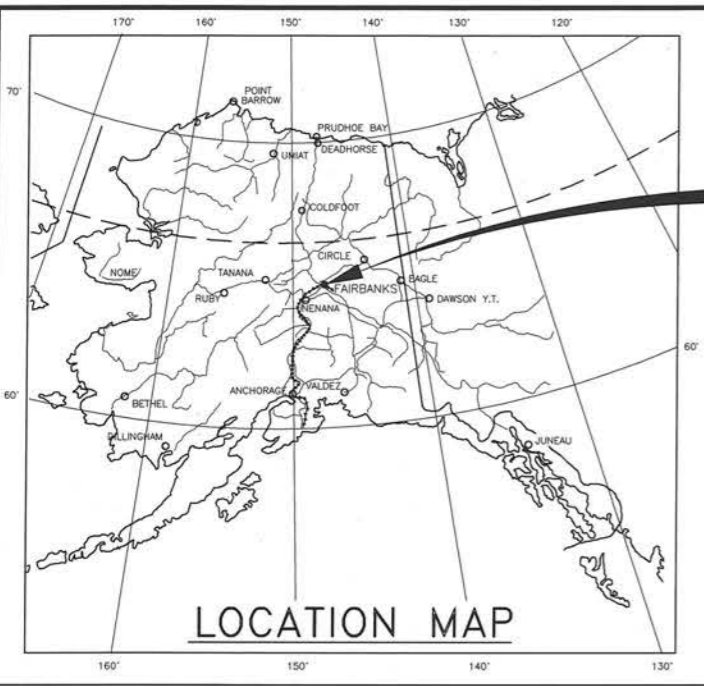


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWHY00270	2018	A1	167
CDS ROUTE: 175900		MILEPOINT: 4.483 TO 4.984		



PROJECT LOCATION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT
0617012/NFHWHY00270

UNIVERSITY AVENUE REHABILITATION –
INDIANA AVENUE TO THOMAS STREET
GRADING, DRAINAGE, PAVING, ILLUMINATION & SIGNALIZATION

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2-A3	LEGEND & GENERAL NOTES
A4	VICINITY MAP
A5-A7	SURVEY CONTROL
A8	ALIGNMENT CONTROL PLAN
B1-B2	TYPICAL SECTIONS
C1-C2	ESTIMATE OF QUANTITIES
E1-E2	RAILROAD CROSSING DETAILS
E3-E13	DEMOLITION PLAN
F1-F9	PLANS
F10-F13	PROFILES
G1-G11	GRADING PLAN
G12-G21	APPROACH SUMMARY & DETAILS
H1-H16	SIGNING & STRIPING
H17-H54	ILLUMINATION & TRAFFIC SIGNAL PLANS
L1-L8	LANDSCAPING PLANS & DETAILS
Q1-Q10	EROSION SEDIMENT CONTROL PLANS
T1-T2	TRAFFIC CONTROL PLANS
U1-U4	WATER AND SEWER UTILITY PLAN AND PROFILES
U5-U12	STORM DRAIN PLAN AND PROFILES
U13-U15	DUCT BANK LAYOUT AND TRENCH SECTIONS
U16-U20	DUCT BANK PLAN AND PROFILES
U21-U23	DUCT BANK DETAILS
U24	GCI RELOCATION LAYOUT
V1-V10	ELECTRICAL SECONDARY RELOCATION PLANS



VICINITY MAP

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:
 C-03.10, C-04.12, C-05.20
 D-01.02, D-04.21, D-20.04, D-22.01, D-23.01, D-24.00, D-26.03, D-35.00
 I-20.20, I-21.10, I-22.10,
 L-03.10, L-30.10
 M-13.01, M16.01, M-20.14, M-23.12
 S-00.11, S-01.01, S-05.01, S-20.10, S-30.04, S-31.01
 T-20.03, T-21.03, T-22.03, T-23.00, T-30.11, T-31.00, T-35.00, T-40.00, T-52.20, T-55.00, T-56.00
 U-03.01

DESIGN DESIGNATIONS	
	UNIVERSITY AVE
ADT (2018)	17,725
ADT (2040)	21,000
DHV (2030)	10%
PERCENT TRUCKS (T)	3%
DIRECTIONAL SPLIT (D)	45/55
DESIGN SPEED (V)	40 MPH
DESIGN EAL'S (2038)	740,000

PROJECT SUMMARY			
	UNIVERSITY AVE	WOLF RUN	HIGH SCHOOL ACCESS RD
WIDTH OF PAVEMENT	57 FT	24 FT	30 FT
LENGTH OF GRADING	0.53 MI	0.07 MI	0.04 MI
LENGTH OF PAVING	0.53 MI	0.07 MI	0.04 MI
LENGTH OF PROJECT	0.53 MI	0.07 MI	0.04 MI

LAUREN LITTLE, P.E., PROJECT MANAGER
HEATHER D. ESTABROOK, P.E., DESIGN ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
APPROVED BY: _____ DATE _____
Sarah E. Schacher, P.E.
Preconstruction Engineer, Northern Region
ACCEPTED FOR CONSTRUCTION:

Ryan F. Anderson, P.E.
Regional Director, Northern Region

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 BEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
P:\2011\1147.0\FB\C\Segment Improvement Packages\Segment 1B\B-C\0001\cns1147.01b-seg-1b-Title FRI, Sun/08/18 08:20am

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\C\0002const11147.01\FB-Seg-1B-A2_Thu_Jun_07_18_08:30am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	A2	A8

	RECOVERED	SET
BLM MONUMENT		
GLO MONUMENT		
USC&GS MONUMENT		
PRIMARY MONUMENT		
CENTERLINE MONUMENT IN CASING		
PRIMARY R.O.W. MONUMENT		
BEARING OBJECT		
MISCELLANEOUS MONUMENT		
LINE OF SIGHT MONUMENT		
CONCRETE R.O.W. MONUMENT		
BENCHMARK		
REBAR AND CAP		
REBAR		
IRON PIPE		
PK NAIL		
SPIKE		
HUB AND TACK		
CONSTRUCTION CENTERLINE		
MISCELLANEOUS CENTERLINE		
STATION EQUATION	$\frac{L}{48+97.23 \text{ POT BK=}}$ $\frac{O}{48+97.23 \text{ PC AHD}}$	
PROJECT RIGHT-OF-WAY LINE		
EXISTING RIGHT-OF-WAY LINE		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
EXISTING EASEMENT LINE		
PROPOSED EASEMENT LINE		
PROPOSED CUT SLOPE LIMIT		
PROPOSED FILL SLOPE LIMIT		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
TOWNSHIP & RANGE LINE		
MEANDER LINE		

