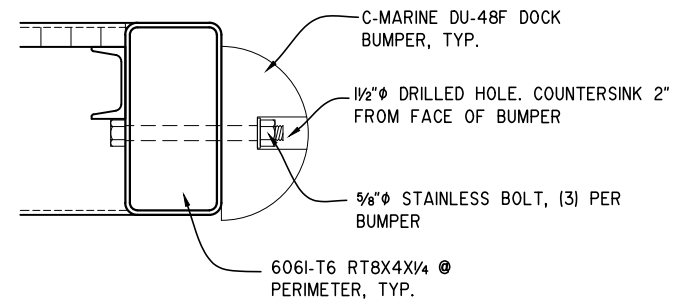
D PADEYE
S5.1 SCALE: 3"=1'-0"



E DOCK FLOAT PILE GATE
S5.1 SCALE: 1-1/2"=1'-0"



F REMOVABLE PILE GATE SECTION
S5.1 SCALE: 1-1/2"=1'-0"



G BUMPER CONNECTION
S5.1 SCALE: 1-1/2"=1'-0"



CONSTRUCTION DOCUMENTS

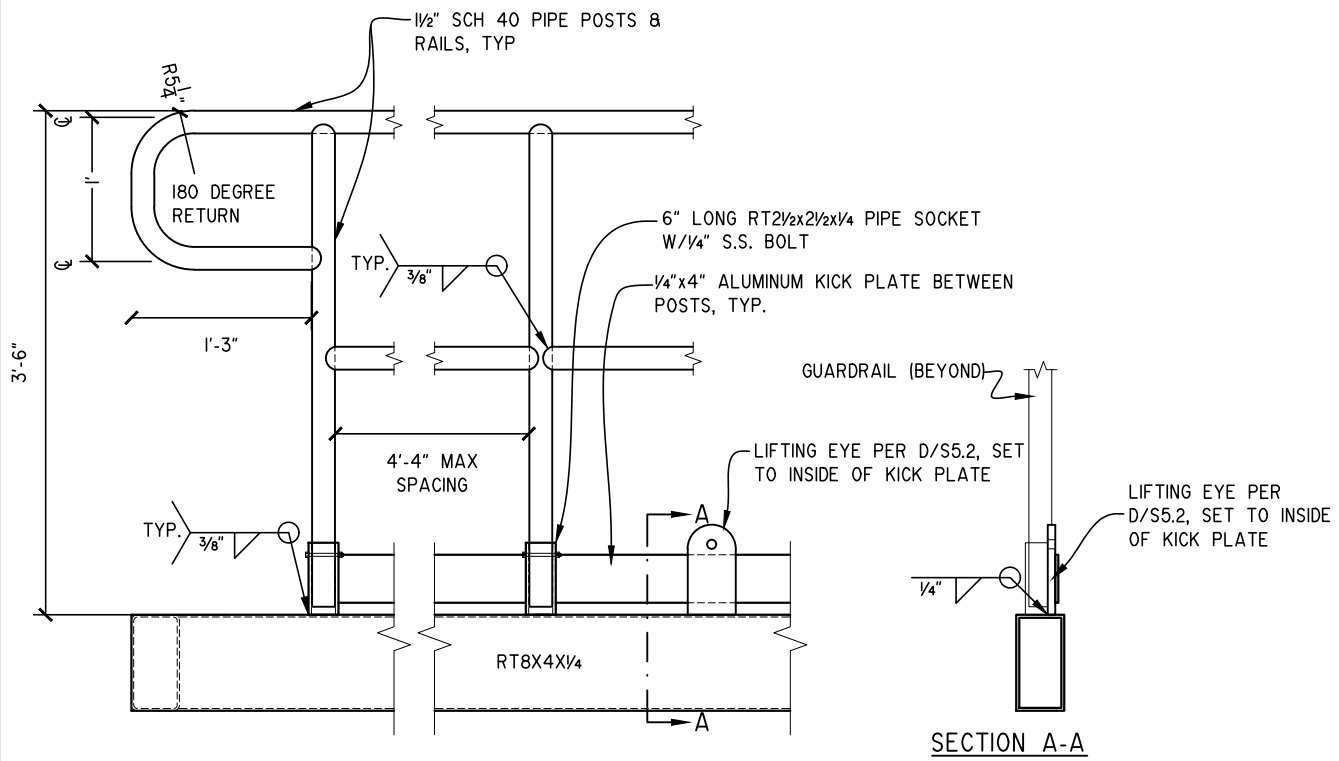
CONSULTING ENGINEERS
 STRUCTURAL/CIVIL

155 BIDARCA ST
 KENAI, AK 99611
 TEL: (907) 283-3583
 NELSONENGINEER@ALASKA.NET
 AK CORP. AUTHORIZATION AEC.C.1291

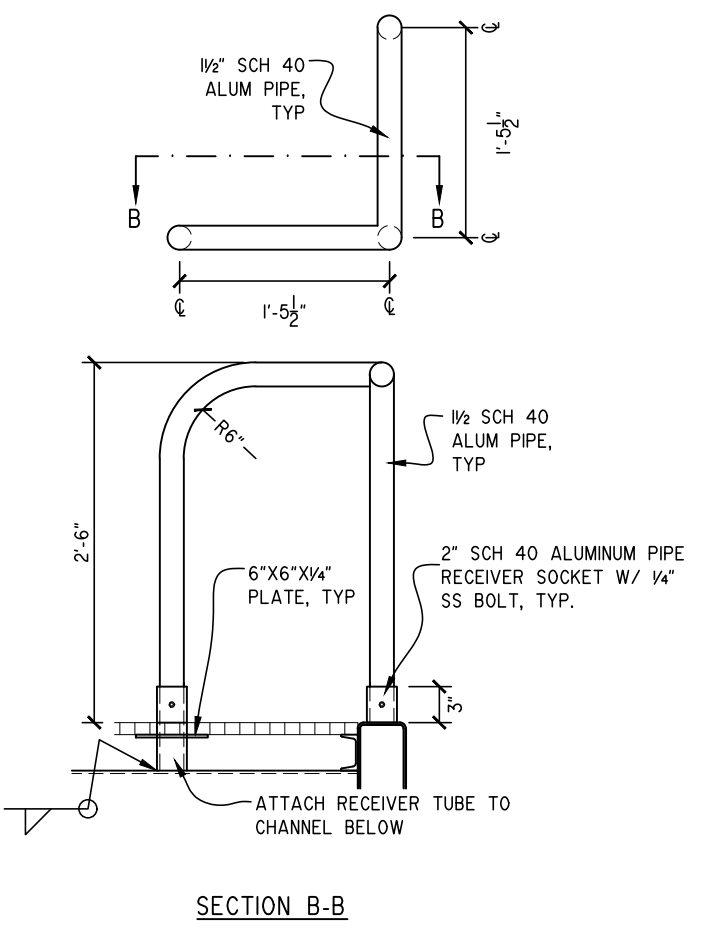
NELSON
 ENGINEERING



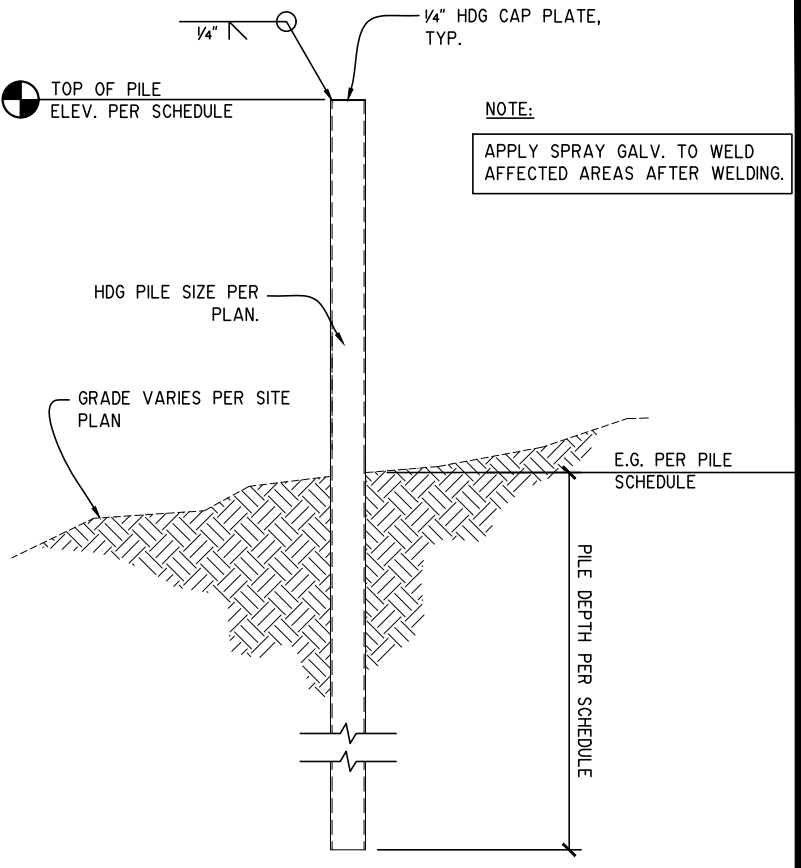
PREPARED: ZSR
 DRAWN: CAM
 REVIEWED: MJD
 DATE: 05/13/26



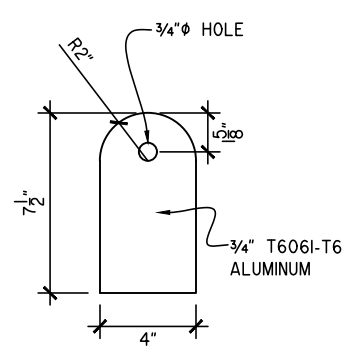
A REMOVABLE HANDRAIL
852 SCALE: 3/4"=1'-0"



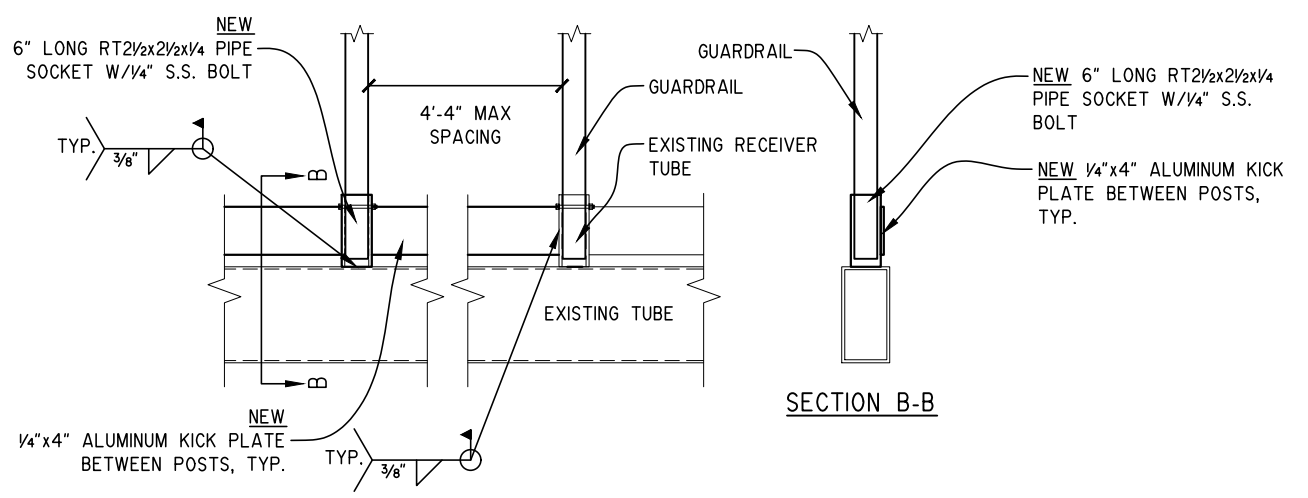
B LOADING HANDRAIL
852 SCALE: 3/4"=1'-0"



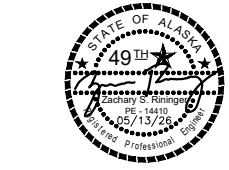
C PILE ELEVATION
852 SCALE: 1/4"=1'-0"



D LIFTING EYE
852 SCALE: 1-1/2"=1'-0"



E RETROFIT GUARDRAIL RECEIVER
852 SCALE: 3/4"=1'-0"



CONSTRUCTION DOCUMENTS

CONSULTING ENGINEERS
STRUCTURAL/CIVIL
 155 BIDARCA ST
 KENAI, AK 99611
 TEL: (907) 283-3583
 NELSONENGINEER@ALASKA.NET
 AK CORP. AUTHORIZATION AECC.1291

NELSON ENGINEERING

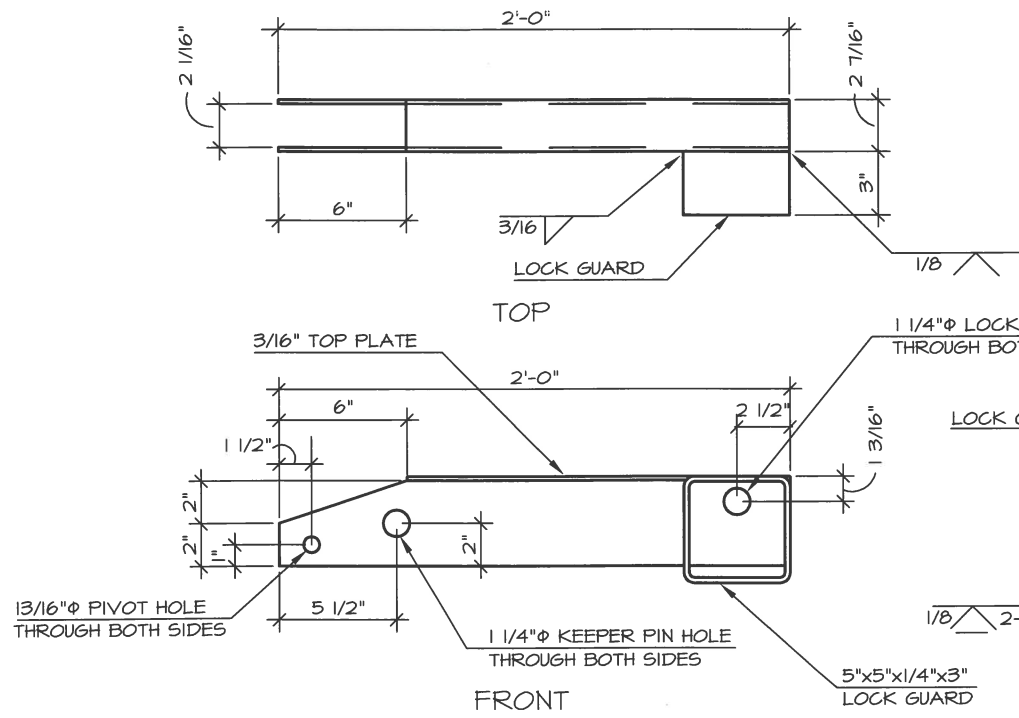
PREPARED: ZSR
 DRAWN: CAM
 REVIEWED: MJD
 DATE: 05/13/26

SHEET
S5.2
 OF 7 SHEETS

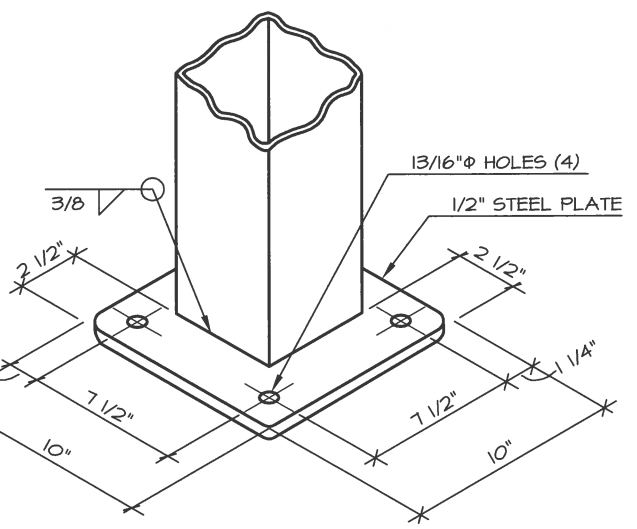
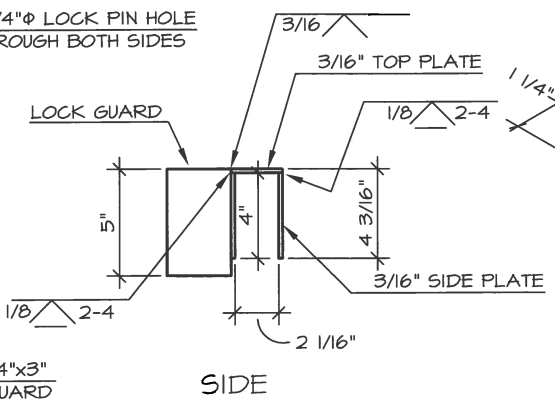
STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES
 KRMA: EAGLE ROCK
 UPPER PARKING IMPROVEMENTS
 PROJECT No. 72018-2

HANDRAIL, PILE, AND ABUTMENT
 DETAILS

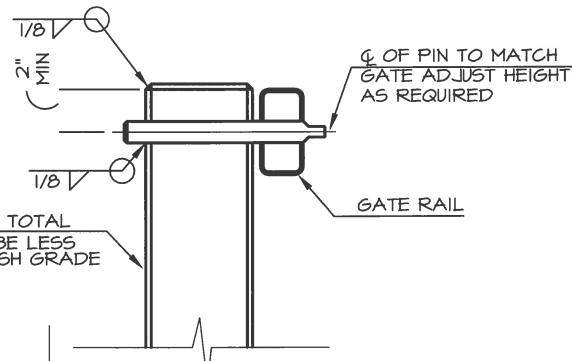
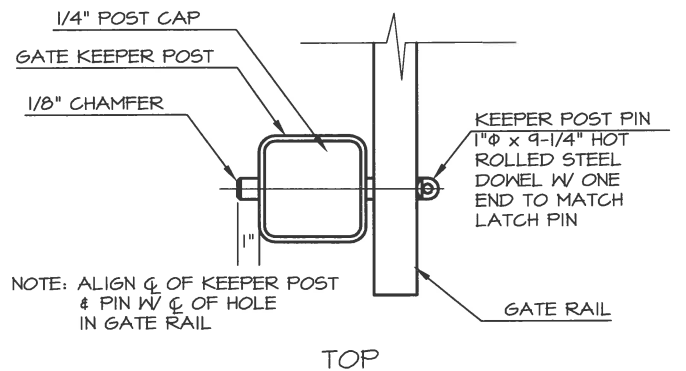




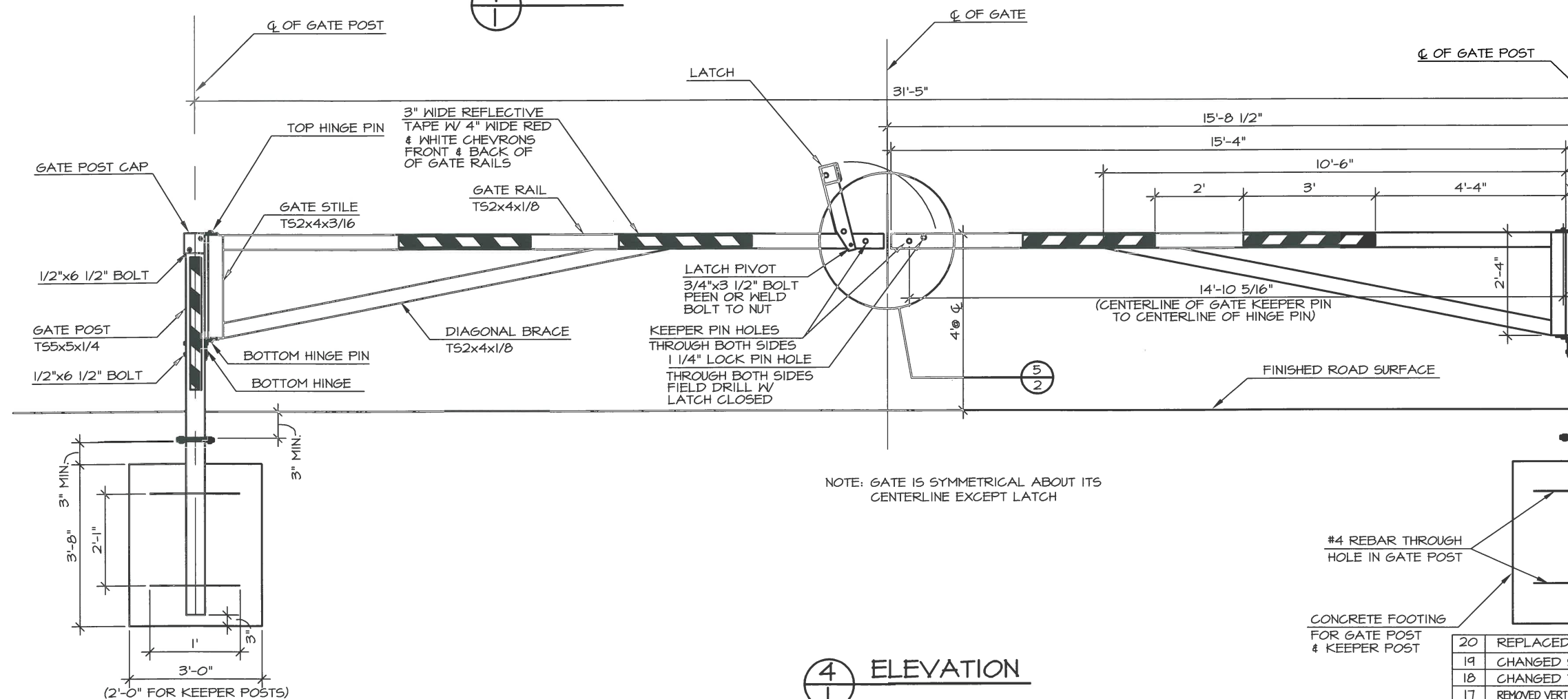
LATCH



STEEL PLATE (TYP.)



KEEPER POST



ELEVATION

BACK OF GATE STILE

3" WIDE REFLECTIVE TAPE W/ 4" WIDE RED & WHITE CHEVRONS BOTH SIDES PERPEND. TO ROAD ON GATE & KEEPER POST

#4 REBAR THROUGH HOLE IN GATE POST

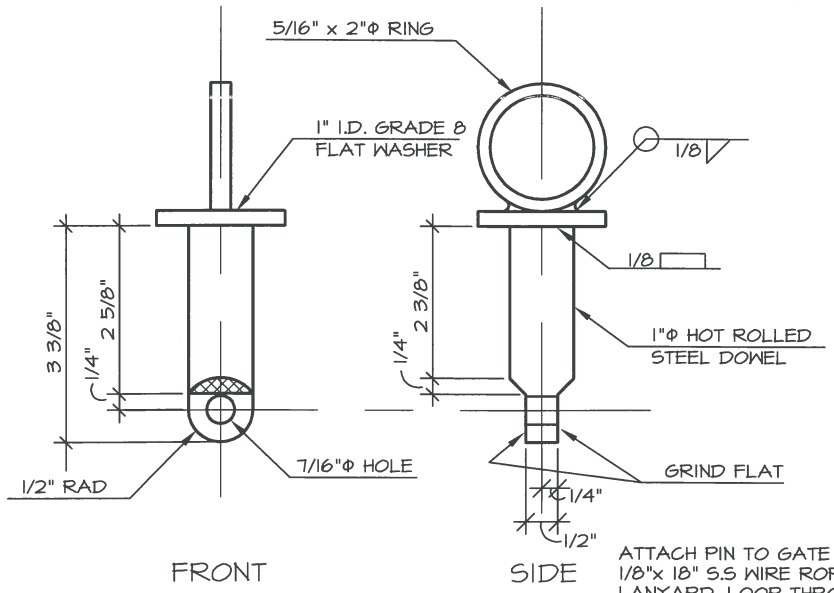
CONCRETE FOOTING FOR GATE POST & KEEPER POST



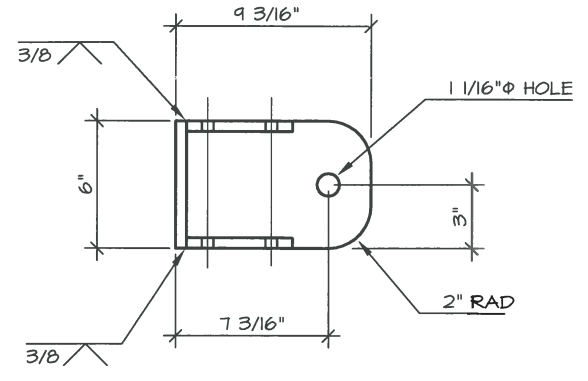
NO.	REVISION	DATE	APPROVED
20	REPLACED STAMP	12/13	RBM
19	CHANGED STATE PARK LOGO	04/10	MP5
18	CHANGED TITLE BLOCK	12/07	MP5
17	REMOVED VERTICLE FOOTING REBAR / ADDED HORIZONTAL REBAR	12/04	MP5
16	RESIZED KEEPER PIN HOLE & LOCK PIN HOLE	12/04	MP5
15	REPLACED STAMP	3/02	BFS
14	REPLACED STAMP		

PREPARED:
DRAWN: RK
REVIEWED: DH TY
DATE: 10/14/05

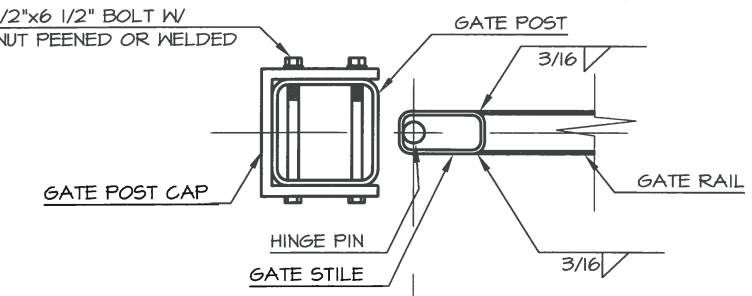
SHEET 1
G-2
OF 2 SHEETS



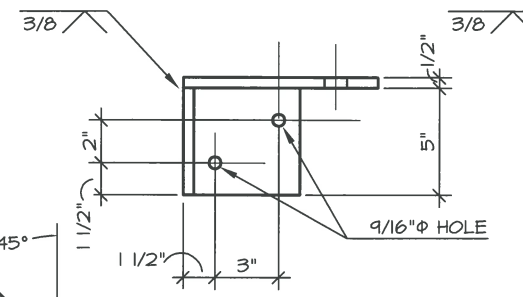
1
2 LATCH PIN



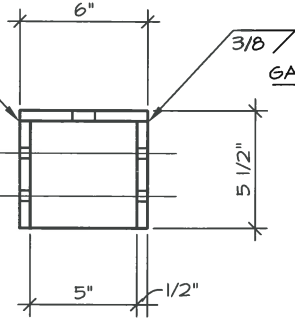
BOTTOM



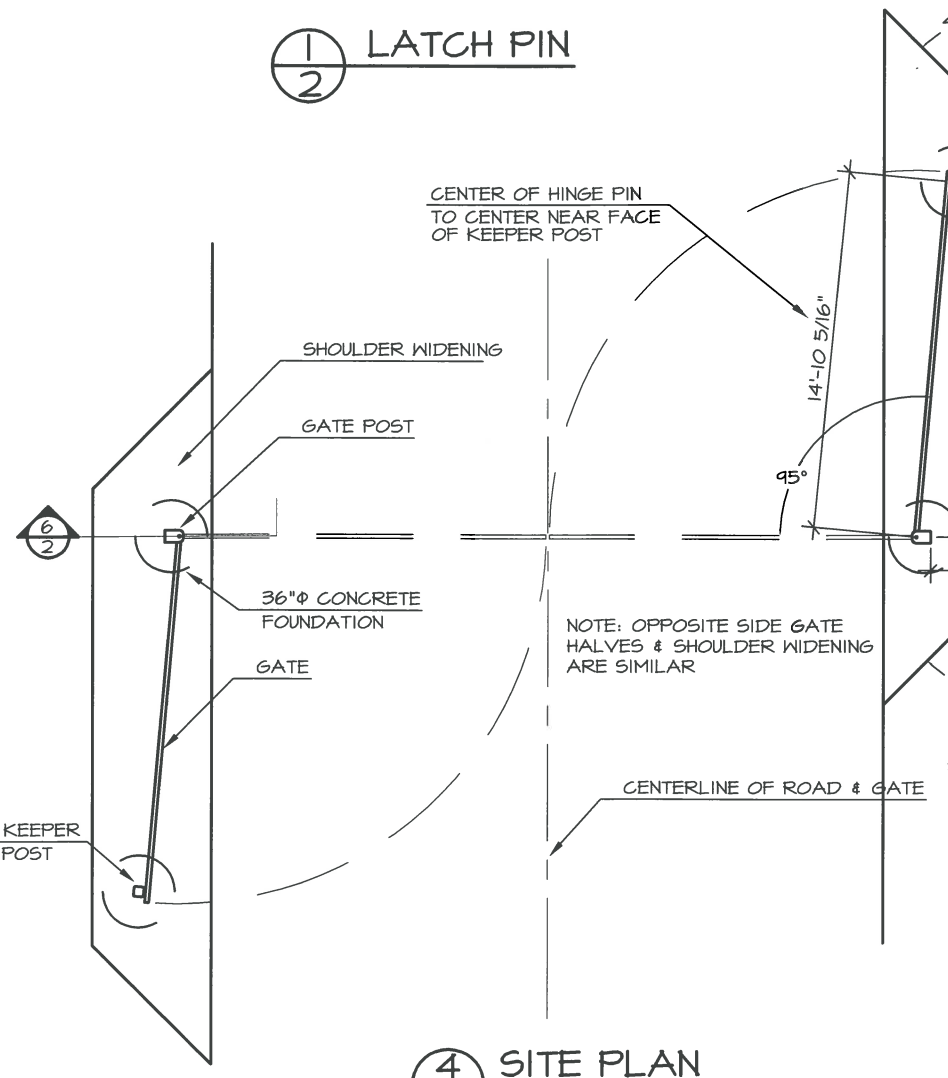
3 SECTION



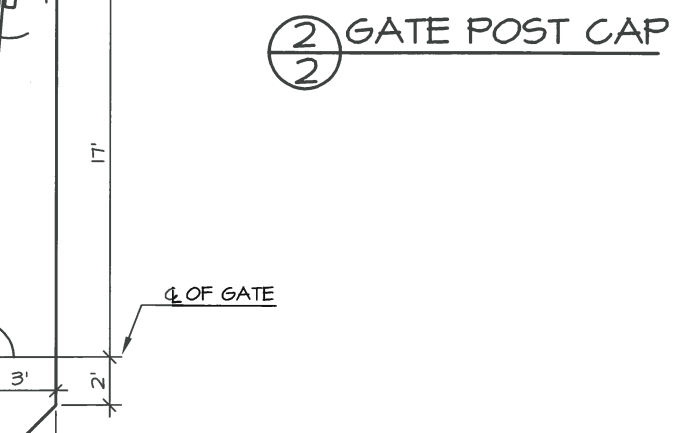
FRONT



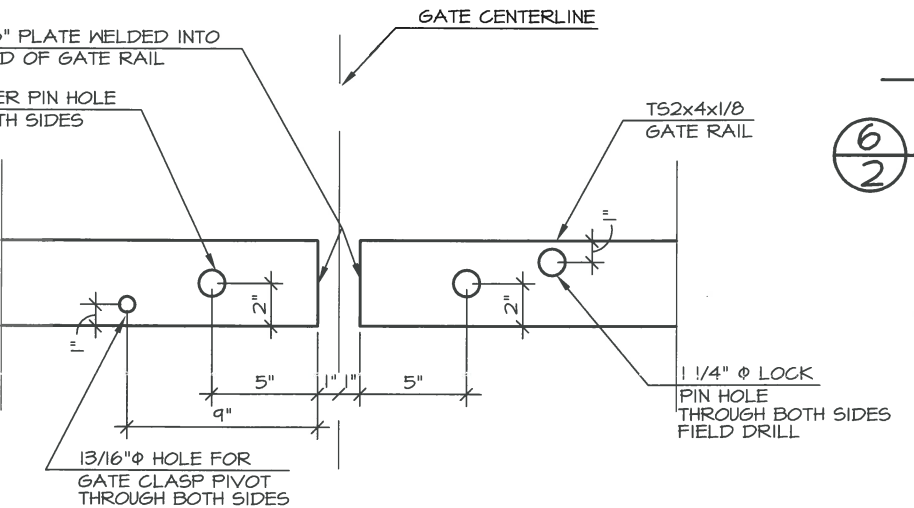
GATE SIDE



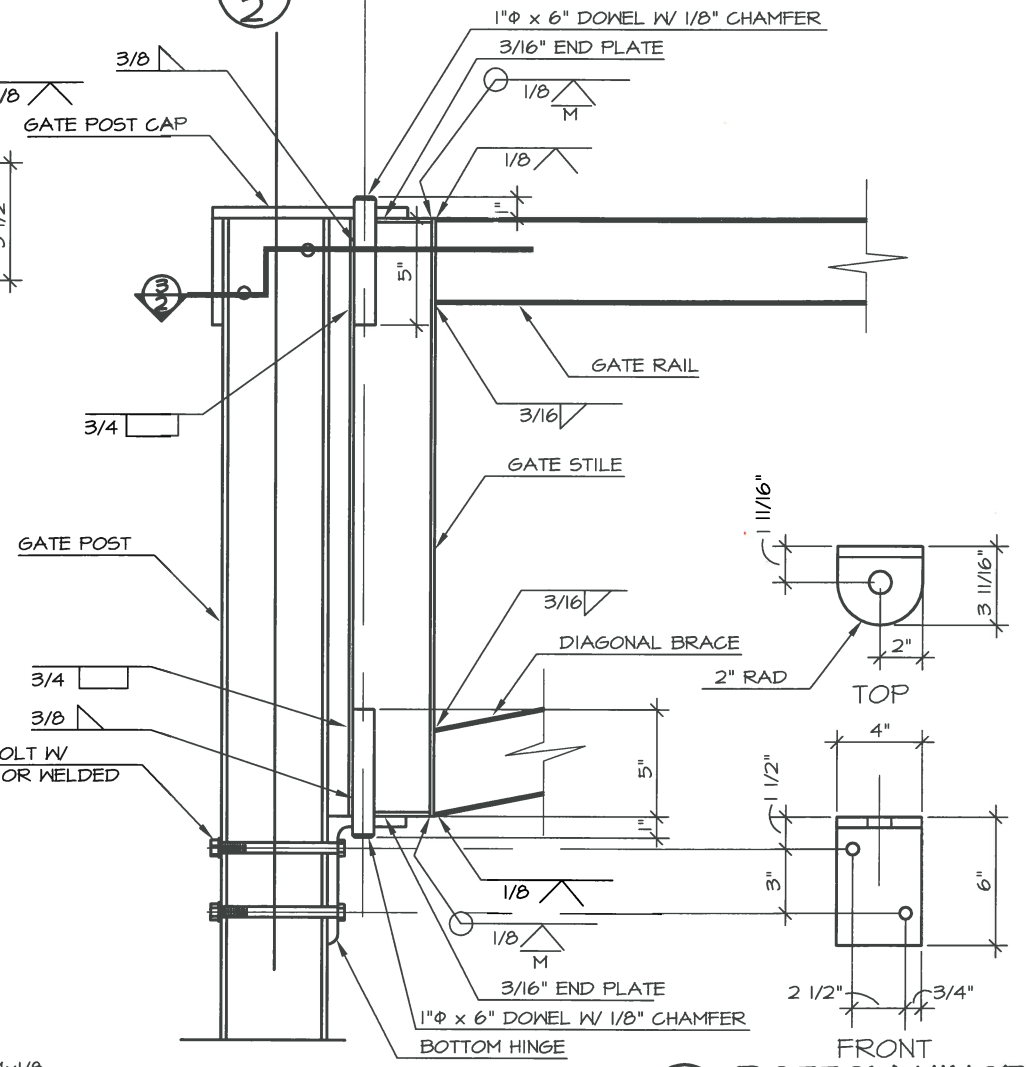
4 SITE PLAN



2 GATE POST CAP

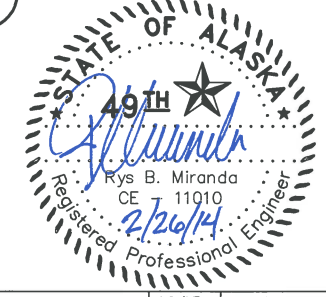


5 DETAIL



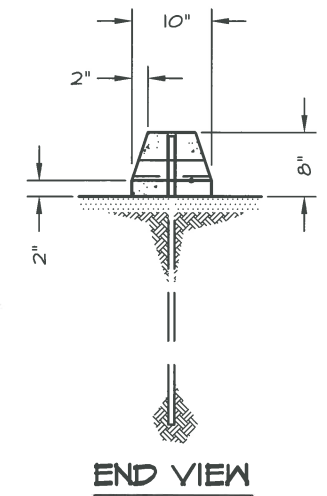
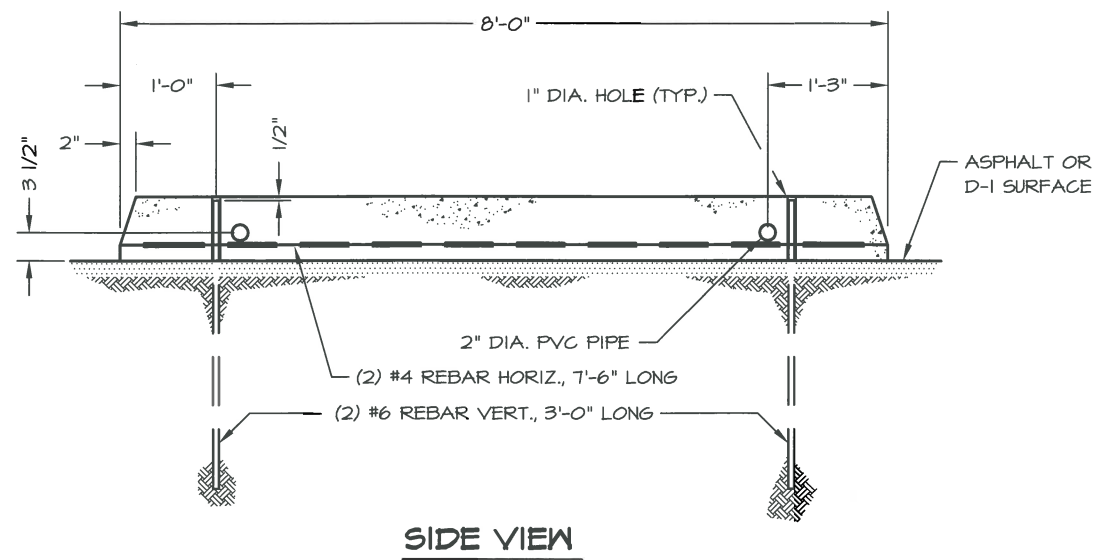
6 SECTION

7 BOTTOM HINGE



NO.	REVISION	DATE	APPROVED
19	REPLACED STAMP	12/13	RBM
18	CHANGED STATE PARK LOGO	04/10	MPS
17	CHANGED TITLE BLOCK	12/07	MPS
16	RESIZED KEEPER PIN HOLE & LOCK PIN HOLE	12/04	MPS
15	REPLACED STAMP	3/04	MPS
14	REPLACED STAMP	3/02	DH





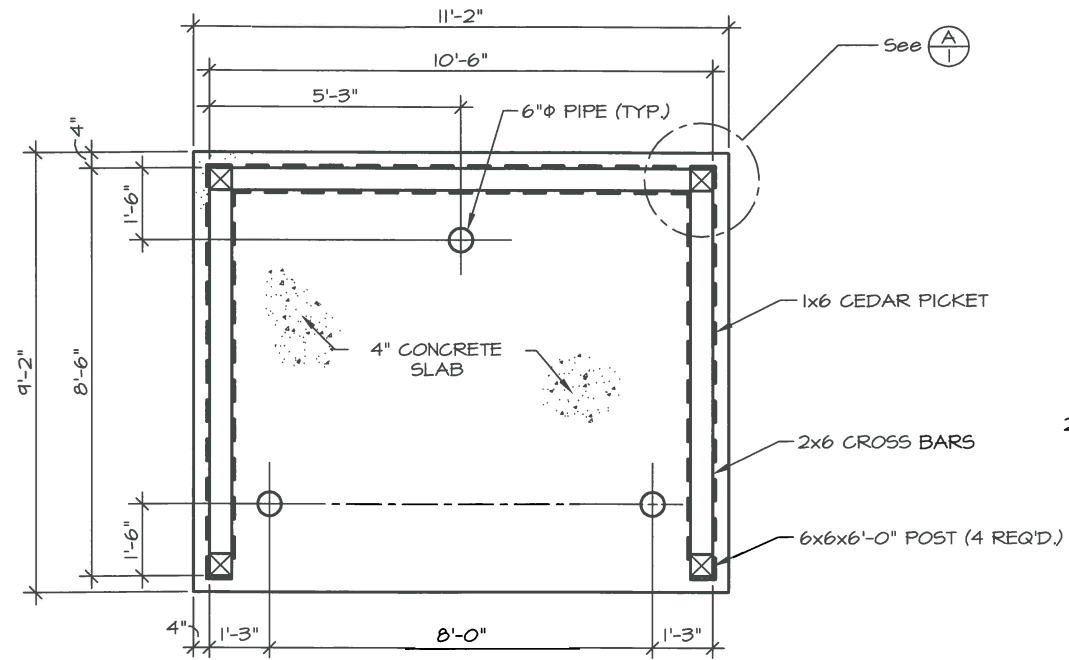
① CONCRETE PARKING BUMPER



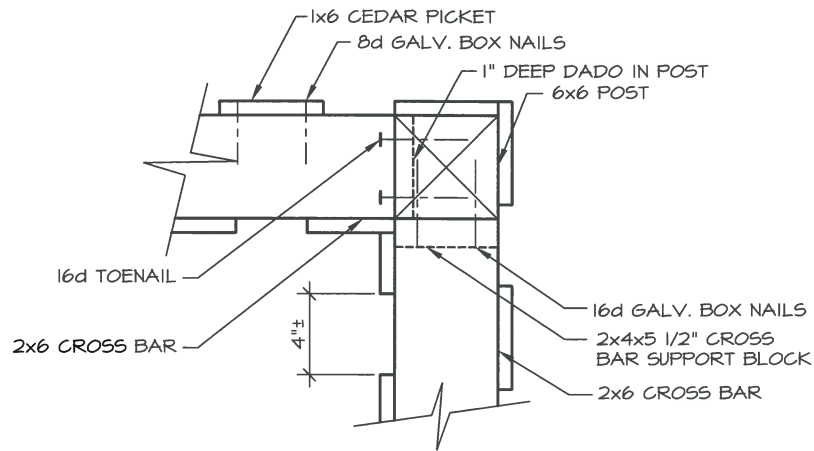
PREPARED: tlc
 DRAWN: tlc
 REVIEWED: DH
 DATE: 1 MAY 94

NO.	REVISION	DATE	APPROVED
11	REPLACED STAMP	12/13	RBM
10	CHANGED STATE PARK LOGO	04/10	MPS
9	CHANGED TITLE BLOCK	12/07	MPS
8	DELETED WOOD PARKING BUMPER & NOTES	10/05	MPS
7	UPDATED PRESSURE TREATMENT NOTE	12/04	MPS
6	UPDATED PRESSURE TREATMENT NOTE	3/04	MPS
5	REPLACED STAMP	3/04	MPS
4	REPLACED STAMP	3/02	DH