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)		
SANITARY SEWER (FORCE MAIN)		
FUEL LINE		
GAS LINE		
WATER LINE		
METER, VALVE, FIRE HYDRANT		
EXISTING STORM DRAIN (FLOW DIRECTION →)		
PROPOSED STORM DRAIN		
FIBER OPTIC LINE		
DIRECT BURIAL TELEPHONE CABLE		
GPR DATA RECENTLY COLLECTED		
DIRECT BURIAL ELECTRIC CABLE		
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT		
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE		
SANITARY SEWER CLEAN OUT		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE		
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX		
RAILROAD TRACKS		
RAILROAD DEVICES		
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
RIPRAP		
EXISTING BUILDINGS		
POST OR BOLLARD		
WELL OR MONITORING WELL		
SEPTIC PIPE		
FUEL TANK FILL PIPE/VENT		
SATELLITE DISH		
TEST HOLE		
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG-IN		
DELINEATOR/GUIDE MARKER		

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		
JUNCTION BOX, TYPE II		
JUNCTION BOX, TYPE III		
JUNCTION BOX, ABOVE GRADE		
SIGNAL FACE, VEHICULAR		
SIGNAL FACE, BACKPLATE		
SIGNAL FACE, LEFT TURN, BACKPLATE		
SIGNAL FACE, PEDESTRIAN		
LOOP DETECTOR		
VIDEO DETECTOR		
RADAR DETECTOR		
OPTICOM DETECTOR		
PAN, TILT, ZOOM CAMERA		
PEDESTRIAN PUSH BUTTON		
SIGNAL POST W/O MAST ARM		
SIGNAL POLE W/MAST ARM		
INTERCONNECT VAULT		
INTERCONNECT MANHOLE		
SIGNAL CONTROLLER		
LOAD CENTER		
POST MOUNTED TRANSFORMER AND DISCONNECT SWITCH		
LUMINAIRE		
RIGID METAL CONDUIT		
TRAFFIC SIGNAL INTERCONNECT		
BORING/ENCASED CONDUITS		

H = HOUSE
 G = GARAGE
 M = MERCHANT/STORE
 B = BARN
 S = SHED
 P = PRIVY
 SS = SERVICE STATION
 W = WAREHOUSE

LEGEND AND NOTES



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	A3	A8

GENERAL NOTES

- APPROACH LOCATIONS; LENGTHS AND LOCATIONS OF CULVERTS, STORM DRAINS, AND DUCT BANKS SHOWN ON THESE PLANS ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. ALL DISTANCES SHOWN IN THE PLAN VIEW ARE HORIZONTAL MEASUREMENTS.
- CLEARING, GRUBBING AND SEEDING LIMITS SHALL BE AS SHOWN ON THE PLANS AND SHALL BE AS DIRECTED BY THE ENGINEER. RESTORE ALL DISTURBED AREAS DUE TO CONTRACTORS WORK OUTSIDE THE CLEARING AND GRUBBING LIMITS SHOWN ON THE PLANS. PAYMENT FOR THIS WORK SHALL BE SUBSIDIARY TO THE RESPECTIVE BID ITEM.
- DEWATERING, IF REQUIRED, WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED SUBSIDIARY TO THE RESPECTIVE BID ITEM FOR WHICH THE DEWATERING IS NECESSARY.
- SAWCUT ALL MATCH LINES WHERE NEW CONSTRUCTION ABUTS EXISTING ASPHALT. APPLY STE-1 ASPHALT FOR TACK COAT ON THE VERTICAL FACE OF ALL SAWCUTS. SAWCUT EXISTING SIDEWALKS OR GO BACK TO NEAREST JOINT.
- REFERENCE GRADING PLAN SHEETS FOR INTERSECTION TRANSITION LAYOUTS.
- WORK IN PUE'S IS FOR UTILITY PURPOSES. PUE'S ARE NOT AVAILABLE FOR STAGING, ETC. FOR OTHER WORK ITEMS.

UTILITY NOTES

- NUMEROUS UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT CORRIDOR. CONTACT UTILITY OWNERS AND GET LOCATES PRIOR TO ANY EXCAVATION.
- THE DEPTH OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON AVAILABLE INFORMATION FROM AS BUILT DRAWINGS AND ARE APPROXIMATE ONLY. DETERMINE ACTUAL DEPTH PRIOR TO INSTALLING NEW UTILITIES.
- PROTECT, OR REMOVE AND REPLACE IN SAME LOCATION OR TO THE SIDE OF ROADWAY, EXISTING MARKER POSTS FOR UTILITIES THAT ARE DISTURBED DURING CONSTRUCTION. THIS IS SUBSIDIARY TO OTHER ITEMS OF WORK.
- INSULATING PIPES, INLETS, MANHOLES, FITTINGS, APPURTENANCES AND CROSSING UTILITIES AS INDICATED ON THE PLANS WILL NOT BE MEASURED FOR PAYMENT. THIS WORK IS SUBSIDIARY TO ALL UTILITY AND STORM DRAIN INSTALLATIONS.
- SEE INDIVIDUAL U SERIES SHEETS FOR ADDITIONAL NOTES.
- CONTRACTOR MUST RESTORE PUE'S AFTER UTILITY CONSTRUCTION, IN ACCORDANCE WITH PUE REQUIREMENTS.
- CONTRACTOR SHALL PROVIDE SWPPP FOR THE CONCURRENT UTILITY RELOCATIONS. THIS WORK IS SUBSIDIARY TO 641 PAY ITEMS.
- UTILITY COMPANIES WILL BE WORKING CONCURRENTLY WITH THE CONTRACTOR TO COMPLETE THE WORK IN THIS SECTION. THIS WORK MAY INCLUDE, BUT IS NOT LIMITED TO INSTALLING CABLE, SPLICING CABLE, INSTALLING OTHER EQUIPMENT AND CONNECTING SERVICES. THE CONTRACTOR SHALL COOPERATE AND SUPPORT THIS WORK, INCLUDING PROVIDING ANY NECESSARY TRAFFIC CONTROL. TRAFFIC CONTROL FOR UTILITY COMPANY WORK WILL BE PAID UNDER 643 PAY ITEMS.