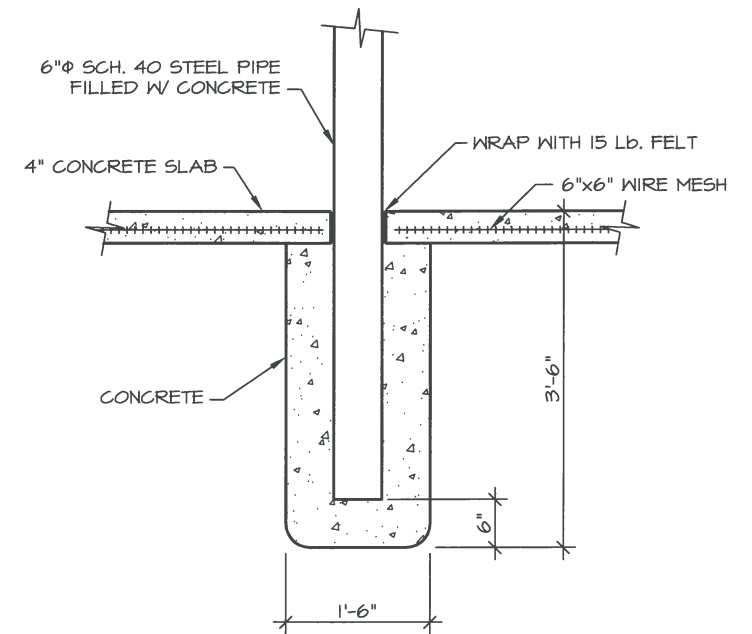
SHEET 1
 P-6
 OF 1 SHEETS



PLAN VIEW



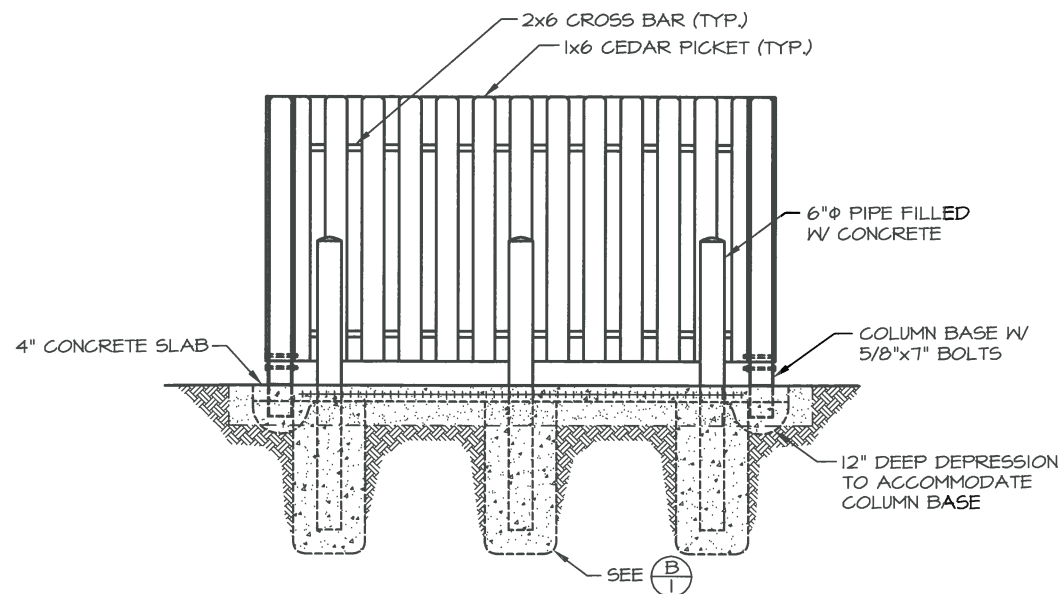
A CORNER DETAIL



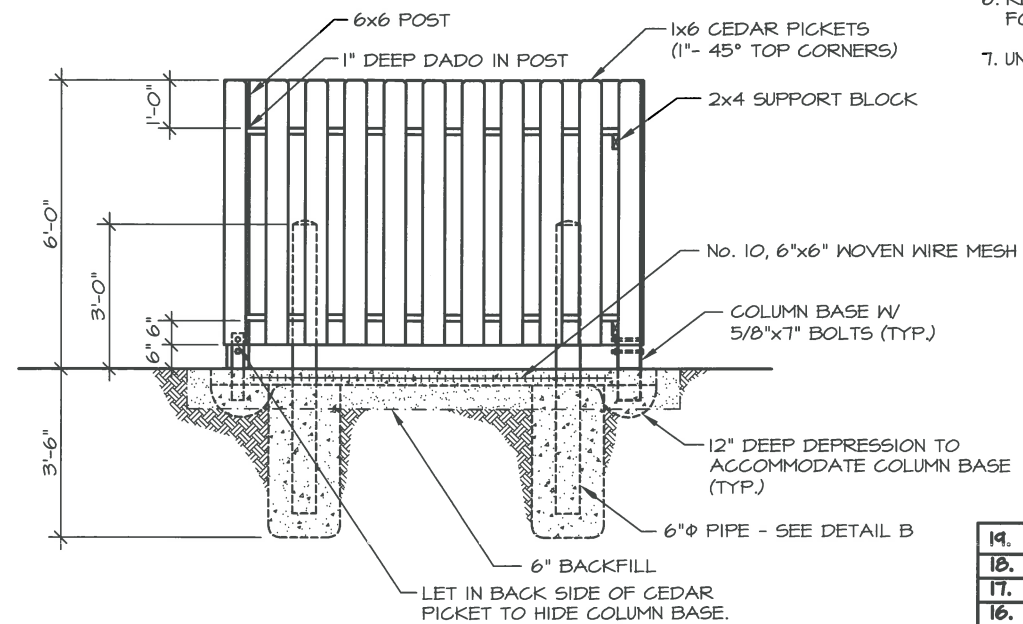
B FOOTING DETAIL

GENERAL NOTES:

1. STAIN ALL WOOD WITH 2 COATS OF STAIN.
2. FILL PIPES WITH CONCRETE & ROUND TOPS.
3. CONCRETE TO HAVE TROWEL FINISH. KEEP SURFACE OF CONCRETE SLAB MOISTENED FOR 7 DAYS.
4. LENGTH & WIDTH OF DUMPSTER SCREEN MAY BE CHANGED TO CORRESPOND WITH LOCAL DUMPSTER SIZES.
5. HOLES FOR WELL PIPE FOOTINGS ARE TO BE HAND DUG OR AUGERED.
6. REAR COLUMN BASES ARE TURNED 90° FROM FRONT BASES FOR ADDITIONAL LATERAL SUPPORT.
7. UNLESS OTHERWISE SPECIFIED, LUMBER SHALL BE TREATED.



FRONT ELEVATION



SIDE ELEVATION



NO.	REVISION	DATE	APPROVED
19.	REPLACED STAMP	12/13	RBM
18.	REMOVED PAINT NOTE	04/10	MPS
17.	CHANGED WELL PIPE TO SCH. 40 PIPE	04/10	MPS
16.	CHANGED STATE PARK LOGO	04/10	MPS
15.	CHANGED TITLE BLOCK	12/07	MPS
14.	CHANGED LUMBER TREATMENT NOTE	12/04	MPS
13.	UPDATED PRESSURE TREATMENT NOTE	03/04	MPS
12.	REPLACED STAMP	03/04	MPS
11.	REMOVED SCALES	12/02	D. Haag
NO.	REVISION	DATE	APPROVED





PREPARED: LMR
 DRAWN: MH/LMR
 REVIEWED: JAM
 DATE: 01/09/09

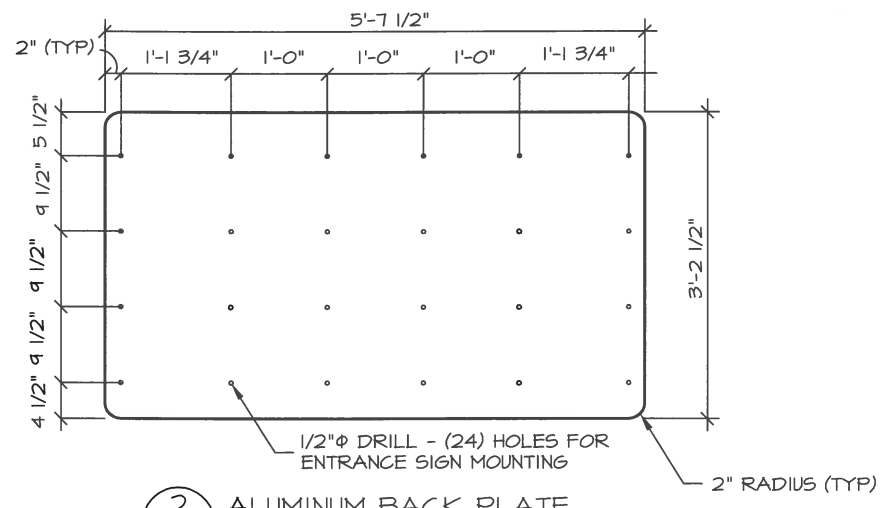
SHEET 1

S-3C
 OF 1 SHEETS

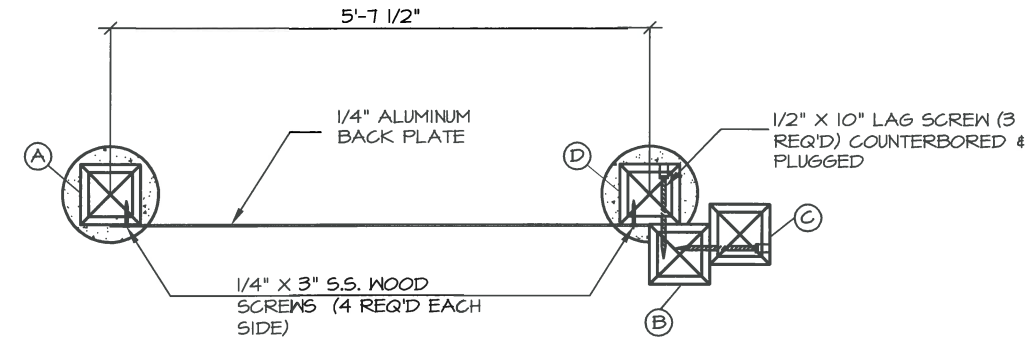


8" x 8" POST LENGTHS

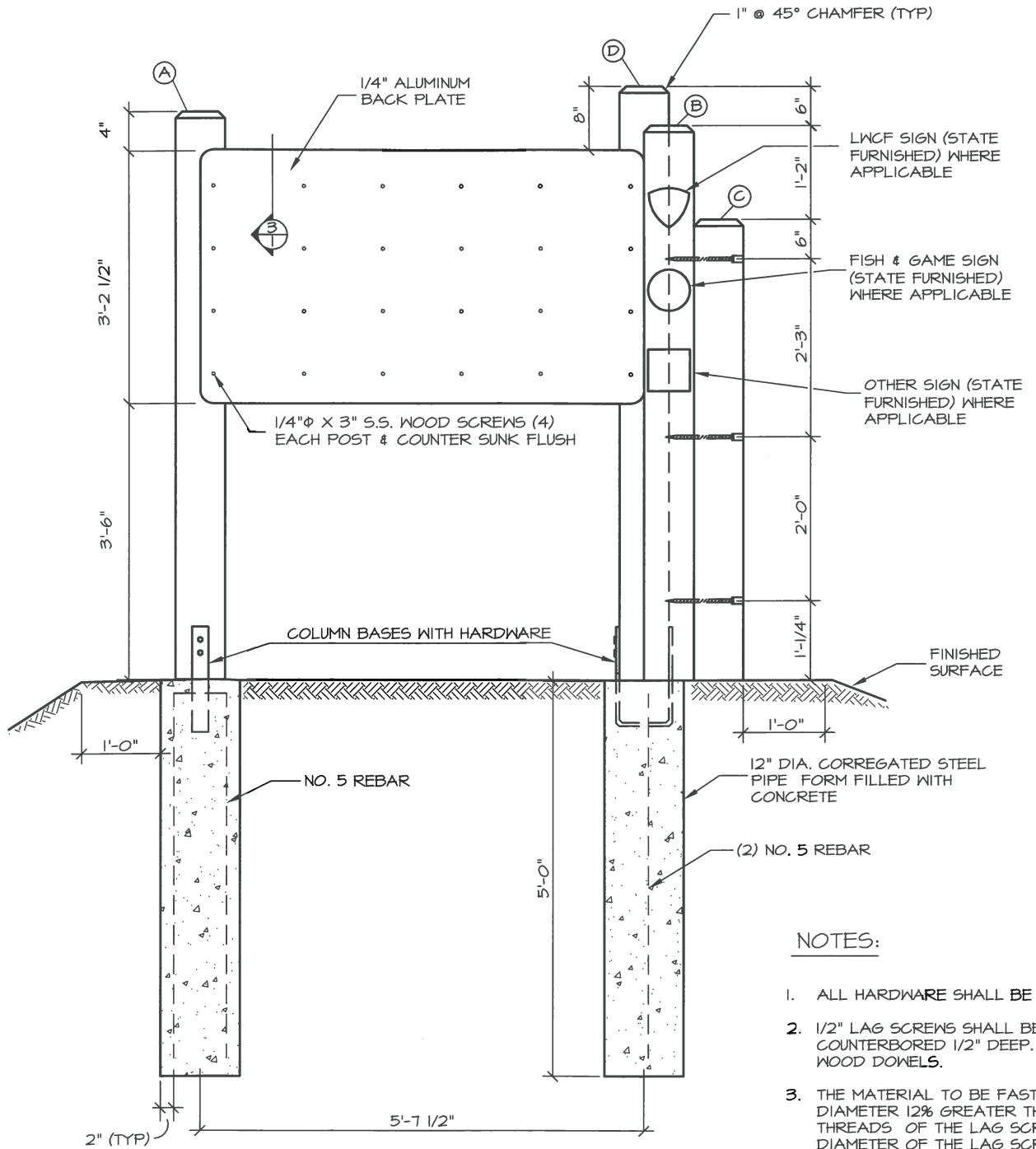
POST NUMBER	LENGTH
A	6'-11 1/4"
B	7'-1/4"
C	5'-9 1/4"
D	7'-5 1/4"



2 ALUMINUM BACK PLATE



3 PLAN VIEW



1 FRONT ELEVATION

NOTES:

1. ALL HARDWARE SHALL BE GALVANIZED UNLESS OTHERWISE SPECIFIED
2. 1/2" LAG SCREWS SHALL BE COUNTERBORED 2 1/2" DEEP. 1/4" LAG BOLTS SHALL BE COUNTERBORED 1/2" DEEP. ALL COUNTERBORED HOLES SHALL BE PLUGGED WITH WOOD DOWELS.
3. THE MATERIAL TO BE FASTENED BY THE LAG SCREW SHALL BE PRE-DRILLED TO A DIAMETER 12% GREATER THAN THE LAG SCREW. THE MATERIAL RECEIVING THE THREADS OF THE LAG SCREW SHALL BE PRE-DRILLED TO A MAXIMUM OF 75% OF THE DIAMETER OF THE LAG SCREW.
4. SIGN TO BE PLACED APPROXIMATELY WHERE IT IS SHOWN ON THE PLANS. IT SHALL BE POSITIONED AS DIRECTED BY THE ENGINEER.

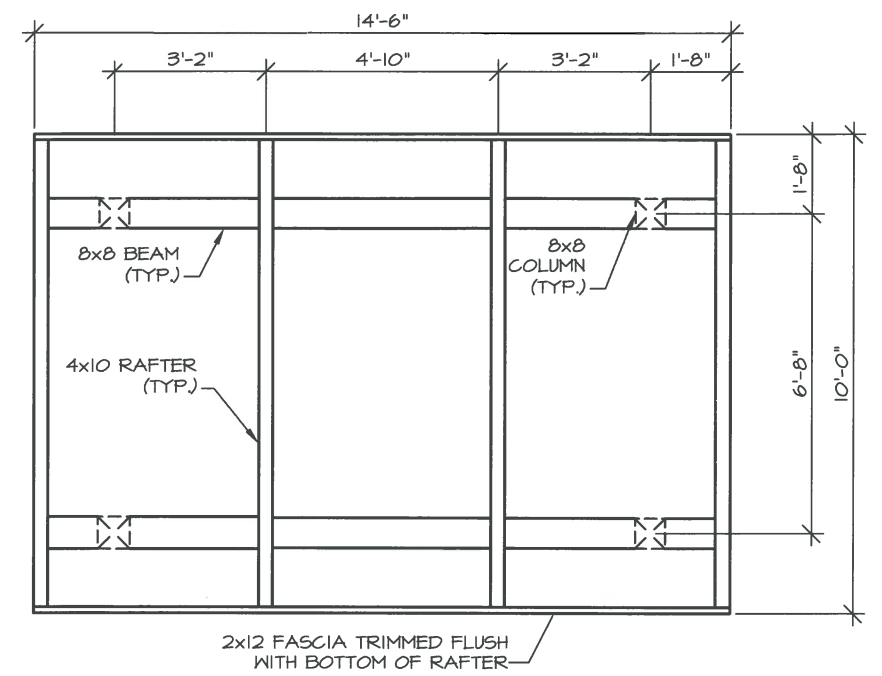
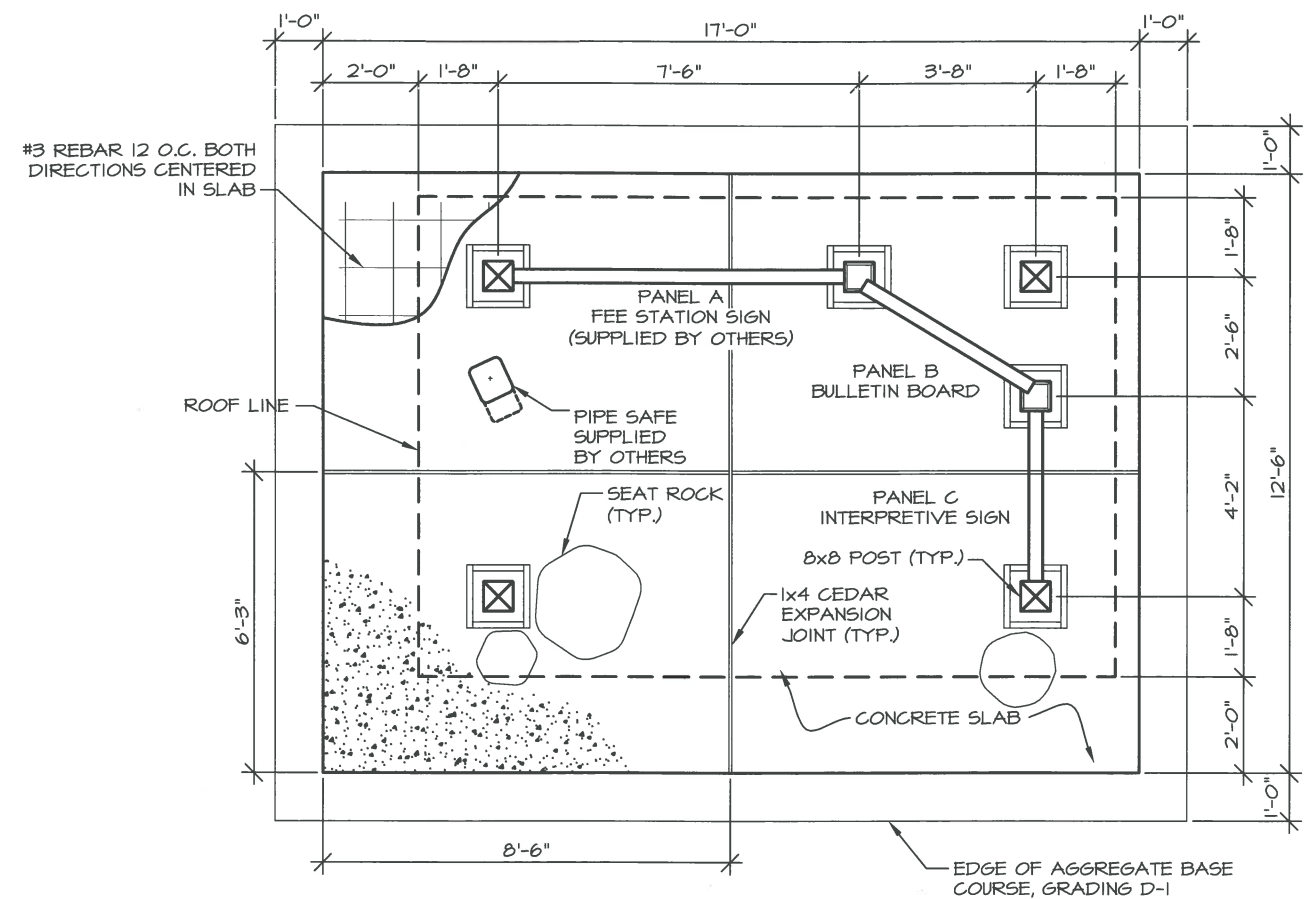
NO.	REVISION	DATE	APPROVED
2	REPLACED STAMP	12/13	REM
1	CHANGED STATE PARK LOGO	04/10	MPS



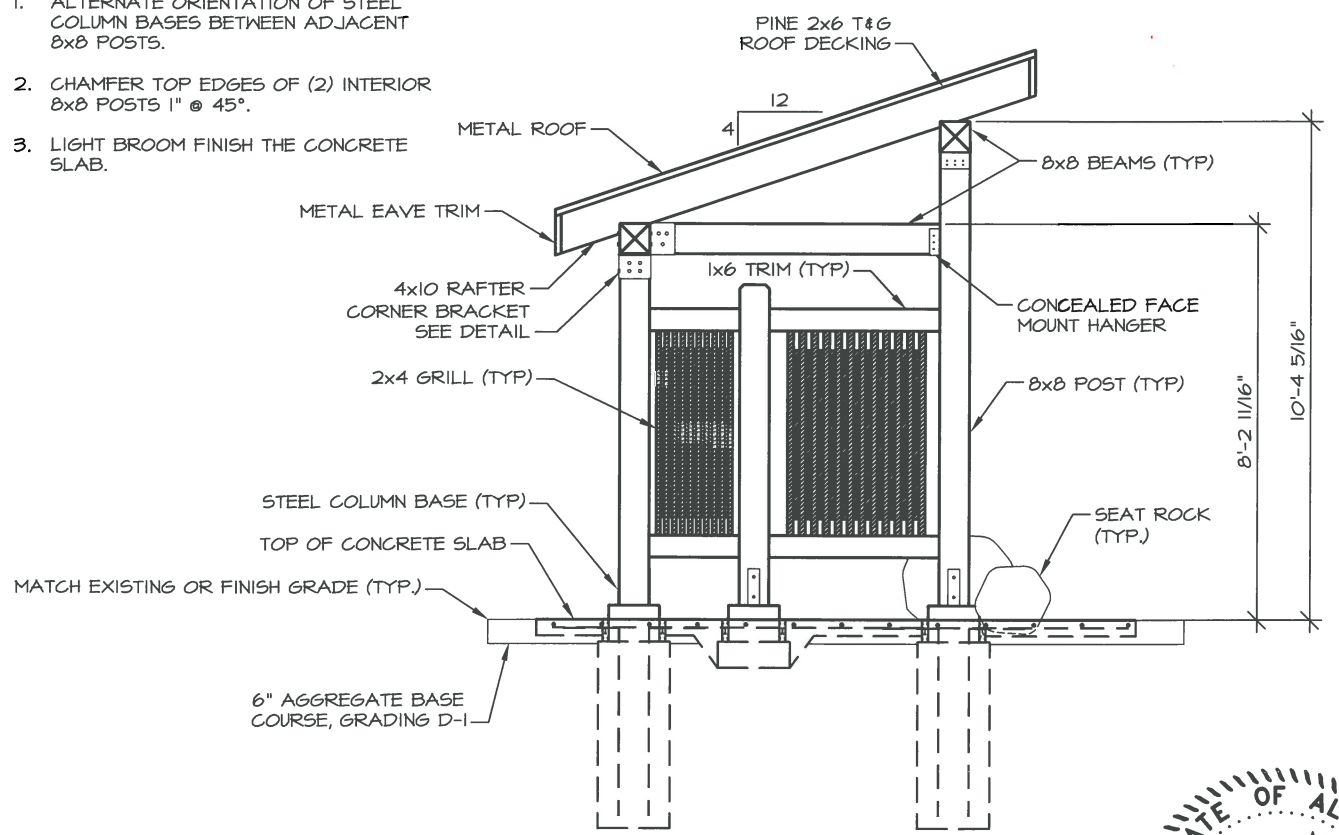
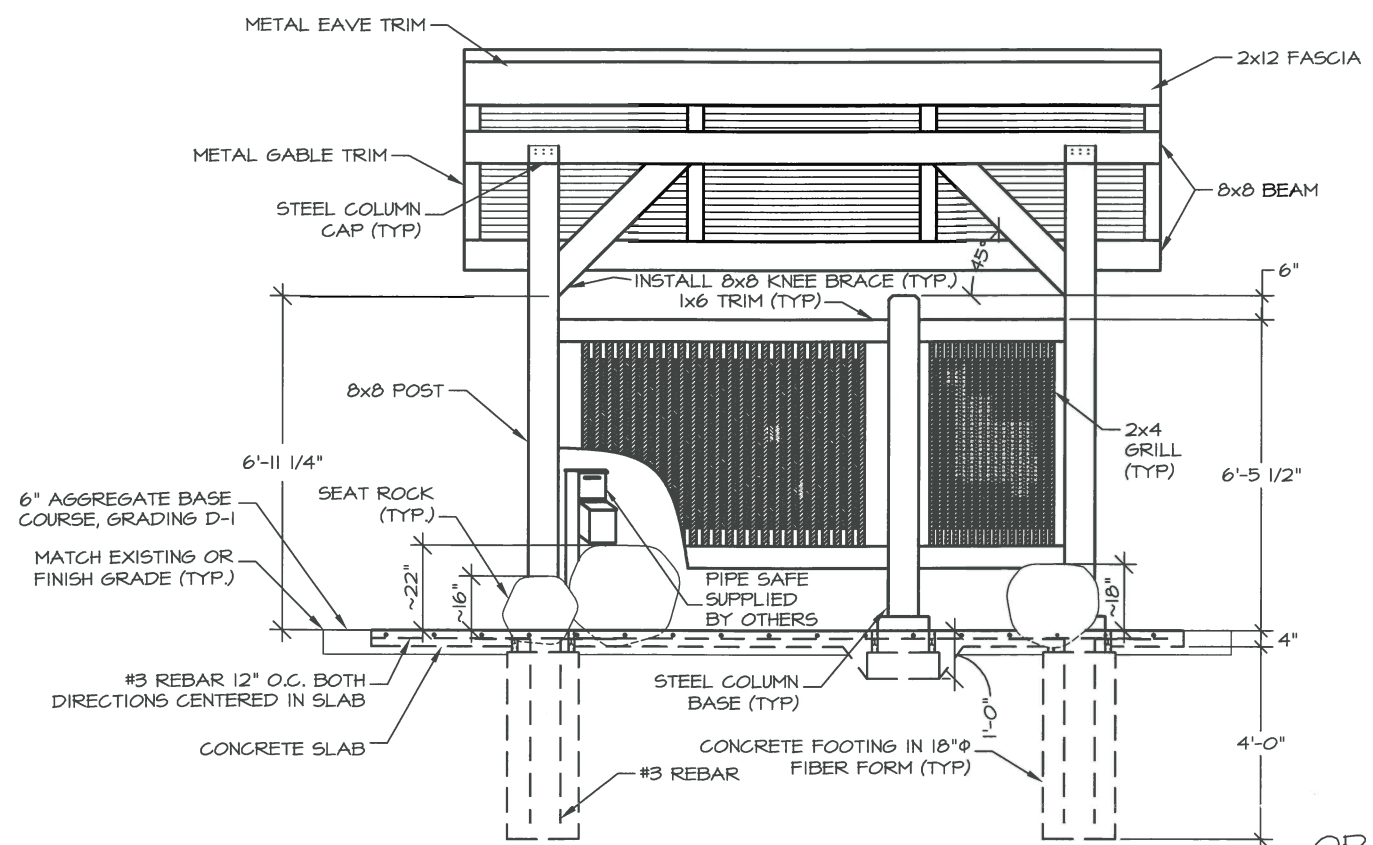
PREPARED: RBM/JAS
 DRAWN: AT/RBM/JAS
 REVIEWED: MPS
 DATE: JAN 2004

SHEET 1

S-10D
 OF 3 SHEETS



- NOTES:
1. ALTERNATE ORIENTATION OF STEEL COLUMN BASES BETWEEN ADJACENT 8x8 POSTS.
 2. CHAMFER TOP EDGES OF (2) INTERIOR 8x8 POSTS 1" @ 45°.
 3. LIGHT BROOM FINISH THE CONCRETE SLAB.



ORIENTATION KIOSK
 PLAN & PROFILE

NO.	REVISION	DATE	APPROVED
5	REPLACED STAMP	12/13	RBM
4	ADDED D-1 SHOULDER	12/10	MPS
3	CHANGED CONCRETE FOOTER, ADDED NOTE 3	12/10	MPS
2	UPDATED STATE PARK LOGO	12/10	MPS
1	CHANGED TITLE BLOCK	12/07	MPS

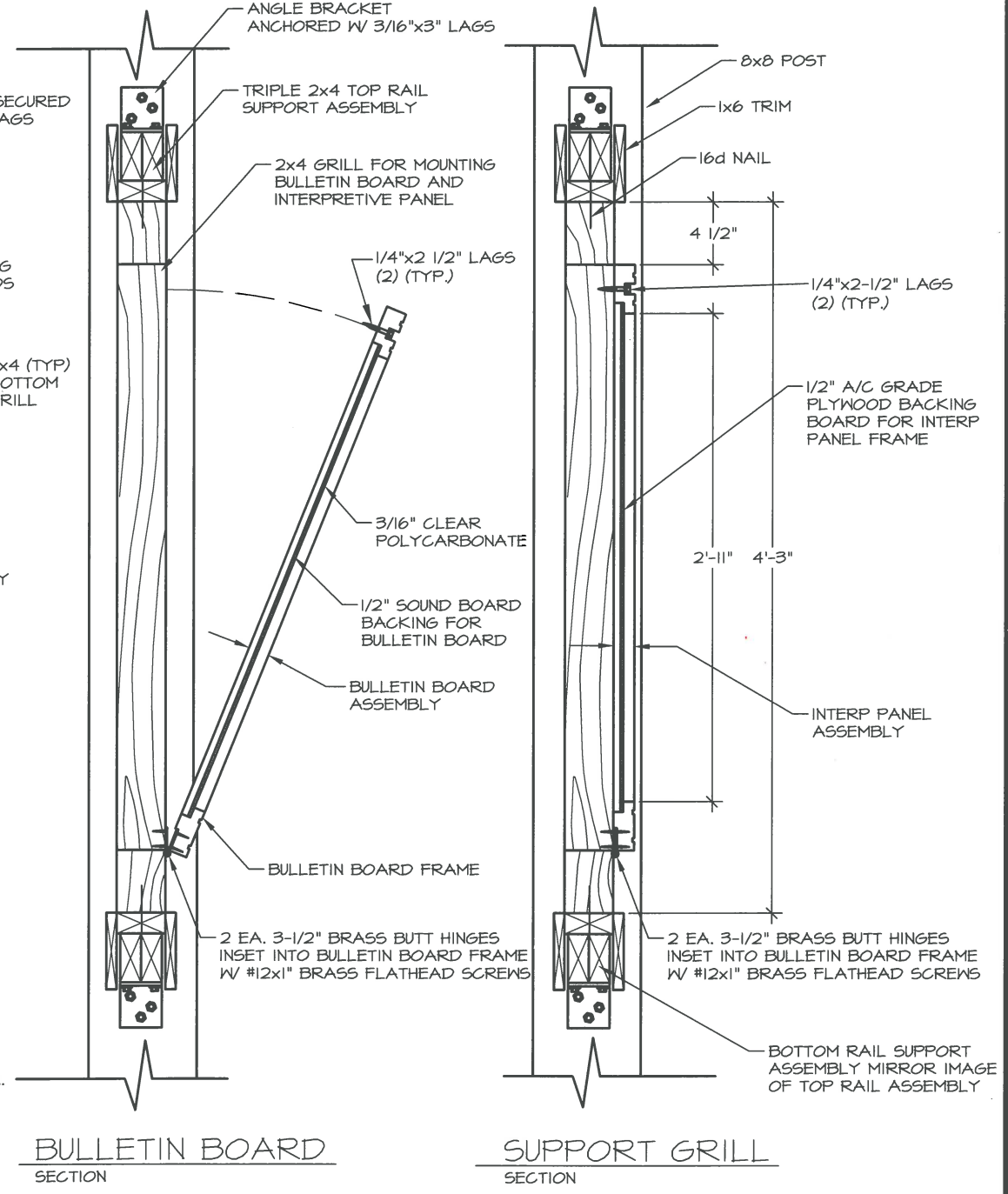




PREPARED: RBM/JAS
 DRAWN: AT/RBM/JAS
 REVIEWED: MPS
 DATE: JAN 2004

SHEET 2

S-10D
 OF 3 SHEETS

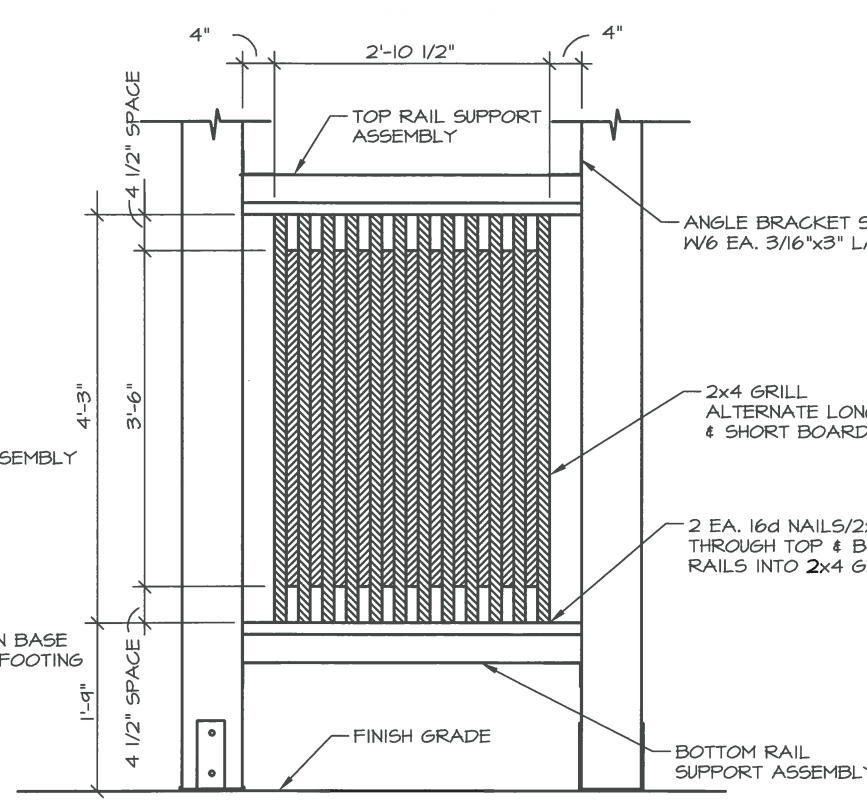


BULLETIN BOARD SECTION

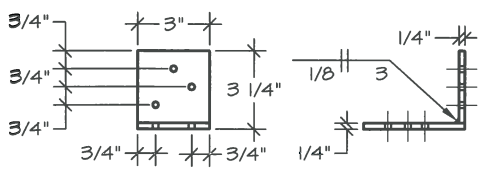
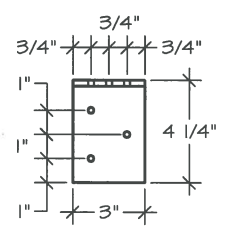
SUPPORT GRILL SECTION

NOTES:
 1. INTERPRETIVE PANEL ASSEMBLY CONSISTS OF INTERPRETIVE GRAPHIC BACKING BOARD AND INTERP PANEL FRAME.
 2. INTERPRETIVE GRAPHIC PANEL SUPPLIED BY OTHERS MEASURES 3'-0 1/2"x2'-6 1/2"x1/8". THE CONTRACTOR SHALL MAKE ACCOMMODATIONS FOR THIS GRAPHIC IN MEASUREMENTS AND CONSTRUCTION.

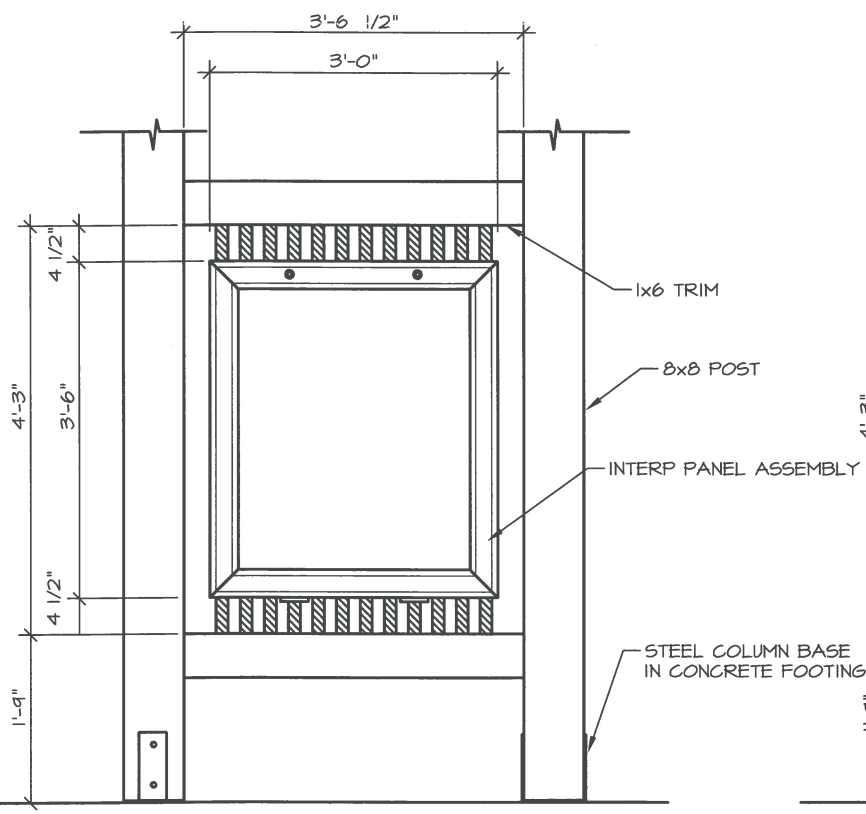
NO.	REVISION	DATE	APPROVED
4	REPLACED STAMP	12/13	RBM
3	CHANGED INTERP FRAME FASTENER SYSTEM	12/10	MPS
2	UPDATED STATE PARK LOGO	12/10	MPS
1	CHANGED TITLE BLOCK	12/07	MPS



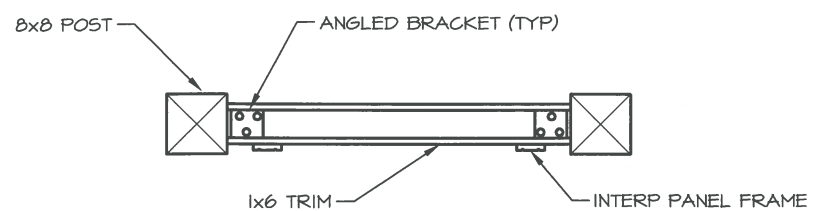
2x4 GRILL
 DETAILS - INTERP PANEL & 1x6 TRIM NOT SHOWN



ANGLE BRACKET
 DETAILS

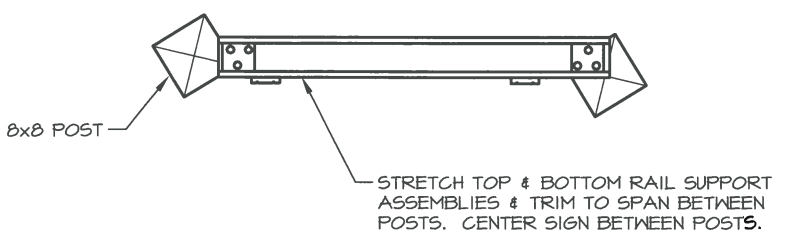


2x4 GRILL W/ INTERP PANEL
 DETAILS

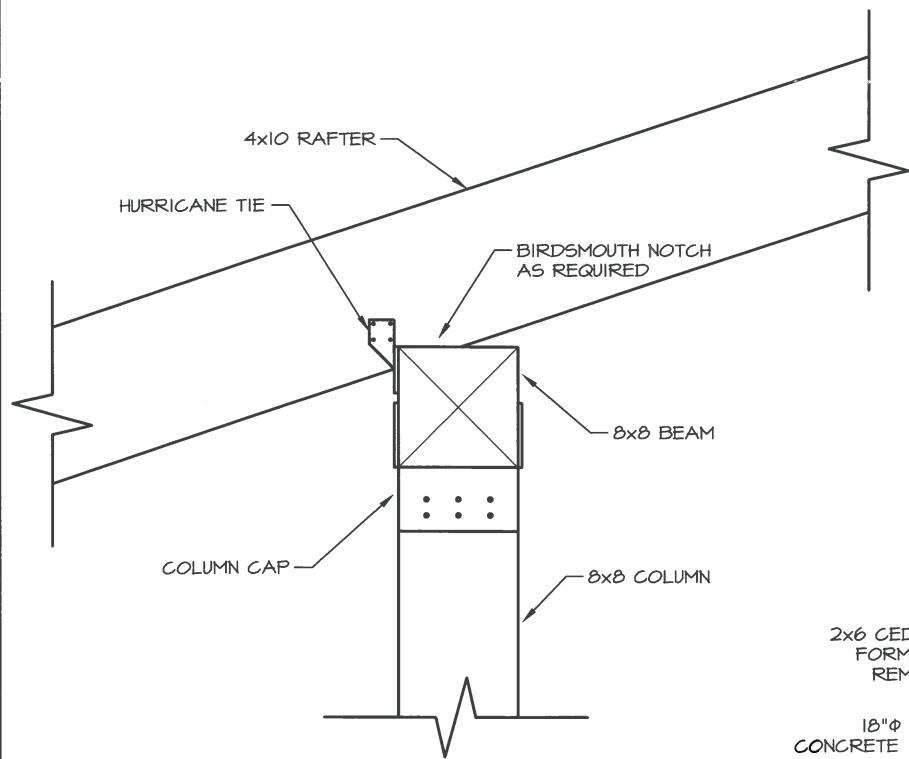


2x4 GRILL
 PLAN - PERPENDICULAR TO POSTS

NOTES:
 1. NOTCH POSTS TO FIT ANGLE BRACKETS & TOP/BOTTOM SUPPORT RAILS.
 2. DO NOT NOTCH POSTS FULL LENGTH OF 2x4 GRILL.