ABBREVIATIONS

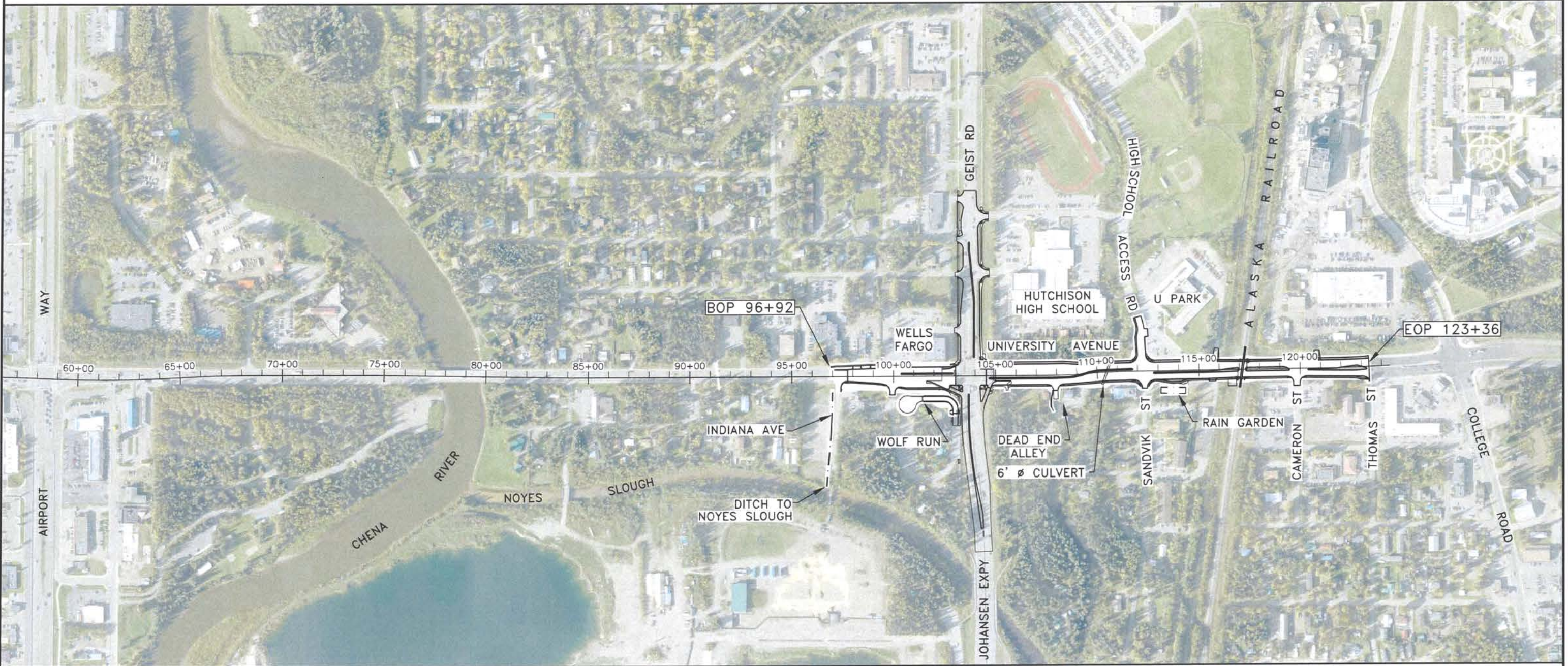
ACS	ALASKA COMMUNICATION SYSTEMS	LHF	LEFT HAND FORWARD
ADA	AMERICAN WITH DISABILITIES ACT	LN	LANE
ARRC	ALASKA RAILROAD CORPORATION	LOC	LIP OF CURB
ATB	ASPHALT TREATED BASE	LP	LOW POINT
AVE	AVENUE	LT	LEFT
BLM	THE BUREAU OF LAND MANAGEMENT	LVC	LENGTH OF VERTICAL CURVE
BOP	BEGINNING OF PROJECT	MAX	MAXIMUM
BP	BEGIN POINT	MH	MANHOLE
BV	BUTTERFLY VALVE	MIN	MINIMUM
C/A	ACCESS CONTROL	MMA	METHYL METHACRYLATE
CL	CENTERLINE		
C	CENTER	NO./#	NUMBER
CB	CATCH BASIN	N	NORTHING
CGP	CONSTRUCTION GENERAL PERMIT	NFL	NORMAL FLOW LINE
CMP	CORRUGATED METAL PIPE	NIC	NOT IN CONTRACT
COM	COMMERCIAL	NTS	NOT TO SCALE
COMM	COMMUNICATIONS		
CON	CONCRETE	PC	POINT OF CURVATURE
CPM	CRITICAL PATH METHOD	PCC	PORTLAND CEMENT CONCRETE / POINT OF COMPOUND CURVE
CSP	CORRUGATED STEEL PIPE	PRC	POINT OF REVERSE CURVE
		PI	POINT OF INTERSECTION
		PT	POINT OF TANGENCY
DEMO	DEMOLITION	PUE	PUBLIC UTILITY EASEMENT
DIP	DUCTILE IRON PIPE		
DOT	DEPARTMENT OF TRANSPORTATION	R	RADIUS
DNR	DEPARTMENT OF NATURAL RESOURCES	RES	RESIDENTIAL
DR	DRIVE	REHAB	REHABILITATION
DRWY	DRIVEWAY	RHF	RIGHT HAND FORWARD
DWT	DETECTABLE WARNING TILE	RD	ROAD
		ROW, R/W, R.O.W.	RIGHT OF WAY
E	EASTING	RP	RADIAL POINT
EA	EACH	RT	RIGHT
EG	EXISTING GROUND		
ELEV, EL	ELEVATION	SC	STRUCTURE CENTER
EOP	END OF PROJECT	SD	STORM DRAIN
EP	END POINT, END OF PAVEMENT	SDWK	SIDEWALK
EXPY, EXP	EXPRESSWAY	SS	SANITARY SEWER
EXP	EXPANSION JOINT	ST	STREET
EX	EXISTING	STD	STANDARD
		STA	STATION
FG	FINISHED GRADE	SW	SIDEWALK
FL	FLOW LINE	SWR	SEWER
FLG	FLANGE	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
FM	FORCE MAIN		
FNG	FAIRBANKS NATURAL GAS	TBC	TOP BACK OF CURB
FT	FEET	TCE	TEMPORARY CONSTRUCTION EASEMENT
		TCP	TEMPORARY CONSTRUCTION PERMIT
GALV	GALVANIZE	THK	THICK
GB	GRADE BREAK	TOC	TOP OF CASTING
GCI	GENERAL COMMUNICATIONS INCORPORATED	TYP	TYPICAL
GPR	GROUND PENETRATING RADAR		
GV	GATE VALVE	VPC	VERTICAL POINT OF CURVATURE
GVEA	GOLDEN VALLEY ELECTRIC ASSOCIATION	VPI	VERTICAL POINT OF INTERSECTION
		VPT	VERTICAL POINT OF TANGENCY
HDPE	HIGH DENSITY POLYETHYLENE		
HMA	HOT MIX ASPHALT	W/	WITH
HMCP	HAZARDOUS MATERIAL CONTROL PLAN	W, WTR	WATER
		WWM	WELDED WIRE MESH
INT	INTERSECTION		
INV	INVERT		

GENERAL NOTES



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	A4	A8

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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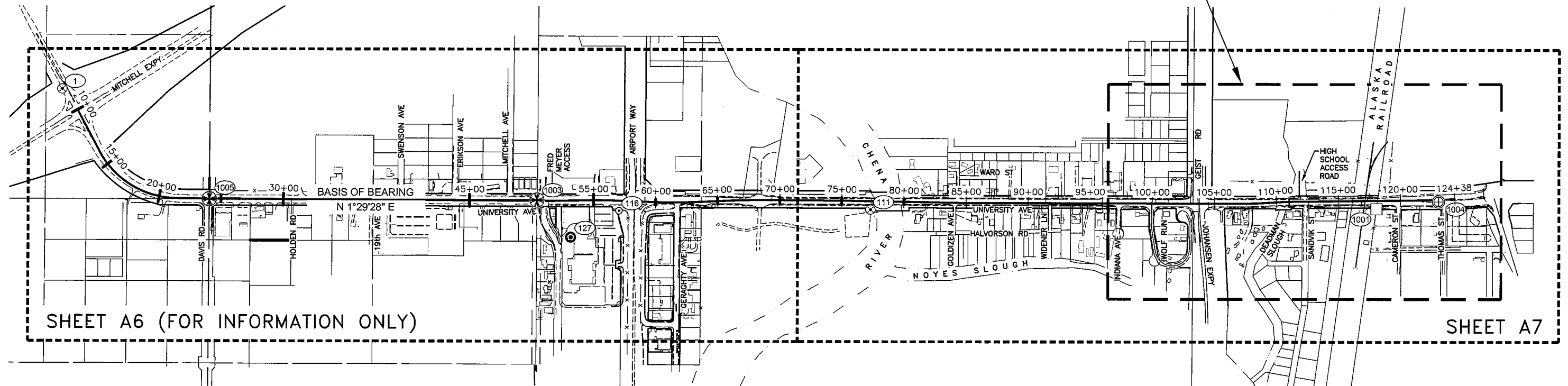


VICINITY MAP



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	A5	A8

PROJECT LIMITS

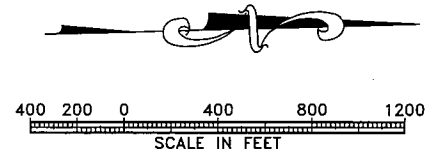


NOTES:

- FIELD WORK FOR THIS CONTROL SURVEY WAS CONDUCTED FROM AUGUST THROUGH NOVEMBER 2012.
- THE BASIS OF HORIZONTAL COORDINATES IS PDC CONTROL POINT #1005, A 3 1/2" ALUMINUM CAP STAMPED "RESET 2012 76215" SET ON A 5/8" REBAR IN A CASING NEAR THE INTERSECTION OF UNIVERSITY AVENUE AND DAVIS ROAD. THIS MONUMENT MARKS THE POSITION OF THE 1/4 CORNER COMMON TO SECTIONS 17 AND 18. IT IS ADOT POINT # 1 ON THE ADOT RECORD OF SURVEY "CONTROL DRAWING OF UNIVERSITY AVENUE 63213" STAMPED AND DATED 4/21/2010 AND RECORDED AS PLAT 2010-112 IN THE FAIRBANKS RECORDING DISTRICT. THE LOCAL PROJECT COORDINATES FOR POINT #1005 ARE 61,145.76 NORTH, 18,085.340 EAST, US FEET.
- THE BASIS OF BEARING IS THE LINE BETWEEN THE BASIS OF COORDINATES (PDC POINT #1005) AND PDC POINT #1003, THE SECTION CORNER COMMON TO SECTIONS 7, 8, 17, AND 18, MARKED BY A 3 1/2" ALUMINUM CAP ON A 5/8" REBAR STAMPED "RESET 2012, 76215" IN A CASING NEAR THE INTERSECTION OF UNIVERSITY AVENUE AND REWAK DRIVE. THIS IS ADOT POINT #2 ON THE ADOT RECORD OF SURVEY "CONTROL DRAWING OF UNIVERSITY AVENUE 63213" STAMPED AND DATED 4/21/2010. THE LOCAL PROJECT BEARING IS N 1°29'28" E.
- THIS PROJECT IS IN A LOCAL GROUND COORDINATE SYSTEM. UNITS ARE U.S. SURVEY FEET.
- CONTROL MONUMENTS DEPICTED WITH POINT NUMBERS AND SHOWN IN THE CONTROL TABLES ARE LIMITED TO THOSE SURVEYED BY PDC, INC IN 2012. ALL OTHER MONUMENTS WERE SURVEYED BY R&M CONSULTANTS AND ADOT&PF AND ARE SHOWN GRAPHICALLY ON THESE SHEETS FOR INFORMATIONAL PURPOSES ONLY. CONTROL COORDINATES FOR R&M/ADOT&PF MONUMENTS ARE LISTED ON THE FOLLOWING DOCUMENTS: THE ADOT RECORD OF SURVEY "CONTROL DRAWING OF UNIVERSITY AVENUE 63213" STAMPED AND DATED 4/21/2010 AND RECORDED AS PLAT 2010-112 IN THE FAIRBANKS RECORDING DISTRICT, AND THE UNRECORDED RIGHT OF WAY MAP FOR THIS PROJECT, LAST REVISION DATE 8-9-2016, ON FILE AT THE ALASKA DEPARTMENT OF TRANSPORTATION.
- THE BASIS OF ELEVATION IS ADOT BENCHMARK "NOYES", A 3 1/4" BRASS CAP MOUNTED ON THE TOP OF THE SOUTH WEST WING WALL IN THE NOYES SLOUGH BRIDGE NEAR THE JOHANSEN EXPRESSWAY. THE CAP IS STAMPED "SOA DOT/PF NOYES 1993 ELEV. 433.59 NAVD 1988".

LEGEND:

	RECOVERED	SET
BLM MONUMENT		
GLO MONUMENT		
USC&GS MONUMENT		
PRIMARY MONUMENT		
CENTERLINE MONUMENT IN CASING		
PRIMARY R.O.W. MONUMENT		
MISCELLANEOUS MONUMENT		
CONCRETE R.O.W. MONUMENT		
SURVEY PANEL POINT		
REBAR AND CAP		
REBAR		
IRON PIPE		
SPIKE		



POINT#	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION
1	59979.81	17171.67	--	--	6" SPIKE SET THIS SURVEY
111	66468.05	18290.42	77+33.38	68.72'	6" SPIKE SET THIS SURVEY
116	64442.60	18254.44	57+08.26	81.64'	2" ALUMINUM CAP RECOVERED
127	64048.61	18458.69	53+10.32	294.26'	2" ALUMINUM CAP ON 5/8" REBAR SET THIS SURVEY
1001	70541.48	18377.83	118+06.37	67.21'	RECOVERED CONCRETE ROW MONUMENT
1003	63782.45	18153.97	50+43.20	-4.90'	3.25" ALUMINUM CAP IN CASING RECOVERED THIS SURVEY
1004	71042.43	18330.72	123+06.24	16.35'	2.5" BRASS CAP IN CASING RECOVERED THIS SURVEY
1005	61145.76	18085.34	24+05.56	3.95'	3.25" ALUMINUM CAP IN CASING RECOVERED THIS SURVEY