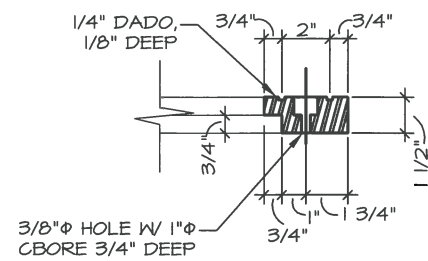


2x4 GRILL
 PLAN - ANGLED TO POSTS

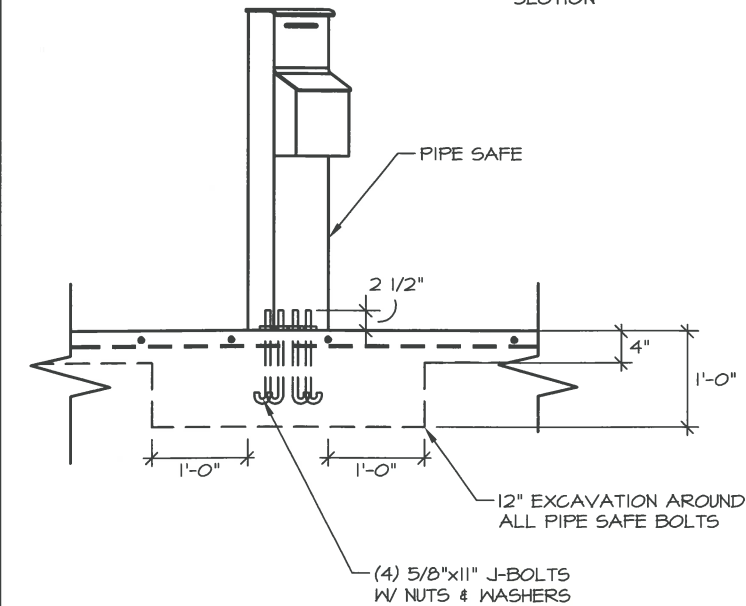


BEAM/RAFTER CONNECTION

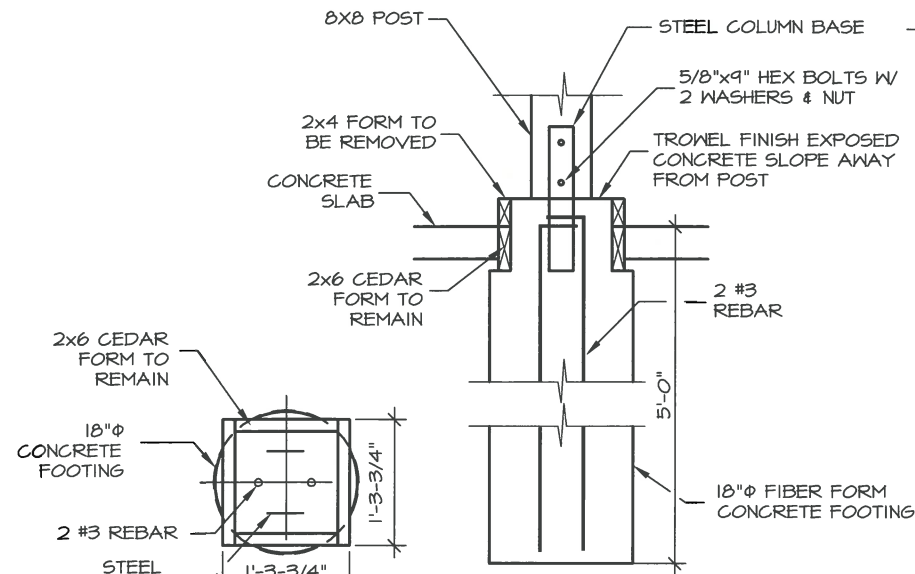
DETAILS - 2x6 T&G DECKING & METAL ROOF NOT SHOWN



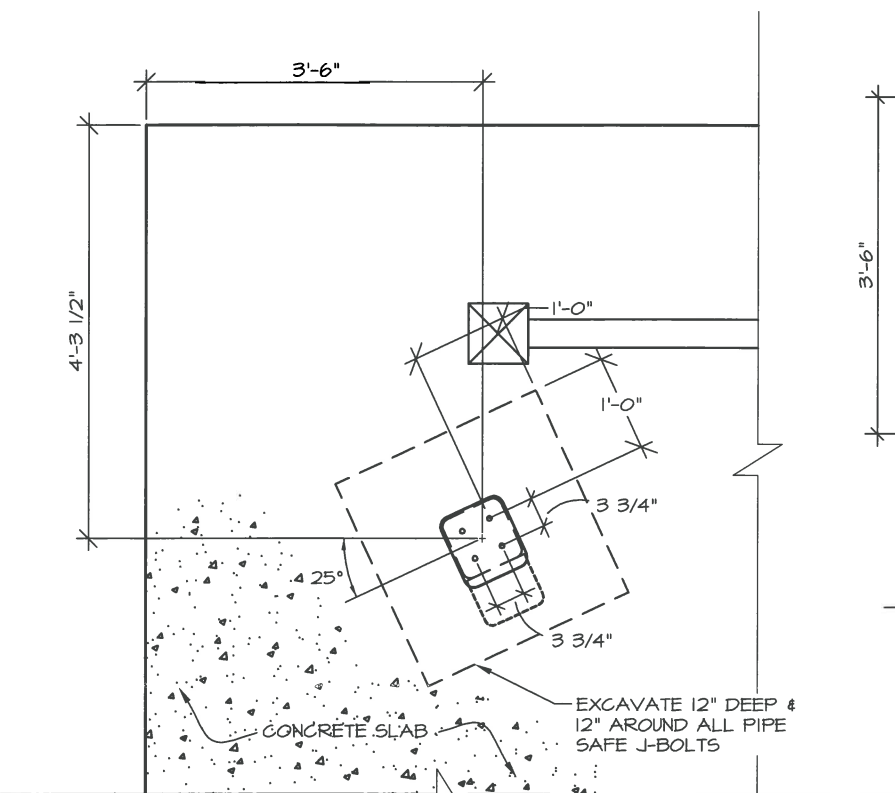
FRAME SECTION



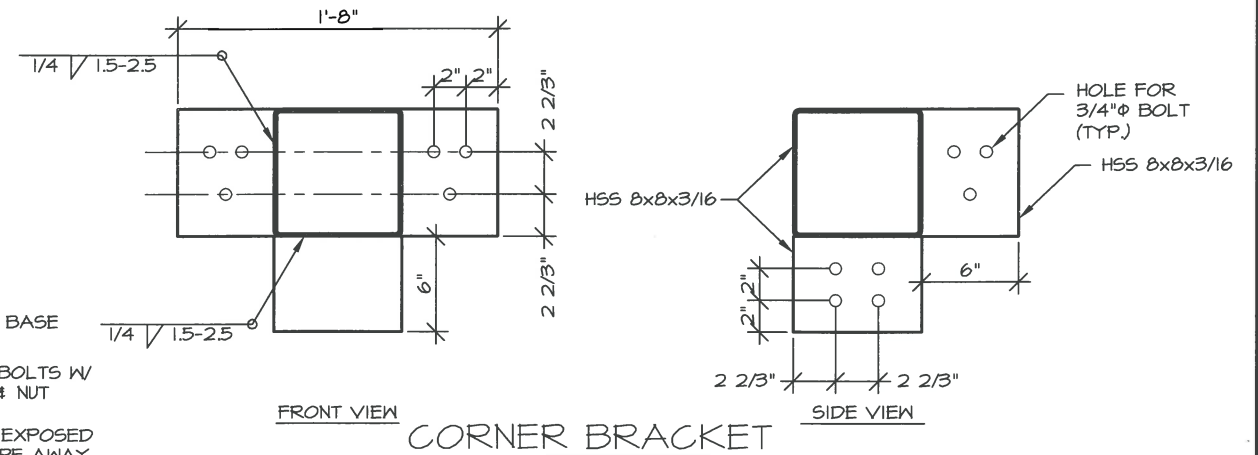
PIPE SAFE DETAILS



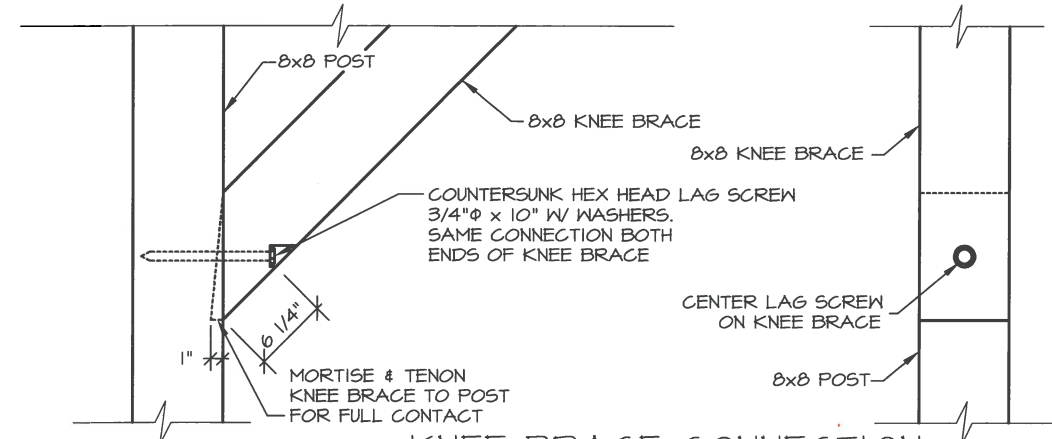
CONCRETE FOOTING DETAIL



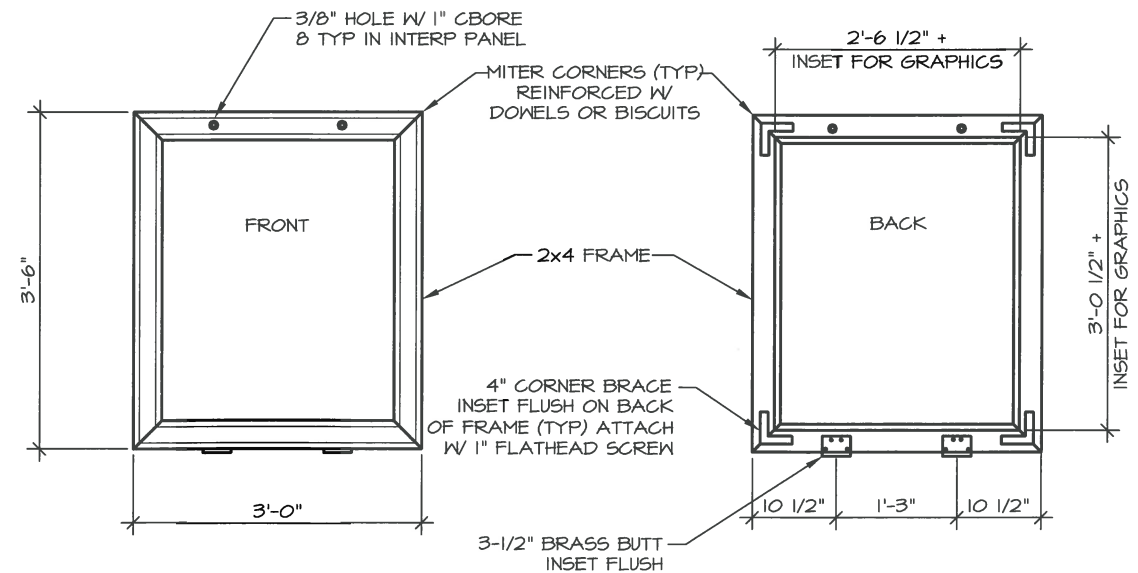
PIPE SAFE BOLT PATTERN DETAILS



CORNER BRACKET DETAIL



KNEE BRACE CONNECTION DETAIL



INTERP PANEL/BULLETIN BOARD FRAME DETAILS

NO.	REVISION	DATE	APPROVED
7	REPLACED STAMP	12/13	RBM
6	INCREASED THE SIZE OF THE J-BOLTS	12/10	MPS
5	ADDED CONCRETE FOOTER DETAIL	12/10	MPS
4	ADDED KNEE BRACE CONNECTION DETAIL	12/10	MPS
3	UPDATED STATE PARK LOGO	12/10	MPS
2	CHANGED TITLE BLOCK	12/07	MPS
1	RELOCATED PIPE SAFE	8/07	MPS

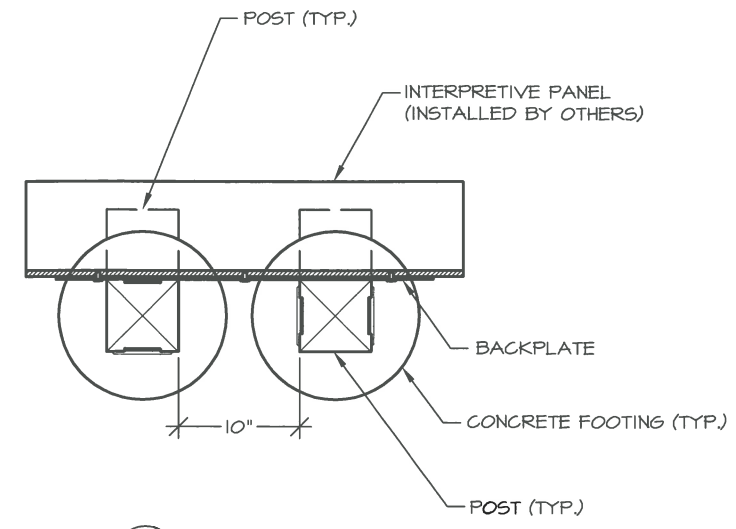




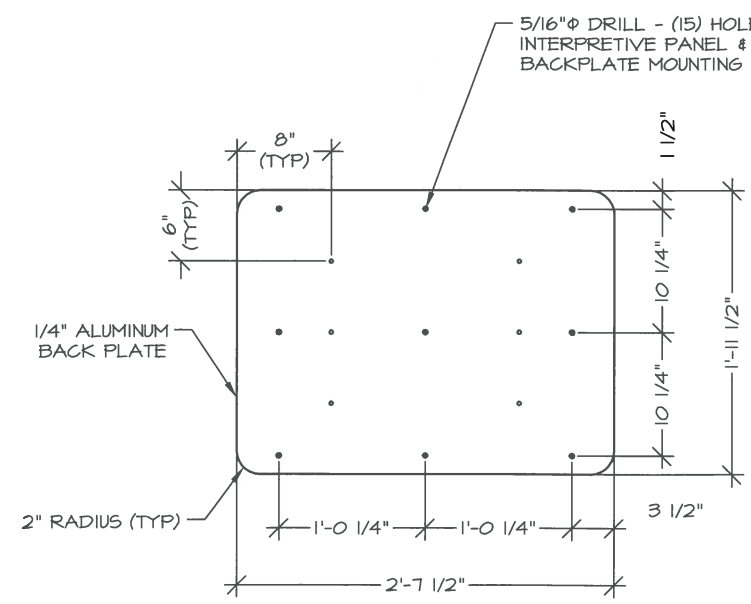
PREPARED: JAM
 DRAWN: JAM
 REVIEWED: D&C
 DATE: 03/18/10

SHEET 1

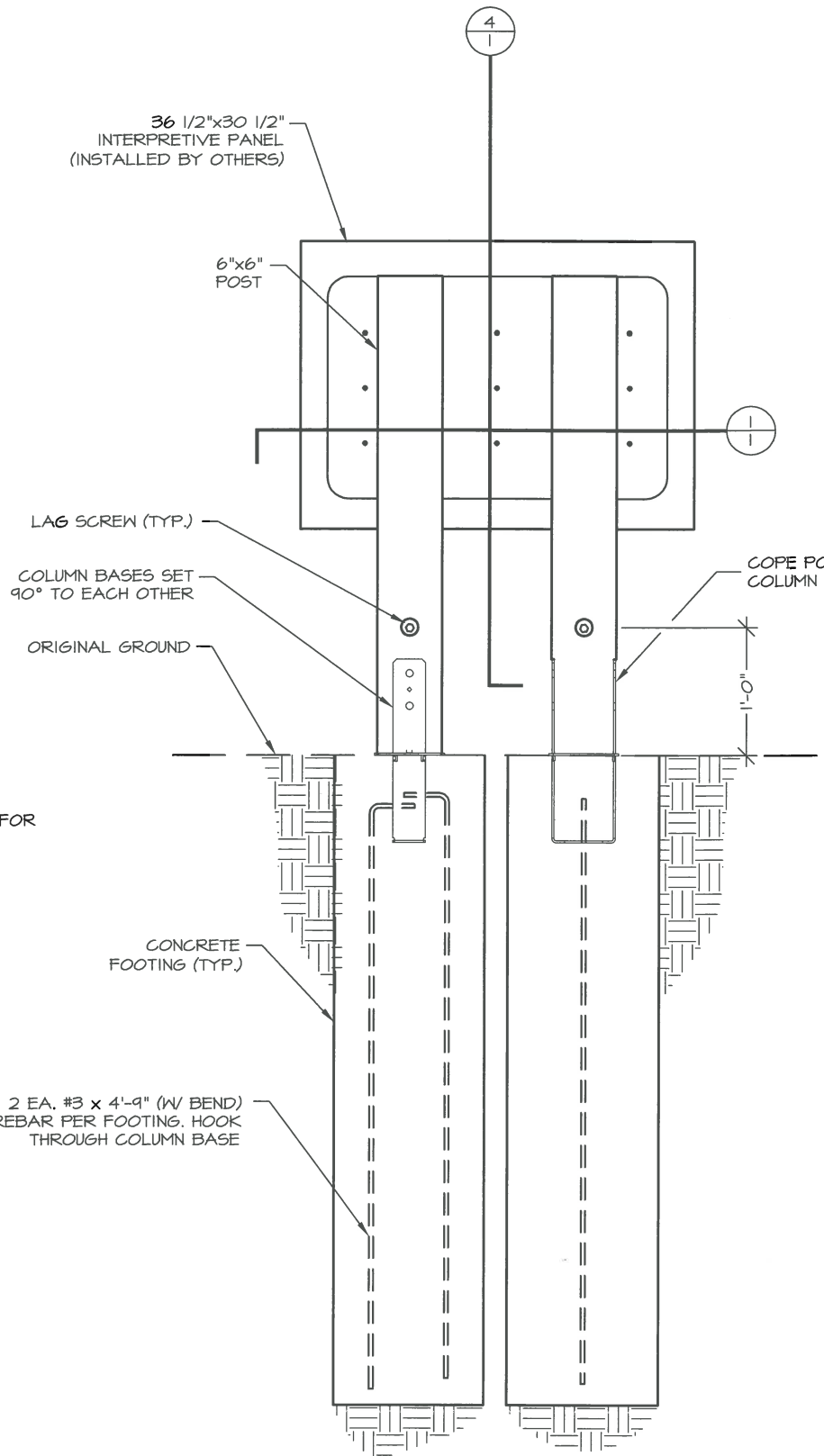
S-11D
 OF 1 SHEETS



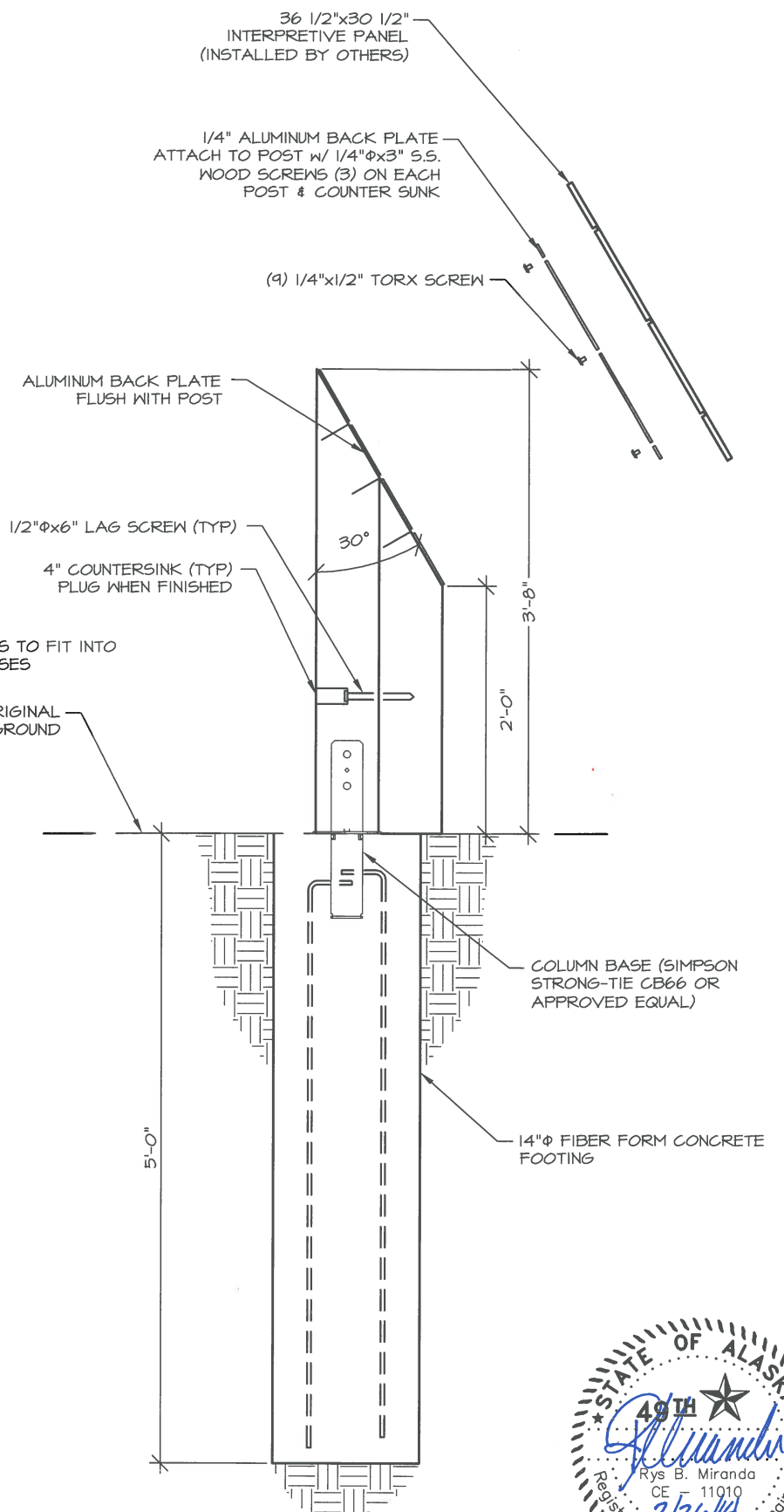
SECTION 1



SECTION 2 ALUMINUM BACK PLATE



SECTION 3 BACK ELEVATION

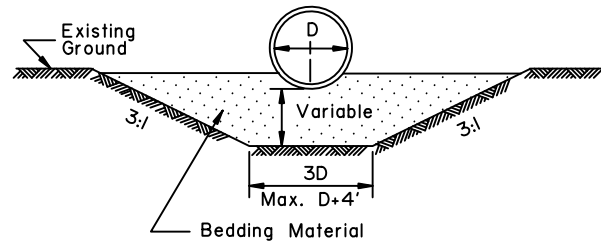


SECTION 4 SECTION

NO.	REVISION	DATE	APPROVED
1	REPLACED STAMP	12/18	REM

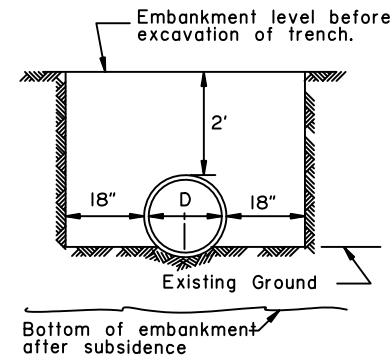
GENERAL NOTES:

1. Sidefill shall be placed and compacted with care under haunches of pipe and shall be brought up evenly and simultaneously on both sides of pipe to 1 foot above the top of the full length of the pipe.
2. Alternate installation methods may only be used when specified or approved by the Engineer.

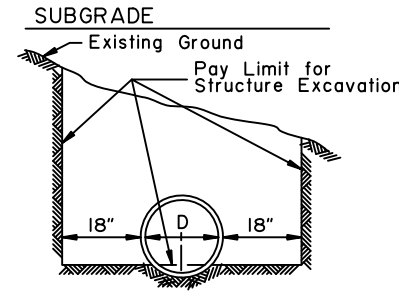


TYPE "A"
FOUNDATION STABILIZATION

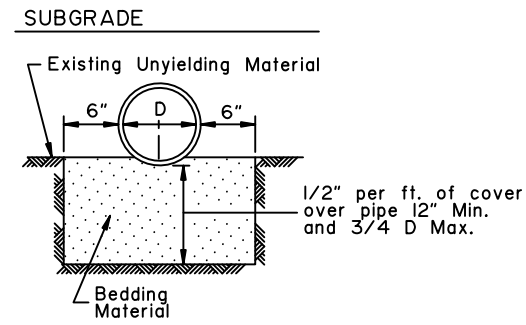
To be used in unstable areas as directed by the Engineer.