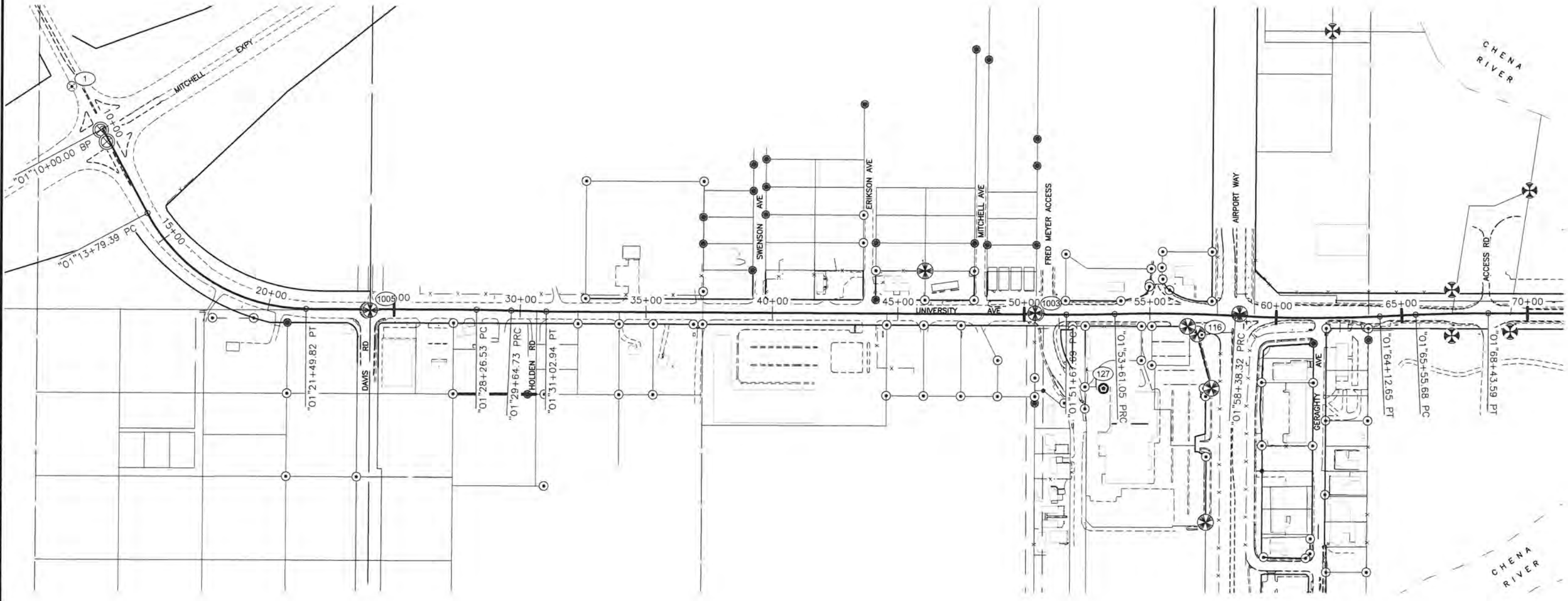
THE MONUMENTS IN THIS TABLE ARE LIMITED TO THOSE SURVEYED BY PDC, INC. ALL OTHER MONUMENTS DEPICTED ON THESE SHEETS WERE SURVEYED BY R&M CONSULTANTS AND ADOT&PF AND ARE SHOWN GRAPHICALLY FOR INFORMATIONAL PURPOSES ONLY. SEE NOTE 5.

SURVEY CONTROL



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200 P:\2011\11147.01\FB\Segment_Improvement_Packages\Segment_1B\1B-1\11147.01\FB-Seg-1B-A5_Wed_Jun0618_12:03pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHUY00270	2018	A6	A8



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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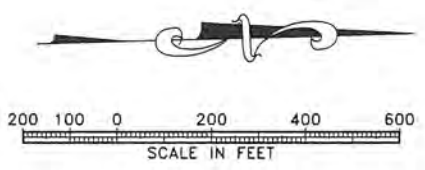
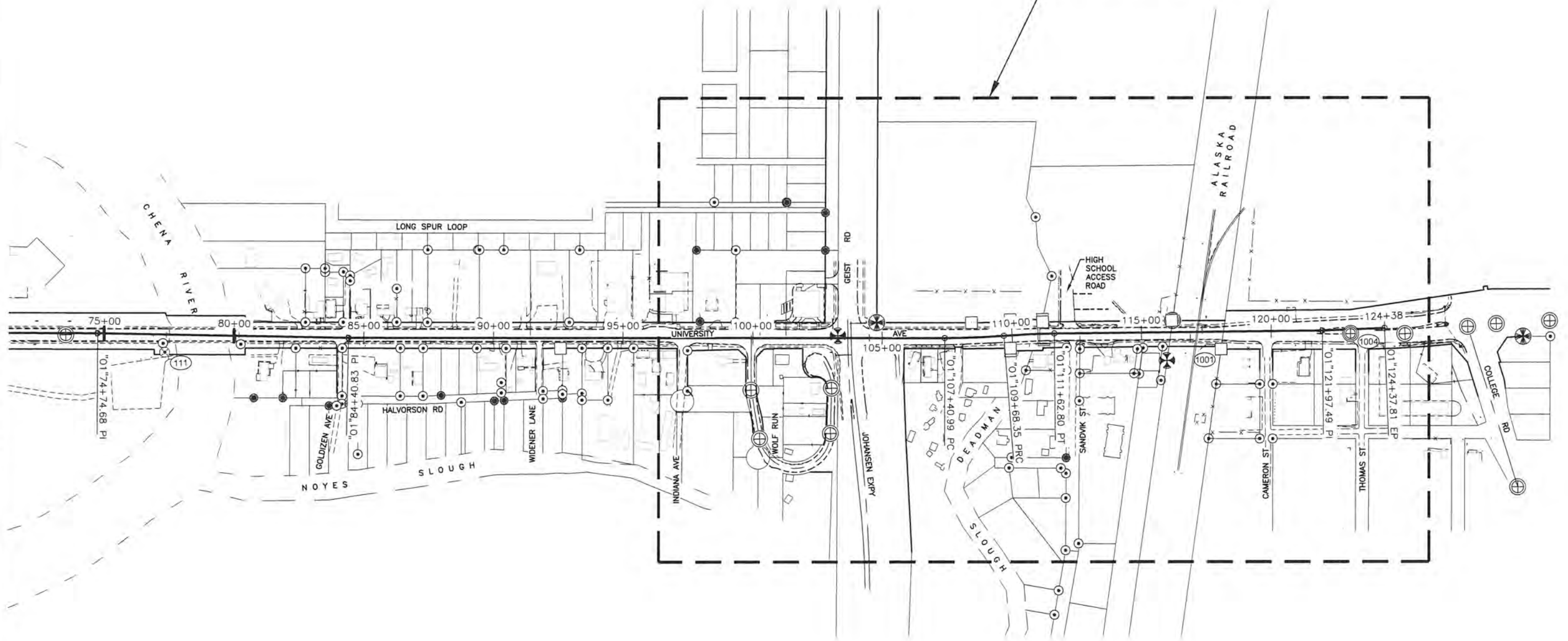
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SCALE IN FEET

FOR INFORMATION ONLY
SURVEY CONTROL
(1 OF 2)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	A7	A8

PROJECT LIMITS



SURVEY CONTROL
(2 OF 2)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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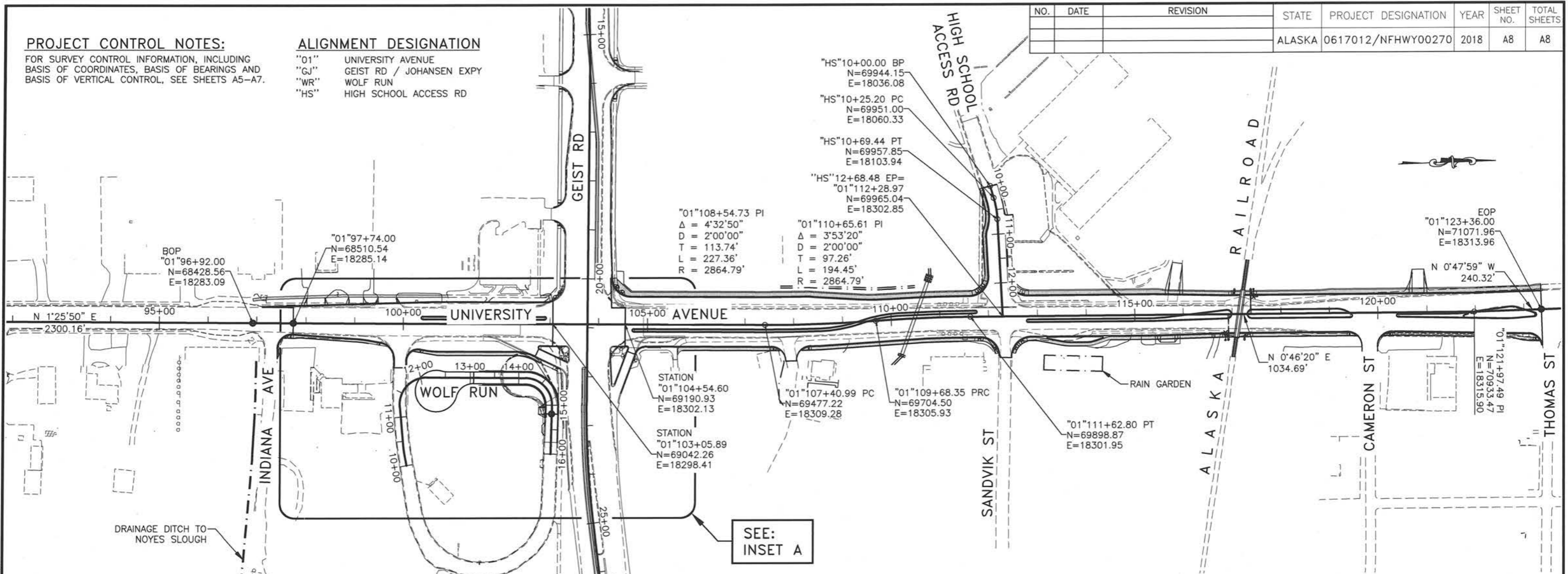
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	A8	A8

PROJECT CONTROL NOTES:

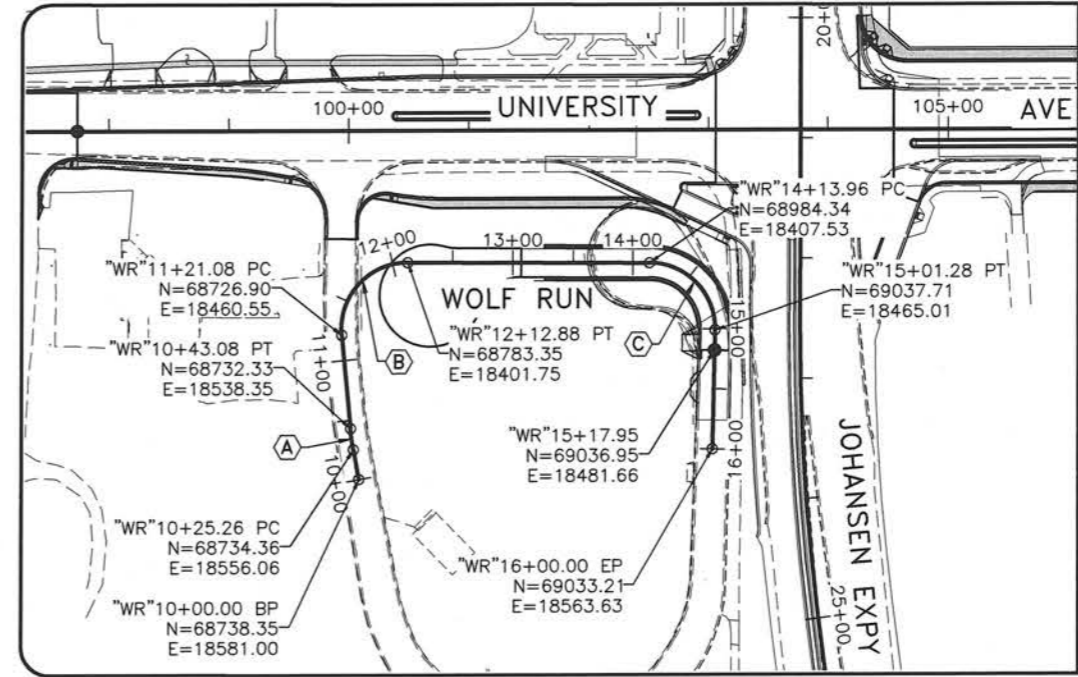
FOR SURVEY CONTROL INFORMATION, INCLUDING BASIS OF COORDINATES, BASIS OF BEARINGS AND BASIS OF VERTICAL CONTROL, SEE SHEETS A5-A7.

ALIGNMENT DESIGNATION

- "01" UNIVERSITY AVENUE
- "GJ" GEIST RD / JOHANSEN EXPY
- "WR" WOLF RUN
- "HS" HIGH SCHOOL ACCESS RD



SEE: INSET A



WOLF RUN CURVE ALIGNMENT DATA:

"WR"10+34.18 PI	$\Delta = 5'06''22''$	
	$D = 28'38''52''$	(NIC)
	$T = 8.92'$	
	$L = 17.82'$	
	$R = 200.00'$	
"WR"11+81.77 PI	$\Delta = 95'38''18''$	
	$D = 104'10''27''$	(NIC)
	$T = 60.70'$	
	$L = 91.81'$	
	$R = 55.00'$	
"WR"14+69.89 PI	$\Delta = 90'57''36''$	
	$D = 104'10''27''$	
	$T = 55.93'$	
	$L = 87.32'$	
	$R = 55.00'$	

* SEE GRADING SHEETS FOR CUL-DE-SAC LAYOUT.