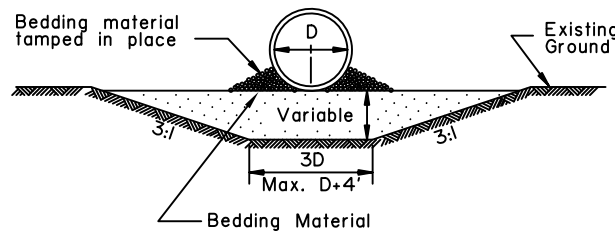
TYPE "B"



TYPE "C"

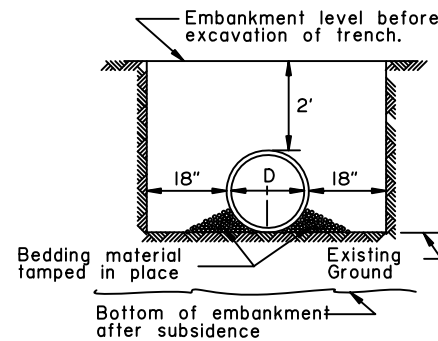


TYPE "D"
ROCK OR UNYIELDING MATERIAL

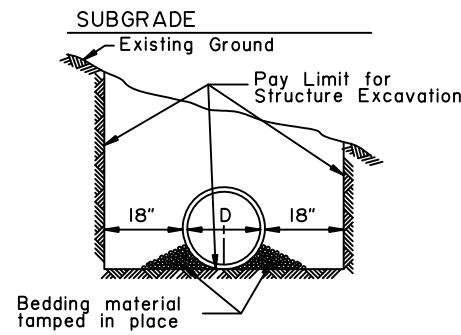


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TYPE "A"
FOUNDATION STABILIZATION

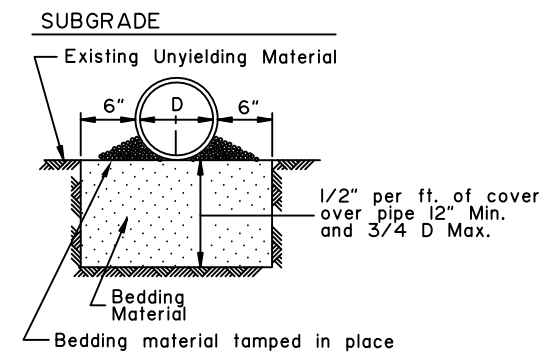
To be used in unstable areas as directed by the Engineer.



'ALTERNATE'
TYPE "B"

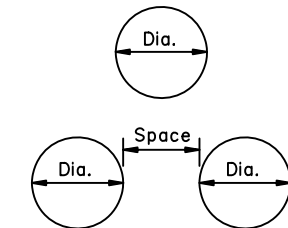


'ALTERNATE'
TYPE "C"



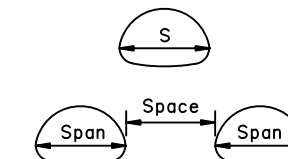
'ALTERNATE' TYPE "D"
ROCK OR UNYIELDING MATERIAL

D = Nominal Pipe Diameter



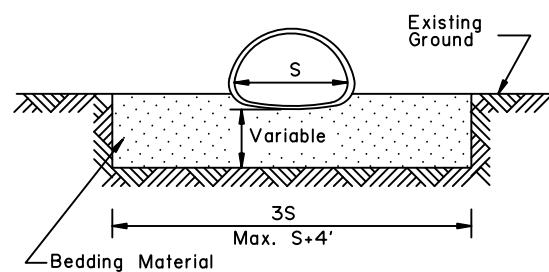
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Dia. of pipe or 3', whichever is less.

S = Nominal Pipe Arch Span



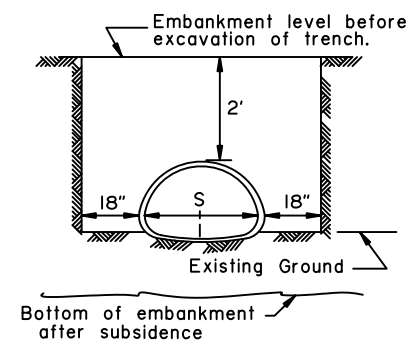
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Span of pipe arch or 3', whichever is less.

CULVERT PIPE

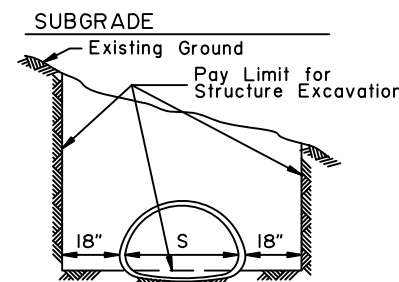


TYPE "A"
FOUNDATION STABILIZATION

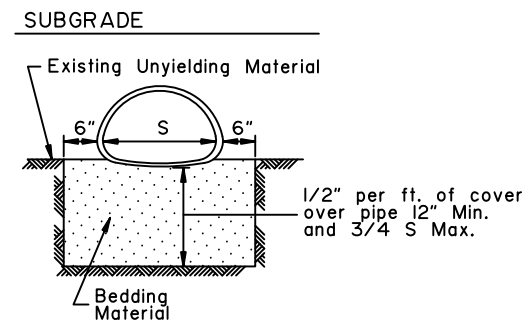
To be used in unstable areas as directed by the Engineer.



TYPE "B"



TYPE "C"



TYPE "D"
ROCK OR UNYIELDING MATERIAL

ARCH

State of Alaska DOT&PF
ALASKA STANDARD PLAN
CULVERT PIPE & ARCH
INSTALLATION DETAILS

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 02/08/2029

GENERAL NOTES:

- All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
- The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
- No more than one type of pipe may be used on any single installation or installation grouping.
- All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
- See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
- Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflection.
- These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100	100+	100+	100+	100+
18	12	83	100+	100+	100+	100+
21	12	71	89	100+	100+	100+
24	12	62	78	100+	100+	100+
27	12		69	97	100+	100+
30	12		62	87	100+	100+
36	12		51	73	94	100+
42	12			62	80	100+
48	12			54	70	85
54	15			48	62	76
60	15				52	64
66	18					52
72	18					43

Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
30	12	57	72	100+	100+	100+
36	12	47	60	84	100+	100+
42	12	40	51	72	96	100+
48	12	35	44	62	84	99
54	15	31	39	55	74	88
60	15	28	35	50	67	79
66	18	25	32	45	61	72
72	18	23	29	41	56	66
78	21		27	38	51	61
84	21			35	48	56
90	24			33	44	52
96	24			31	41	49
102	24				39	46
108	24				37	43
114	24					39
120	24					36

Thickness	0.125		0.150	
Dia. (In)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)
84	18	31		
90	18	27		
96	18	27		
102	18	24		
108	18	24		
114	18	21		
120	24	21		
126	24	19		
132	30	19		
138	30	18		
144	30	18		
150	30		22	
156	30		22	
162	36		20	
168	36		20	

*5.33 - 3/4" dia. steel bolts per foot.

————— CORRUGATED CIRCULAR ALUMINUM PIPE —————

————— CORRUGATED ALUMINUM PIPE-ARCH —————

Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	2 Tons/Sf Corner Bearing Pressure	
				Min. Cover (In)	Max. Cover (Ft)
17	13	3 4/8	16 (0.060)	12	13
21	15	4 1/8	16 (0.060)	12	12
24	18	4 7/8	16 (0.060)	12	12
28	20	5 4/8	14 (0.075)	12	12
35	24	6 7/8	14 (0.075)	12	12
42	29	8 2/8	12 (0.105)	12	12
49	33	9 5/8	12 (0.105)	15	12
57	38	11	10 (0.135)	15	12
64	43	12 3/8	10 (0.135)	18	12
71	47	13 6/8	8 (0.164)	18	12

Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	2 Tons/Sf Corner Bearing Pressure	
				Min. Cover (In)	Max. Cover (Ft)
60	46	18 6/8	14 (0.075)	15	20
66	51	20 6/8	14 (0.075)	18	20
73	55	22 7/8	14 (0.075)	21	20
81	59	20 7/8	12 (0.105)	21	16
87	63	22 7/8	12 (0.105)	24	16
95	67	24 3/8	12 (0.105)	24	16
103	71	26 1/8	10 (0.135)	24	16
112	75	27 6/8	8 (0.164)	24	16

Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	2 Tons/Sf Corner Bearing Pressure
					Max. Cover (Ft)
6-7	5-8	31.75	0.125	24	24
6-11	5-9	31.75	0.125	24	24
7-3	5-11	31.75	0.125	24	18
7-9	6-0	31.75	0.125	24	18
8-5	6-3	31.75	0.125	24	16
9-3	6-5	31.75	0.125	24	15
10-3	6-9	31.75	0.125	30	13
10-9	6-10	31.75	0.125	30	13
11-5	7-1	31.75	0.125	30	13
12-7	7-5	31.75	0.125	30	11
12-11	7-6	31.75	0.125	30	11
13-1	8-2	31.75	0.125	30	11
13-11	8-5	31.75	0.125	36	10
14-8	9-8	31.75	0.125	36	9
15-4	10-0	31.75	0.150	36	8
16-1	10-4	31.75	0.150	36	8
16-9	10-8	31.75	0.150	42	7
17-3	11-0	31.75	0.150	42	7
18-0	11-4	31.75	0.175	42	7
18-8	11-8	31.75	0.175	42	7

*5.33 - 3/4" dia. steel bolts per foot.

State of Alaska DOT&PF
ALASKA STANDARD PLAN
PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

Minimum & Maximum Cover for 2 2/3" x 1/2" Steel Pipe

Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100+	100+	100+	100+	100+
18	12	100+	100+	100+	100+	100+
21	12	100+	100+	100+	100+	100+
24	12	100+	100+	100+	100+	100+
30	12	83	100+	100+	100+	100+
36	12	69	86	100+	100+	100+
42	12	59	74	100+	100+	100+
48	12	51	64	91	100+	100+
54	12		57	80	100+	100+
60	12			72	93	100+
66	12			66	85	100+
72	12				78	95
78	12					84
84	12					73

Minimum & Maximum Cover for 3" x 1" Steel Pipe

Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12			100+	100+	100+
42	12			100+	100+	100+
48	12		74	100+	100+	100+
54	12	53	66	93	100+	100+
60	12	47	59	83	100+	100+
66	12	43	54	76	98	100+
72	12	39	49	69	89	100+
78	12	36	45	64	82	100+
84	12	33	42	59	77	94
90	12	31	39	55	71	87
96	12	29	37	52	67	82
102	18	27	34	49	63	77
108	18		32	46	59	73
114	18		31	43	56	69
120	18		29	41	53	65
126	18			39	51	62
132	18			37	48	59
138	18			36	46	57
144	18			44	54	

Minimum & Maximum Cover for 5" x 1" Steel Pipe

Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12	71	88	100+	100+	100+
42	12	60	76	100+	100+	100+
48	12	53	66	93	100+	100+
54	12	47	59	82	100+	100+
60	12	42	53	74	96	100+
66	12	38	48	67	87	100+
72	12	35	44	62	79	97
78	12	32	40	57	73	90
84	12	30	37	53	68	83
90	12	28	35	49	63	78
96	12	26	33	46	59	73
102	18	24	31	43	56	69
108	18		29	41	53	65
114	18		27	39	50	61
120	18		26	37	47	58
126	18			35	45	55
132	18			33	43	53
138	18			32	41	50
144	18			39	48	

Minimum & Maximum Cover for 6" x 2" Steel Multiplate Pipe*

Gage		12	10	8	7	5	3	1
Thickness		0.111	0.140	0.170	0.188	0.218	0.249	0.280
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
60	12	46	67	87	100	100+	100+	100+
66	12	42	60	79	91	100+	100+	100+
72	12	38	55	73	83	100+	100+	100+
78	12	35	51	67	77	93	100+	100+
84	12	32	47	62	71	86	100+	100+
90	12	30	44	58	67	80	95	100+
96	12	28	41	54	62	75	89	97
102	18	27	39	51	59	71	84	91
108	18	25	37	48	55	67	79	86
114	18	24	35	45	52	63	75	82
120	18	22	33	43	50	60	71	77
126	18	21	31	41	47	57	68	74
132	18	20	30	39	45	54	64	70
138	18	19	28	37	43	52	62	67
144	18	18	27	36	41	50	59	64

*4 - 3/4" dia. steel bolts per foot.

GENERAL NOTES

- All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
- The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
- No more than one type of pipe may be used on any single installation or installation grouping.
- All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
- See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
- Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflection.
- These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

CORRUGATED CIRCULAR STEEL PIPE

CORRUGATED STEEL PIPE-ARCH

Minimum & Maximum Cover for 2 2/3" X 1/2" Steel Pipe-Arch

2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)	
17	13	3 4/8	16 [0.060]	12	11	
21	15	4 1/8	16 [0.060]	12	11	
24	18	4 7/8	16 [0.060]	12	11	
28	20	5 4/8	16 [0.060]	12	11	
35	24	6 7/8	16 [0.060]	12	11	
42	29	8 2/8	16 [0.060]	12	11	
49	33	9 5/8	14 [0.075]	12	11	
57	38	11	12 [0.109]	12	11	
64	43	12 3/8	12 [0.109]	12	11	
71	47	13 6/8	10 [0.138]	12	11	
77	52	15 1/8	10 [0.138]	12	11	
83	57	16 4/8	8 [0.168]	12	11	

Minimum & Maximum Cover for 3" X 1" Steel Pipe-Arch

2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)	
53	41	10 2/8	14 [0.079]	12	10	
60	46	18 6/8	14 [0.079]	15	29	
66	51	20 6/8	14 [0.079]	15	29	
73	55	22 7/8	14 [0.079]	18	18	
81	59	20 7/8	14 [0.079]	18	15	
87	63	22 7/8	14 [0.079]	18	15	
95	67	24 3/8	14 [0.079]	18	15	
103	71	26 1/8	14 [0.079]	18	14	
112	75	27 6/8	14 [0.079]	21	14	
117	79	29 4/8	12 [0.109]	21	14	
128	83	31 2/8	10 [0.138]	24	14	
137	87	33	10 [0.138]	24	14	
142	91	34 6/8	10 [0.138]	24	13	
150	96	36	10 [0.138]	30	13	
157	96	38	10 [0.138]	30	13	
164	105	40	10 [0.138]	30	14	
171	110	41	10 [0.138]	30	13	

Minimum & Maximum Cover for 5" X 1" Steel Pipe-Arch

2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)	
53	41	10 2/8	14 [0.079]	12	10	
60	46	18 6/8	14 [0.079]	15	29	
66	51	20 6/8	14 [0.079]	15	29	
73	55	22 7/8	14 [0.079]	18	18	
81	59	20 7/8	14 [0.079]	18	15	
87	63	22 7/8	14 [0.079]	18	15	
95	67	24 3/8	14 [0.079]	18	15	
103	71	26 1/8	14 [0.079]	18	14	
112	75	27 6/8	14 [0.079]	21	14	
117	79	29 4/8	12 [0.109]	21	14	
128	83	31 2/8	10 [0.138]	24	14	
137	87	33	10 [0.138]	24	14	
142	91	34 6/8	10 [0.138]	24	13	
150	96	36	10 [0.138]	30	13	
157	96	38	10 [0.138]	30	13	
164	105	40	10 [0.138]	30	14	
171	110	41	10 [0.138]	30	13	

Minimum & Maximum Cover for Steel Multiplate Pipe-Arch 6" x 2" *

2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Gage (In)	Min. Cover (In)	Max. Cover (Ft)	
6-1	4-7	18	12 [0.111]	12	14	
7-0	5-1	18	12 [0.111]	12	12	
7-11	5-7	18	12 [0.111]	12	10	
8-10	6-1	18	12 [0.111]	18	9	
9-9	6-7	18	12 [0.111]	18	8	
10-11	7-1	18	12 [0.111]	18	6	
11-10	7-7	18	12 [0.111]	18	5	
12-10	8-4	18	12 [0.111]	24	5	
13-3	9-4	31	10 [0.140]	24	11	
14-2	9-10	31	10 [0.140]	24	10	
15-4	10-4	31	10 [0.140]	24	9	
16-3	10-10	31	10 [0.140]	30	8	
17-2	11-4	31	10 [0.140]	30	8	
18-1	11-10	31	10 [0.140]	30	7	
19-3	12-4	31	10 [0.140]	30	7	
19-11	12-10	31	10 [0.140]	30	6	
20-7	13-2	31	10 [0.140]	36	6	

*4 - 3/4" dia. steel bolts per foot.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

GENERAL NOTES

1. All materials and workmanship shall be in accordance with the State of Alaska Standard Specifications for Highway Construction.
2. For foundation and structural backfill details see Standard Plan D-01 "Culvert Pipe & Arch Installation Details".
3. Pipe cover height is measured from top of the pipe to top of rigid pavement, or to the bottom of subgrade for flexible pavement. In all cases the minimum cover shall be no less than 2 ft. Where loads traverse the culvert during construction minimum cover shall be no less than 4 ft.

Maximum Cover for Type S Corrugated Polyethylene Pipe	
Size (in)	Max. Cover (ft)
12	24
15	25
18	24
24	20
30	20
36	18
42	16
48	17

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

GENERAL NOTES

- All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
- The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
- No more than one type of pipe may be used on any single installation or installation grouping.
- All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
- See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
- Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
- These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

Minimum & Maximum Cover for Aluminum Spiral Rib Circular Pipe*					
Gage		16	14	12	10
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	43	61		
21	12	38	52	84	
24	12	33	45	73	
30	15	26	36	58	
36	18	21	30	49	69
42	21		25	41	59
48	24			36	51
54	24			32	46
60	24			29	41
66	24				37
72	30				34

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations

Minimum & Maximum Cover for Aluminum Spiral Rib Pipe-Arch*					
Gage		16	14	12	10
Thickness		0.060	0.075	0.105	0.135
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)		
20	16	12	16		
23	19	12	15		
27	21	15	13	13	
33	26	18	13	13	13
40	31	21		13	13
46	36	24			13
53	41	24			13
60	46	24			13
66	51	24			13

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations

ALUMINUM SPIRAL RIB PIPE

STEEL SPIRAL RIB PIPE

Minimum & Maximum Cover for Steel and Aluminized Steel Spiral Rib Circular Pipe*					
Gage		16	14	12	10
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	91			
24	12	68	95	100+	
30	12	54	76	100+	
36	12	45	63	100+	
42	12	38	54	90	
48	12	33	47	79	
54	18	30	42	70	
60	18	27	38	63	92
66	18	24	34	57	83
72	18		31	52	76
78	24		29	48	70
84	24		27	45	65
90	24			42	61
96	24			39	56
102	30			36	50
108	30			32	45

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations.

Minimum & Maximum Cover for Steel Spiral Rib Pipe-Arch*					
2 Tons/Sf Corner Bearing Pressure					
Thickness		0.064	0.079	0.109	
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)		
20	16	12	13		
23	19	12	13		
27	21	12	11		
33	26	12	11		
40	31	12	11		
46	36	12	11		
53	41	18		11	
60	46	18		19	
66	51	18		19	
73	55	18			18
81	59	18			15
87	63	18			15
95	67	18			15

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

GENERAL NOTES:

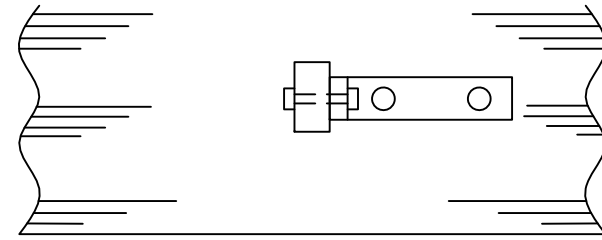
- I. Culvert marker post shall be installed with galvanized steel hardware meeting the following requirements: Galvanizing for nuts and washers shall meet the requirements of ASTM A-153, Class C. Galvanizing for steel mounting supports shall meet the requirements of MIL-P-26915A, or ASTM A-153, Class C.

O
 23 + 45
 18" x 48"
 O

Sta. and size of Culvert to be stamped into a 2"x4"x0.064" thick brass plate, fastened, with No. 8 round head brass screws, to the marker post as shown. Plate to be on side of post facing traffic.