INSET A

ALIGNMENT CONTROL PLAN

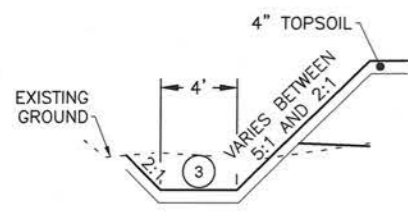


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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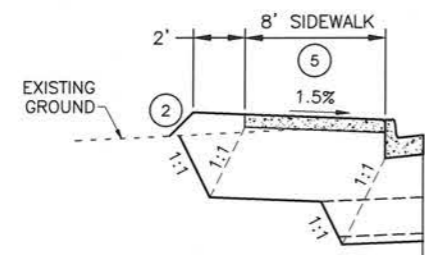
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	B1	B2

TYPICAL SECTION NOTES:

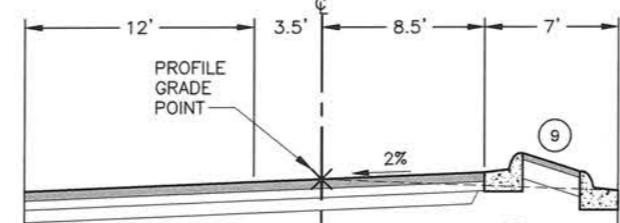
- ① LAYOUT VARIES FROM "01" 97+74 TO "01" 100+36. OMIT MEDIAN, PAVE THE FULL WIDTH, AND SEE SIGNING AND STRIPING SHEETS FOR CLARIFICATION.
- ② UNLESS OTHERWISE CONTROLLED BY A DITCH TYPICAL SECTION CATCH TO EXISTING GROUND AT 2:1 IN BOTH A CUT AND FILL CONDITION.
- ③ SEE GRADING SHEETS FOR DITCH CONTROL.
- ④ FROM "01" 96+92 TO "01" 103+05 THE UTILITY BUFFER SLOPE VARIES. FROM "01" 96+92 TO "01" 100+60 UTILITY BUFFER WIDTH VARIES. FROM "01" 100+90 TO "01" 102+80 PROTECT EXISTING SIDEWALK. SEE GRADING SHEETS FOR LAYOUT CLARIFICATION.
- ⑤ REDUCE SIDEWALK WIDTH TO 6' FROM "01" 115+71 TO "01" 118+80.
- ⑥ MEDIAN WIDTH VARIES FROM "01" 115+42 TO "01" 117+00 AND "01" 120+38 TO "01" 123+26. SEE GRADING SHEETS.
- ⑦ 2 LAYERS OF GEOTEXTILE, REINFORCEMENT-TYPE 2, WITH A MINIMUM OF 12" OF SUBBASE, GRADING F IN BETWEEN AND AS DIRECTED BY THE ENGINEER.
- ⑧ BENCH SLOPES PER SPECIFICATION SECTION 203.
- ⑨ MEDIAN SLOPE VARIES. CONTROLLED BY MEDIAN WIDTH AND HORIZONTAL LOCATION OF MEDIAN WITH RESPECT TO CL.
- ⑩ FROM "01" 97+57 TO "01" 99+68 RT AND "01" 100+22 TO "01" 100+72 RT SIDEWALK WILL BE 4' IN WIDTH AND CONSTRUCTED WITH 1.5" HMA, TYPE II; CLASS B MATERIAL.
11. ALL DISTURBED GROUND NOT TO BE COVERED IN ASPHALT, CONCRETE OR LANDSCAPING MATERIAL SHALL BE SEEDED.
12. PROOFROLL AND COMPACT BELOW SUBBASE, GRADING F MATERIAL. SEE SPEC SECTION 203-3.06.
13. EXPRESSWAY CURB AND GUTTERS IN THE MEDIANS SHALL BE SPILL. SEE SHEET G19 FOR CURB AND GUTTER DETAILS.



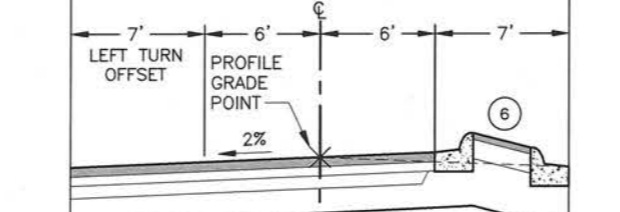
DITCH TYPICAL B
"01" 107+74 TO "01" 110+51



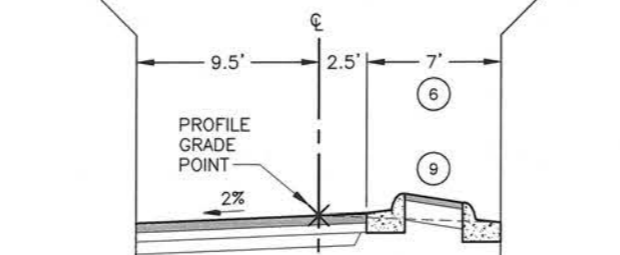
SIDEWALK TYPICAL C
"01" 104+66 TO "01" 123+36



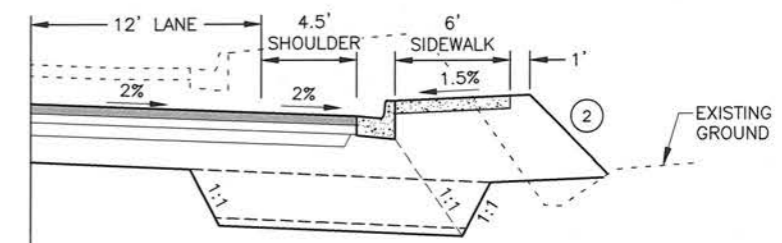
MEDIAN - DUAL LEFT TURN LANES
"01" 100+36 TO "01" 103+06 SECTION REVERSED
"01" 104+55 TO "01" 109+40