DIRECTION OF TRAFFIC

Shoulder of Road

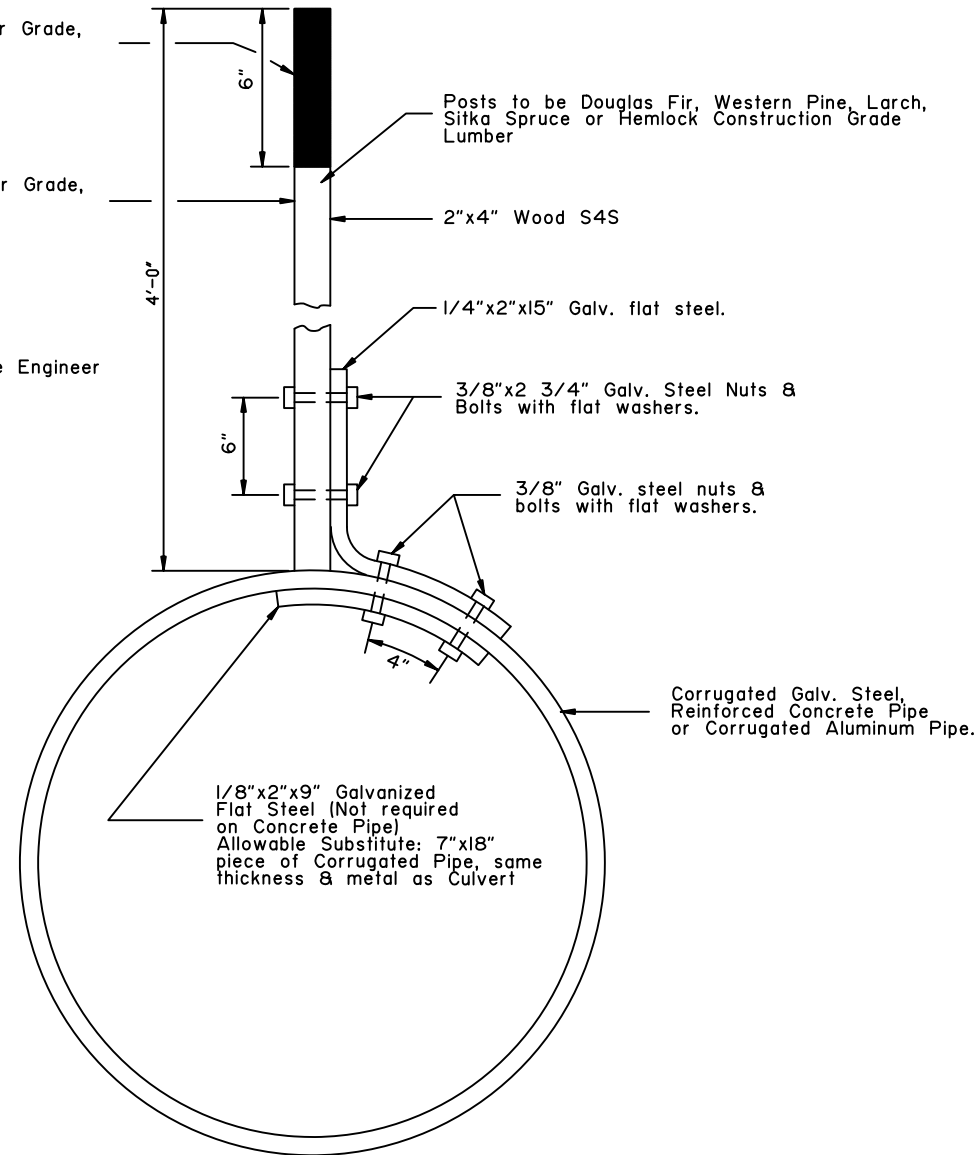


TOP VIEW

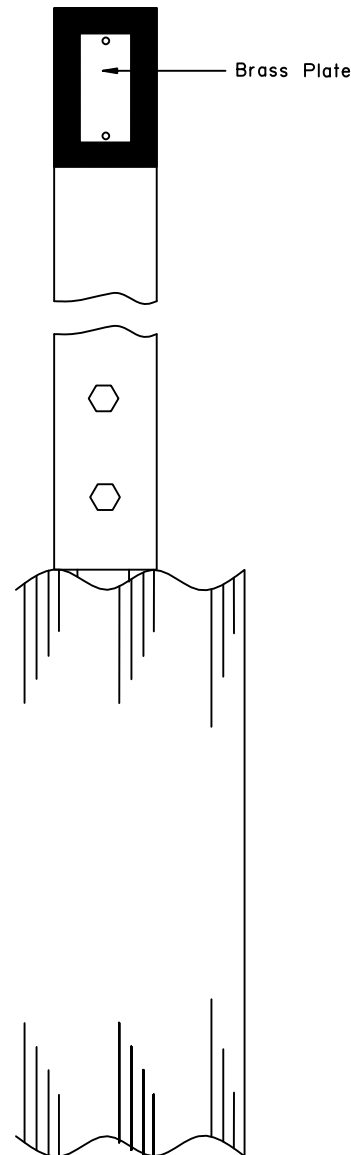
* Black Paint, Exterior Grade, Semi Gloss Enamel.

* White Paint, Exterior Grade, Semi Gloss Enamel

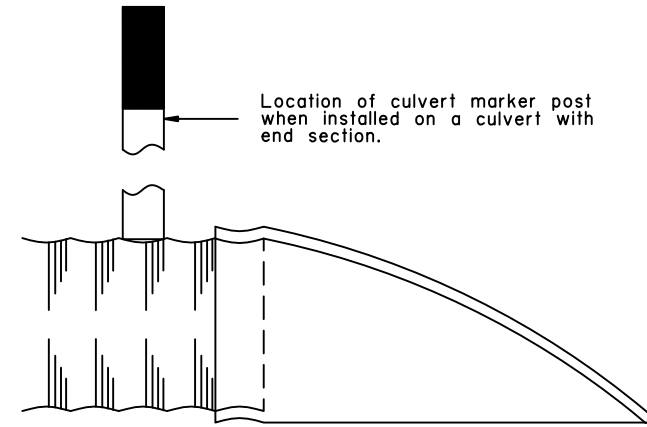
* As approved by the Engineer



END VIEW



SIDE VIEW



END SECTION SIDE VIEW

State of Alaska DOT&PF
ALASKA STANDARD PLAN

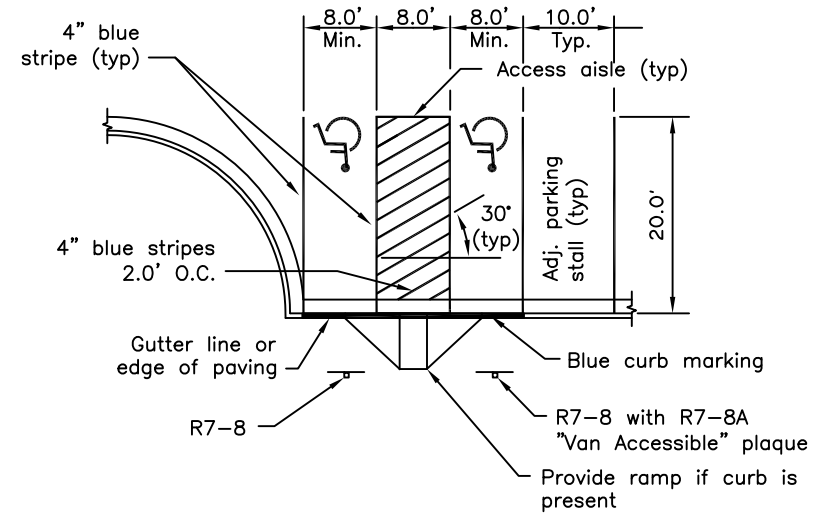
CULVERT MARKER POST

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

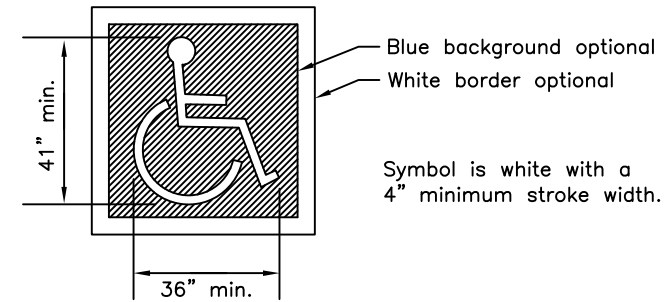
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 02/08/2029



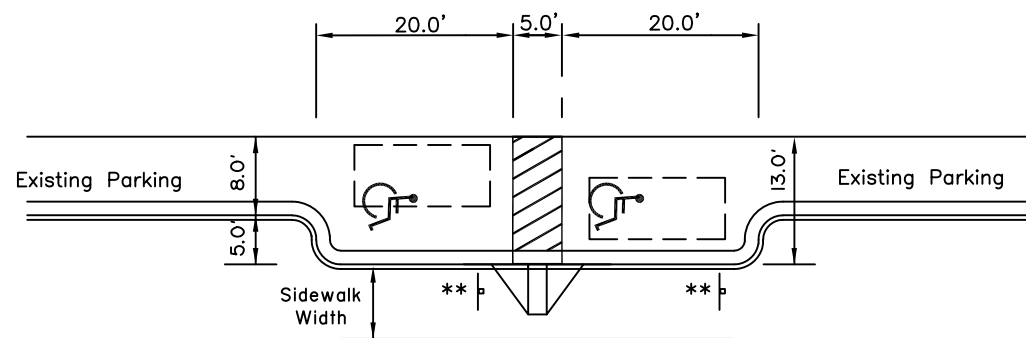
PARKING LOT ACCESSIBLE PERPENDICULAR PARKING



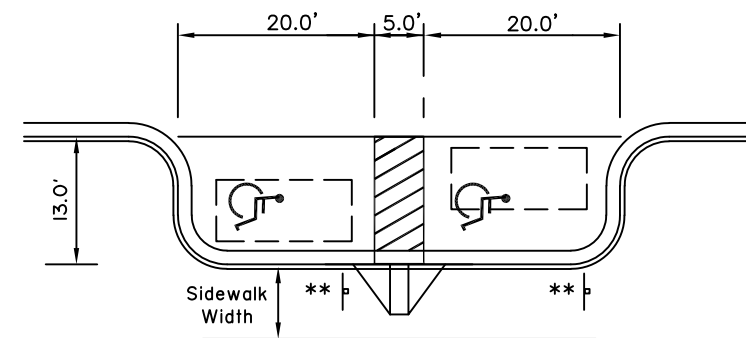
PAVEMENT MARKING SYMBOL DETAIL

GENERAL NOTES:

1. Accessible aisles and accessible routes and those pathways leading from the accessible parking space to the sidewalk shall be free of any obstructions, fixtures or loose surfaces.
2. See standard drawing I-20, I-21, I-22 for curb and curb ramp details.
3. All curb ramps shall be constructed of concrete.
4. The slope for all accessible parking spaces, van accessible parking spaces and access aisles shall not exceed 50:1 in any direction.
5. Although only perpendicular ramps are shown, either parallel or perpendicular ramps are allowable, space permitting.



ACCESSIBLE ON-STREET PARALLEL PARKING PARTIAL INSET



ACCESSIBLE ON-STREET PARALLEL PARKING FULL INSET

ON-STREET PARALLEL PARKING NOTES

1. The 13' width provides for 8' wide parking with a 5' wide access aisle on either side of a car.
2. Add a new curb ramp and 5' aisle between parking places for each additional two accessible parking spaces.
3. Parking spaces may be made van accessible by providing an unobstructed 8' sidewalk width next to each parking space. Ensure curb ramps, parking meters, sign posts, etc. do not encroach on the area where a van's lift would operate.
4. In some cases, ADAAG may allow normal-width parking spaces at the beginning and end of blocks to be designated as accessible. See the latest ADAAG.

** R7-8 "Reserved Parking" and, where appropriate (see note 3), R7-8A, "Van Accessible".

State of Alaska DOT&PF
ALASKA STANDARD PLAN

ACCESSIBLE PARKING

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

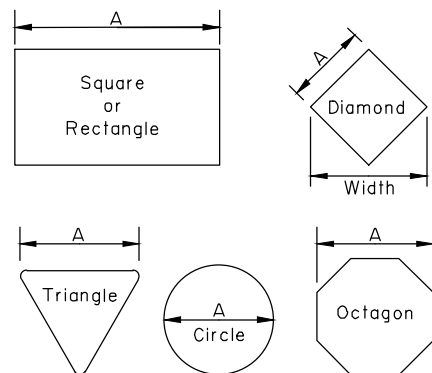
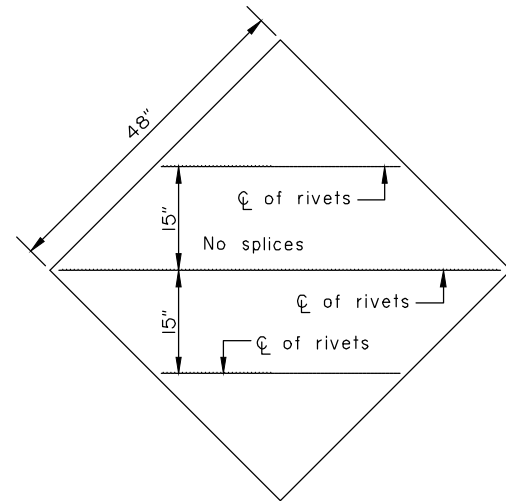
Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

Next Code and Standards Review date: 02/08/2029

GENERAL NOTES

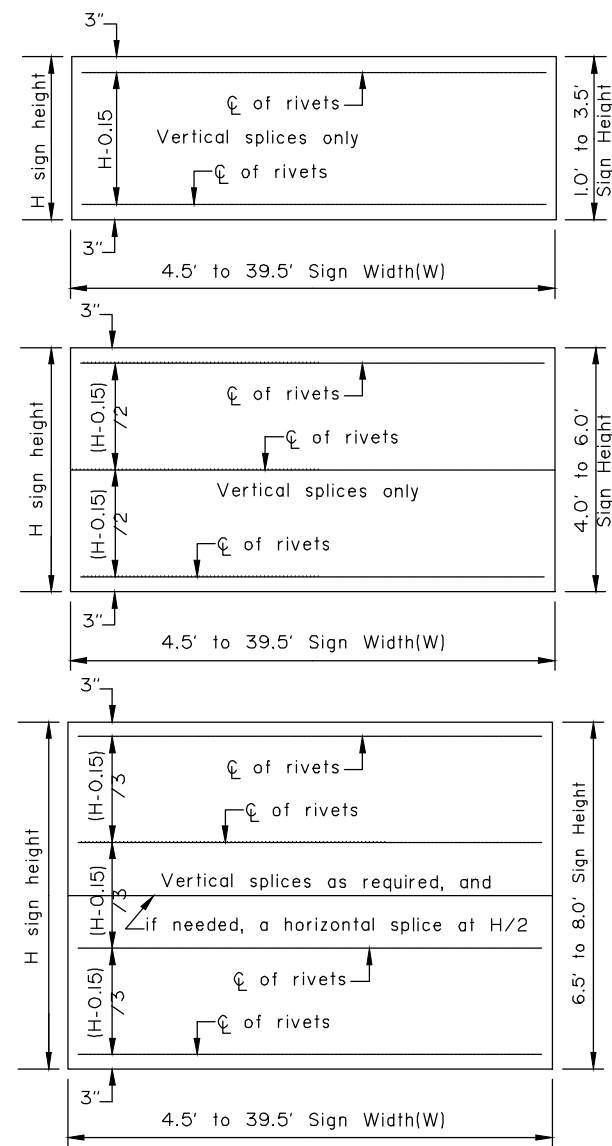
1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer certifies their design equals or exceeds the strength of the zee shaped design.
4. Install one piece wind framing members on all signs up to 23.5' wide. Use one splice in each wind frame on all signs wider than 23.5'. Locate splices at least 18" from all posts and panel edges. Stagger splices in adjacent framing members at least 8.0' apart.
5. Attach wind framing members with rivets or with an engineer approved, double sided, high strength, adhesive tape. Clean and handle sheeting and framing members and apply tape in accordance with the tape manufacturer's written instructions. Install two rivets in both ends of each framing member.
6. Use 3/16" diameter rivets conforming to aluminum alloy 6061-T6 for cold driven rivets, or aluminum alloy 6061-T43 for hot driven rivets.
7. Sign fabricators may use sign panels extruded with integral framing with approval of the engineer, if the manufacturer certifies their design equals or exceeds the strength of the 0.125" thick panel with framing attached to it.
8. Frame all signs taller than 8.0' with five wind framing members located (H-0.15)/4 spaces. If needed, make a horizontal splice at the middle wind frame.
9. Do not use round pipes for sign supports.



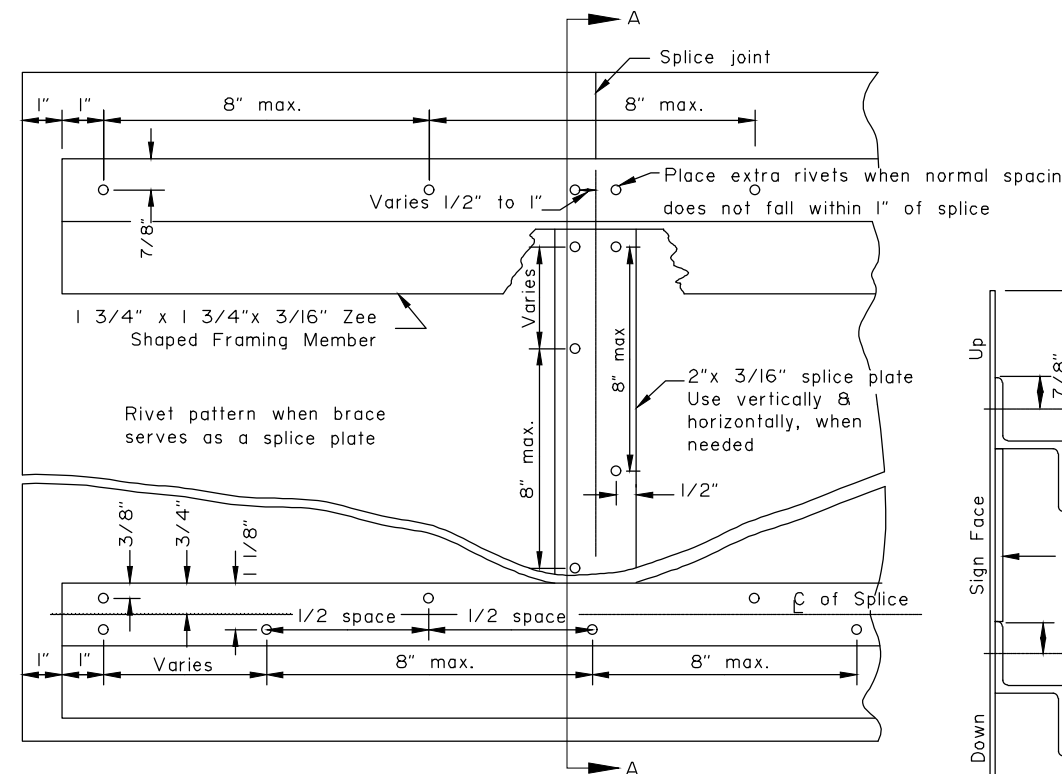
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

Install wind framing on all signs that exceed the dimensions listed.

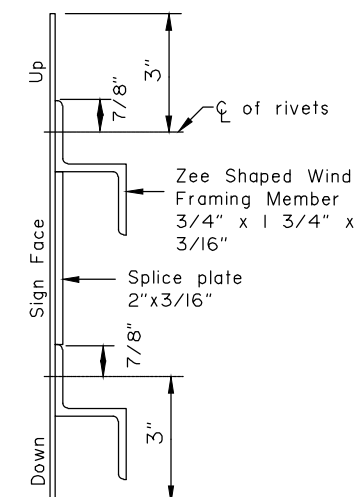
LIGHT SIGNS



WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

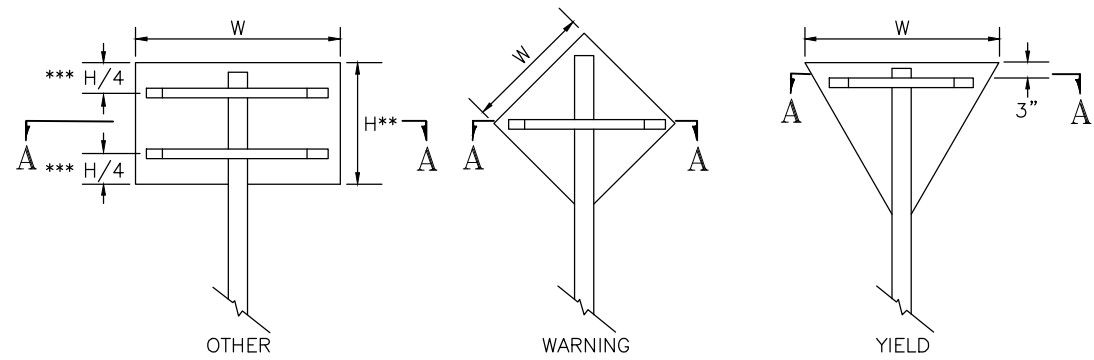
State of Alaska DOT&PF
ALASKA STANDARD PLAN
SIGN FRAMING

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: WTH Date: 7/8/2020

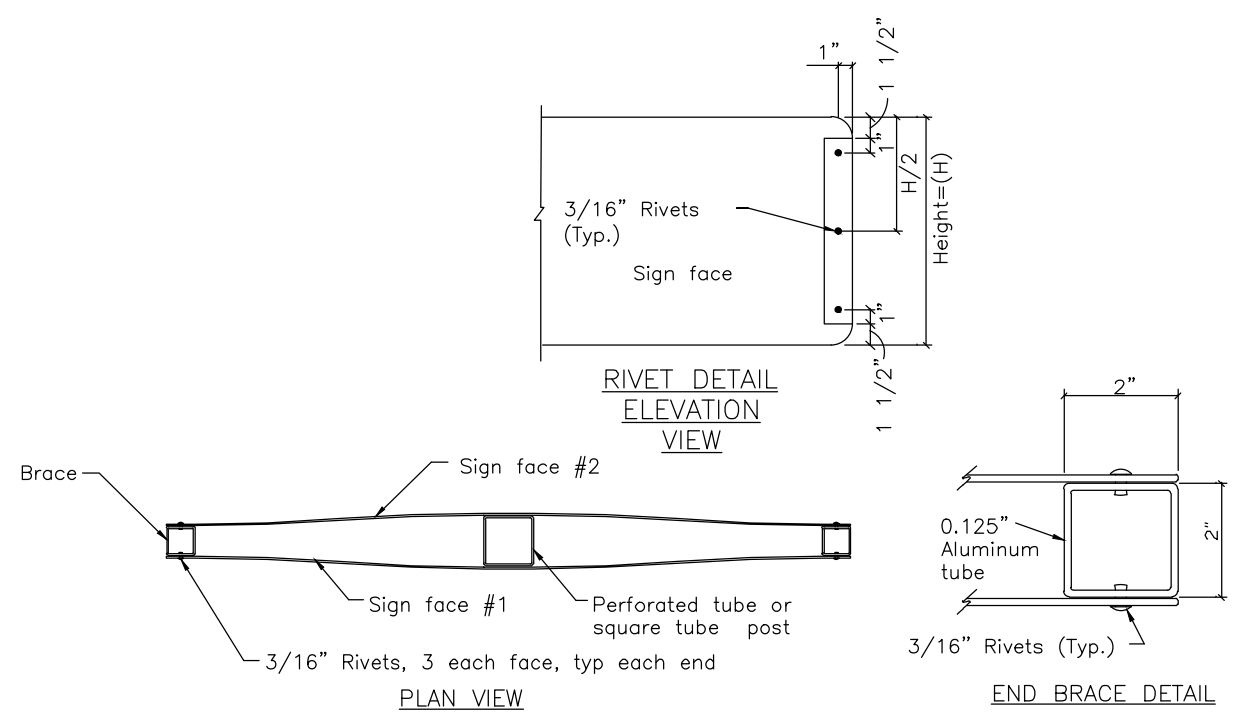
Next Code and Standards Review date: 7/8/2030



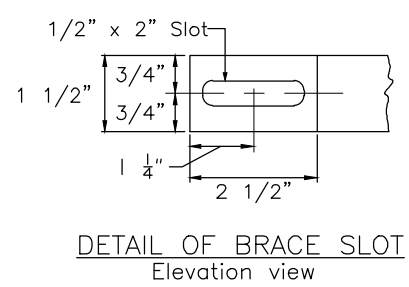
*** Use one brace when $H \leq 18"$
 Use two braces when $18" < H < 48"$
 Use three braces when $H \geq 48"$

** Position of brace may be varied to match
 Pre-drilled mounting holes in panel

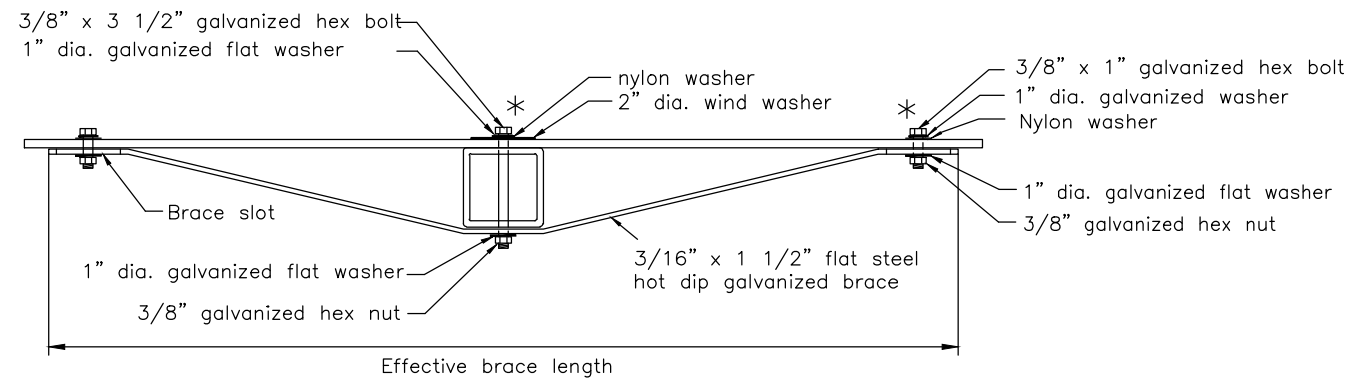
SIGN BRACING PLACEMENT



SMALL STREET NAME SIGN (D3-1, D3-1A, D3-1D) BRACING DETAILS



DETAIL OF BRACE SLOT
Elevation view



TUBE POST SIGN BRACING SECTION A-A
Plan view

* Adjust location of bracing so that bolts and washers will miss the sign legend

Sign Width(W)	Effective Brace Length		
	Warning	Yield	Other
30"	36"	24"	24"
36"	42"	30"	30"
42"	48"	-	36"
48"	Two posts	36"	42"

< 30" No bracing required and use square tube

Note: Drawing not to scale

State of Alaska DOT&PF
 ALASKA STANDARD PLAN

BRACING FOR SIGNS
 MOUNTED ON SINGLE POST

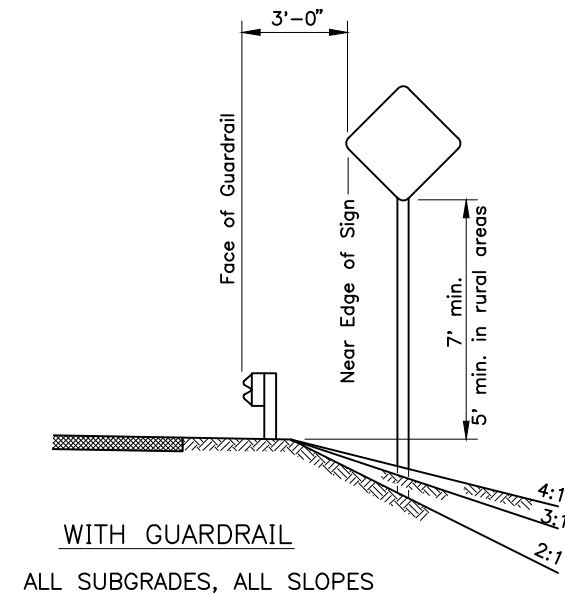
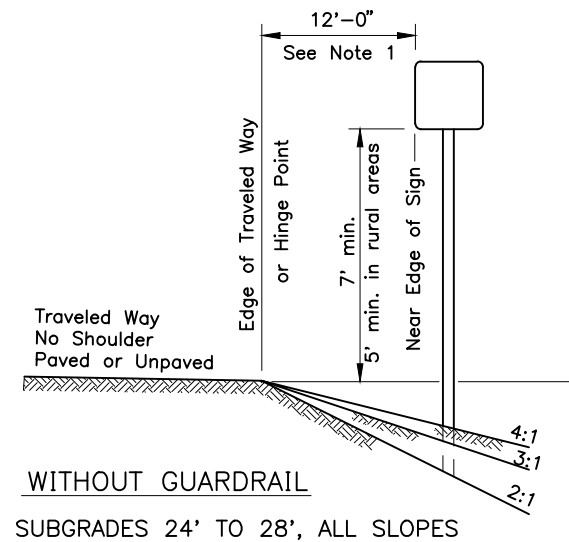
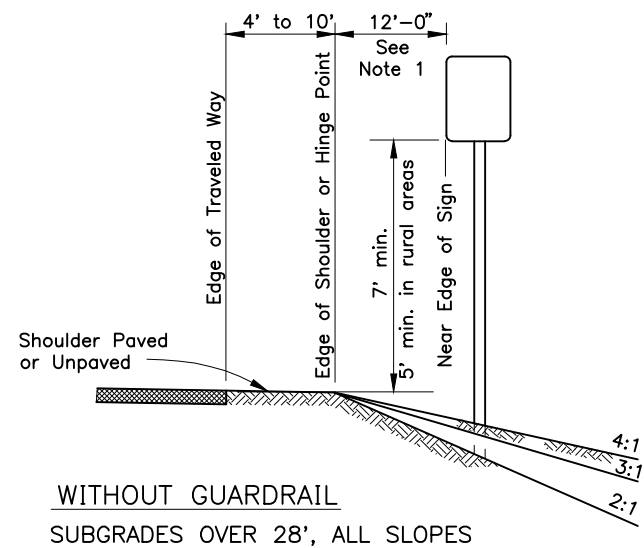
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
 Carolyn Morehouse, P.E.
 Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
 By: WTH Date: 7/8/2020

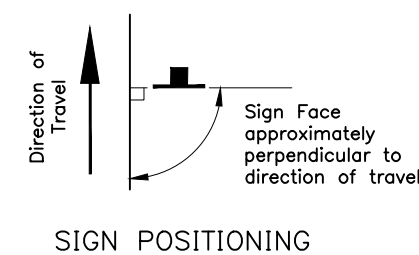
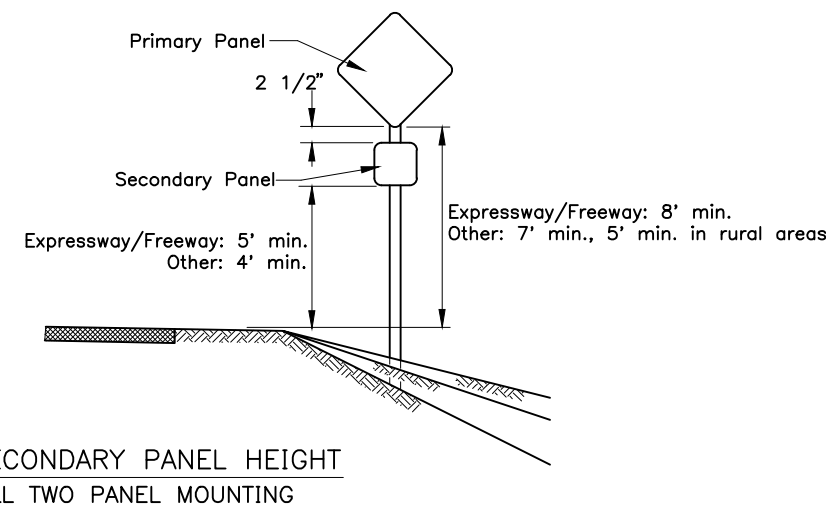
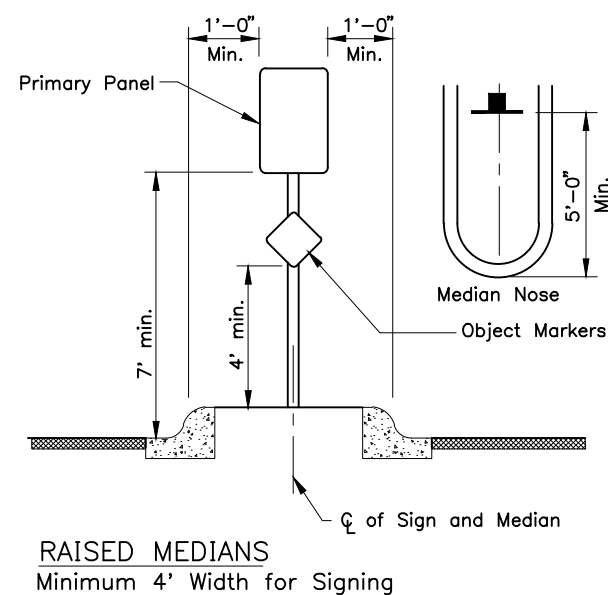
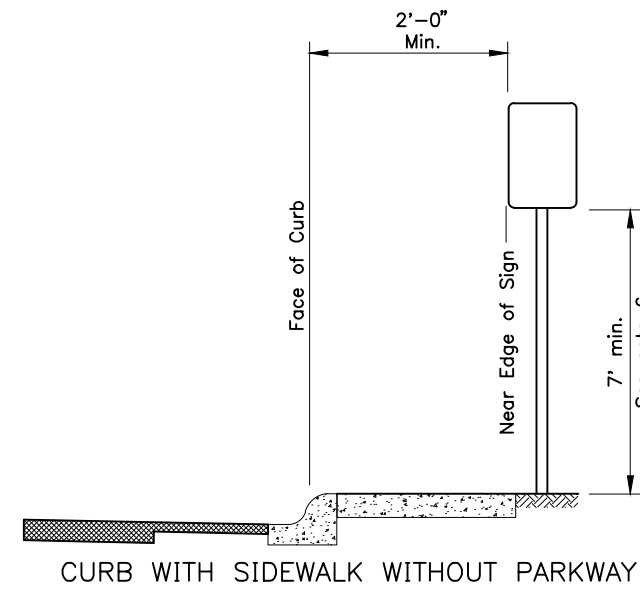
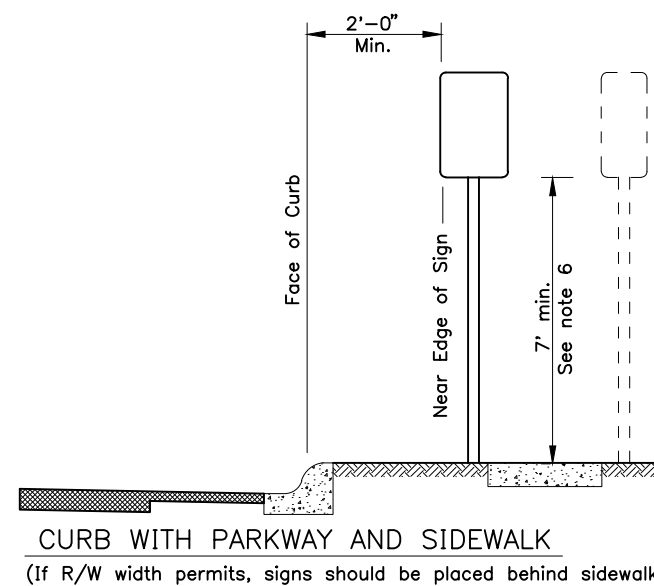
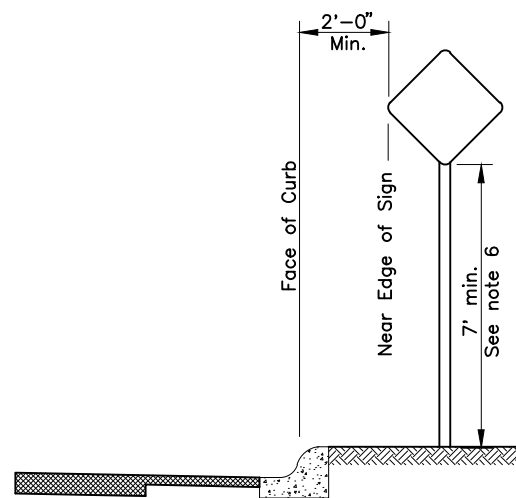
Next Code and Standards Review date: 7/8/2030

S-01.02



GENERAL NOTES

1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6' where shoulder width is 6' or greater.
2. Add 6" to mounting height on unpaved roads.
3. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
4. When signs are placed 30' or more from the edge of traveled way, mount them with the bottom of the sign at least 5' above the road surface at the near edge of the road.
5. When multiple hinged sign supports are used, mount hinges at least 7' above the ground.
6. Minimum mounting height is 7'-0" where parking or pedestrian movements are likely to occur, or where signs extend over sidewalks.
7. For construction signs in rural areas, mounting height shall be 7' minimum.



State of Alaska DOT&PF
ALASKA STANDARD PLAN

POST MOUNTED SIGN
OFFSET AND HEIGHT

Adopted as an Alaska Standard Plan by *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

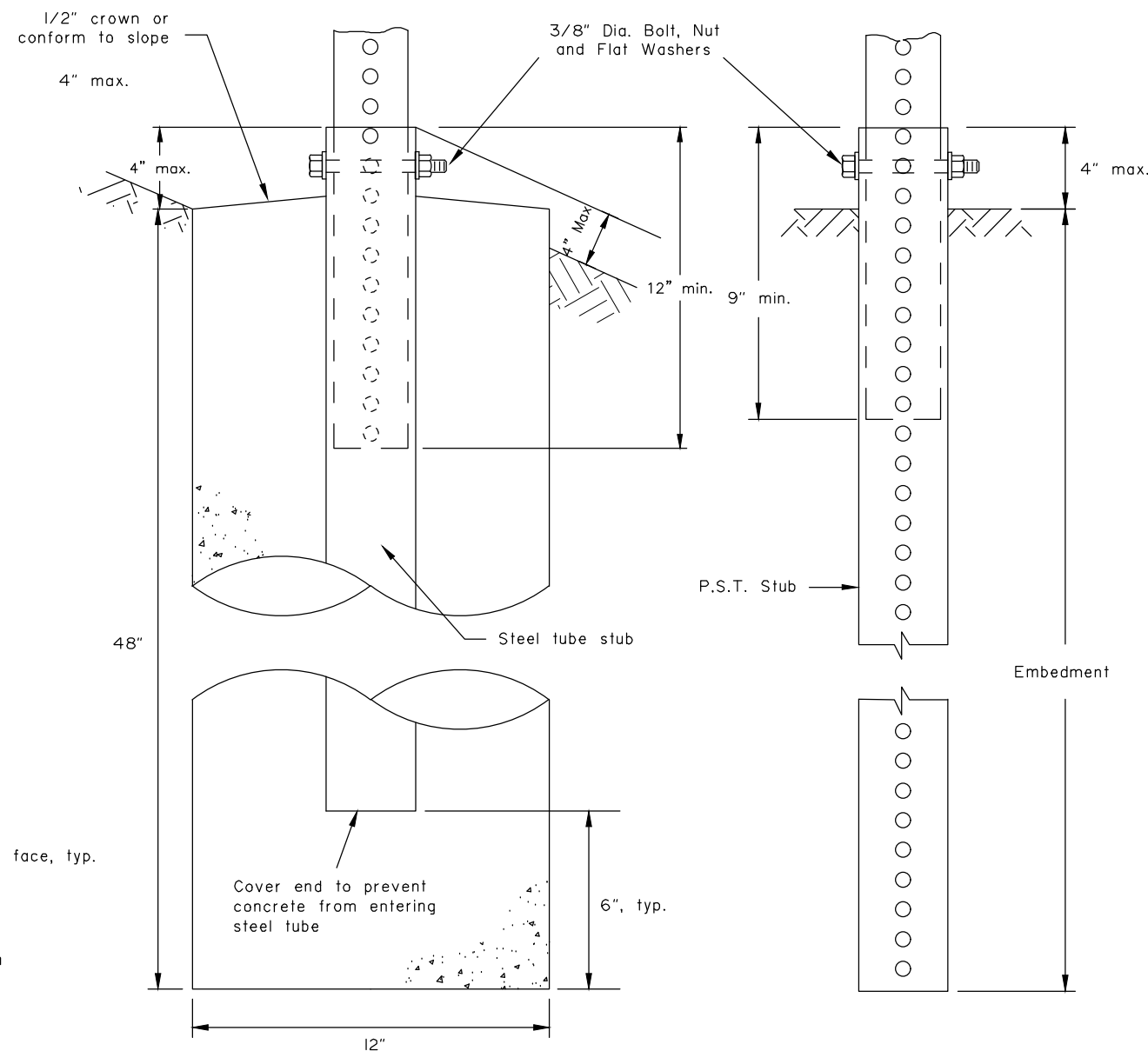
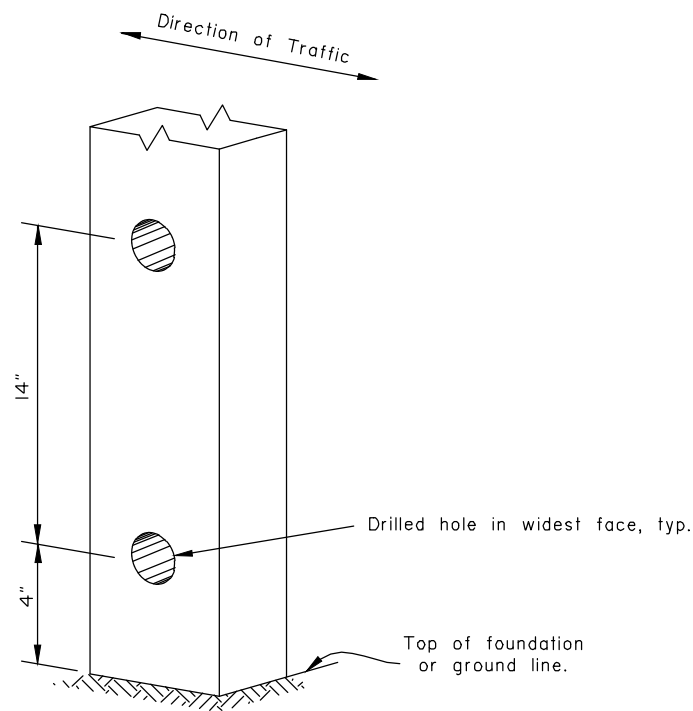
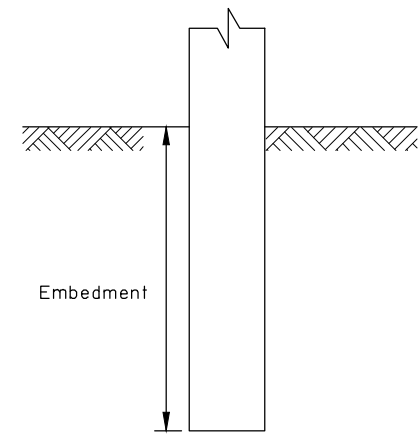
Last Code and Stds. Review
By: KLK Date: 7/8/2020
Next Code and Standards Review Date: 7/8/2030

GENERAL NOTES:

1. Sign shall be placed symmetrically around posts and refer to Standard Plan S-00 for sign framing details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Concrete shall be class B.
5. Do not use the supports on this drawing for multiple support signs if supports are separated by more than 7 feet.
6. Treat all field cuts and field drilled holes in wood posts in accordance with Section 730-2.04 of the Standard Specifications.

SIGN POST SPACING NOTES:

1. Install sign support in accordance with the table below, unless otherwise required by plans or specifications.
2. Exceptions:
 - a. Use one post for all E5-1 gore signs, regardless of width.
 - b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See tables below for the sizes of wood posts and P.S.T.s that may be used within 7'. See Manufacturer's documentation for breakaway couplings and tubes that may be used within 7'.
4. See Standard Plan S-31 for frangible couplings, hinges, and foundations for tube and W-shape sign supports.



SLEEVE TYPE
CONCRETE FOUNDATION

SLEEVE TYPE*
SOIL EMBEDMENT

WOOD SIGN POSTS			
SIZE	HOLE DIA.	EMBEDMENT*	NO. OF POSTS WITHIN 7 Ft. PATH
4"x4"	NONE	4'-1"	2
4"x6"	1 1/2"	5'-3"	2
6"x6"	1 1/2"	4'-9"	1
6"x8"	3"	4'-9"	1

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

PERFORATED STEEL TUBES (P.S.T.)		
POST SIZE	Embedment Depth	No. of P.S.T.s permitted within 7 ft path
1 1/2" x 1 1/2"	4'-8"	2
1 3/4" x 1 3/4"	4'-6"	2
2" x 2"	4'-3"	2
2 1/4" x 2 1/4"	5'-0"	1
2 1/2" x 2 1/2"	4'-6"	1

* Use 3"x3"x3/16" Stub for 2 1/2"x2 1/2" PST Applications.

PERFORATED STEEL TUBE (PST) POSTS

TUBE SIGN POST SPACING								
Sign Width (feet)	No. of Posts	Distance Between Posts	Sign Overhang	Post Type				Notes
				P.S.T.	Wood	Steel Tube	W-Shape	
0.5 to 4.0	1	-	0.5W	X	X	X		See Note 2.
4.5 to 10.0	2	0.6W	0.2W	X	X	X		See Note 3.
10.5 to 11.0	2	6	Varies	X	X	X		See Note 3.
11.5 to 13.0	2	8	Varies				X	
13.5 to 20.0	2	0.6W	0.2W				X	
20.5 to 22.5	3	8	Varies				X	
23.0 to 29.5	3	0.35W	0.15W				X	
30.0 to 31.5	4	8	Varies				X	
32.0 to 40.0	4	0.25W	0.125W				X	

TUBE SIGN POST SPACING

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHT SIGN STRUCTURE
POST EMBEDMENT

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: WTH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030