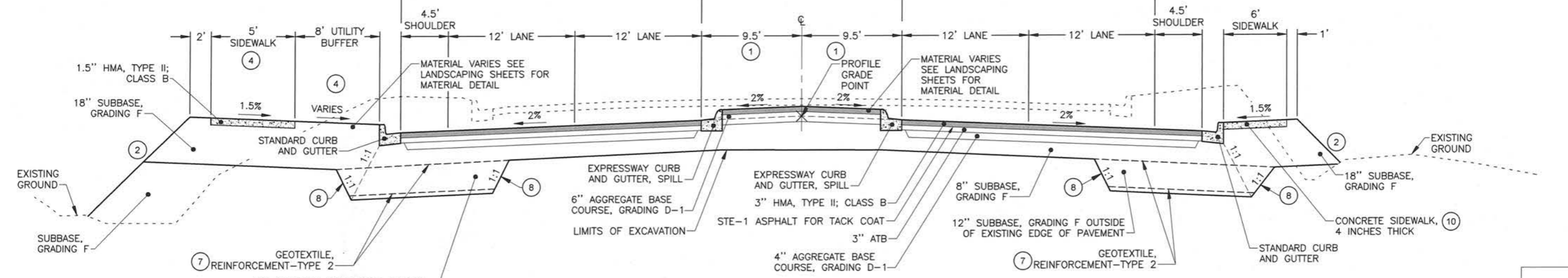
MEDIAN - ALIGNED LEFT TURN LANE
"01" 109+40 TO "01" 112+30 SECTION REVERSED
"01" 112+30 TO "01" 115+42



MEDIAN - OFFSET LEFT TURN LANE
"01" 120+00 TO "01" 121+58



RIGHT TURN LANE
"01" 100+72 TO "01" 102+50
"01" 104+52 TO "01" 108+30 SECTION REVERSE



SIDEWALK TYPICAL A
"01" 96+92 TO "01" 103+05

UNIVERSITY AVENUE TYPICAL
"01" 97+74 TO "01" 123+36

SIDEWALK TYPICAL B
"01" 97+56 TO "01" 123+36

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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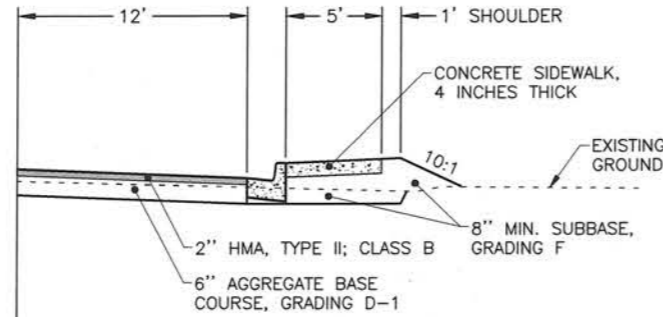


TYPICAL SECTIONS

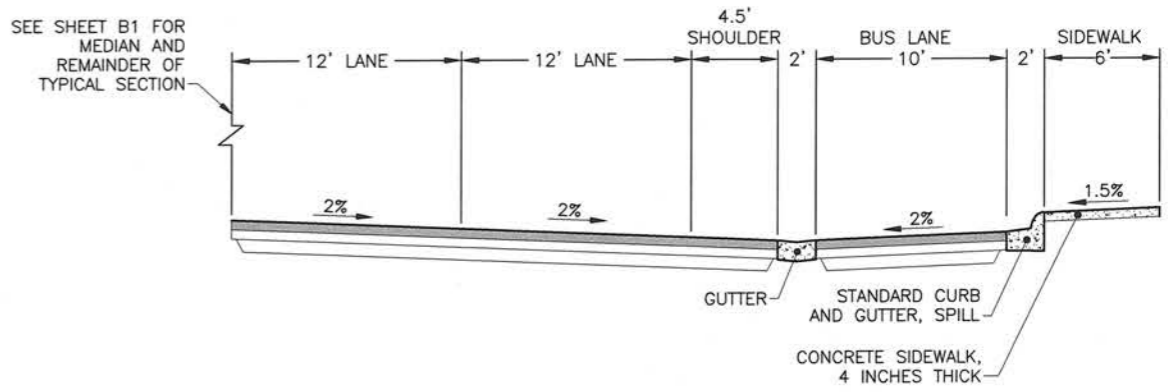
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	B2	B2

TYPICAL SECTION NOTES:

1. ALL DISTURBED GROUND NOT TO BE COVERED IN ASPHALT, CONCRETE OR LANDSCAPING MATERIAL SHALL BE SEEDED.
2. PROOFROLL AND COMPACT BELOW SUBBASE, GRADING F MATERIAL. SEE SPEC SECTION 203-3.06.
3. GEOTEXTILE, STABILIZATION IS TO BE PLACED WHEN SILT IS ENCOUNTERED AT THE BOTTOM OF EXCAVATION, AS DIRECTED BY THE ENGINEER.



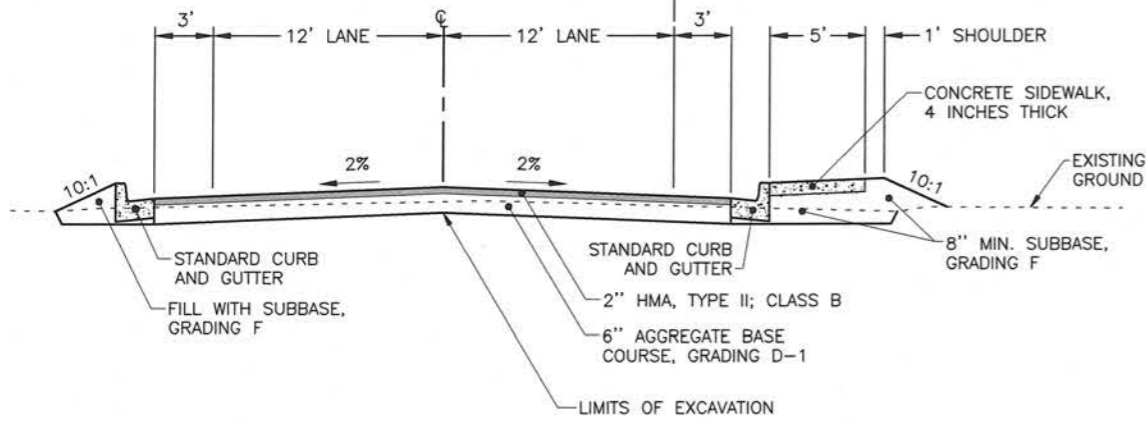
RIGHT TURN LANE
"HS" 11+06 TO "HS" 12+00



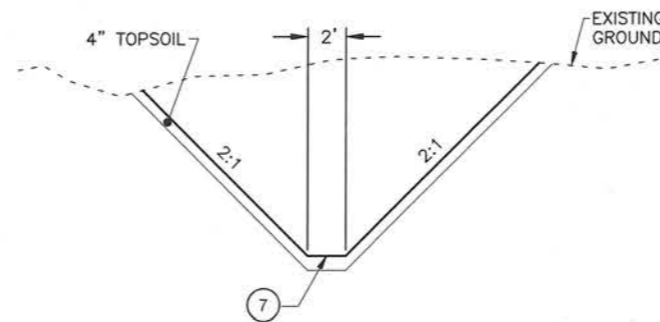
BUS PULLOUT
"01" 113+00 TO "01" 114+46

BUS PULLOUT NOTES:

8. SEE UNIVERSITY AVENUE TYPICAL ON B1 AND GRADING SHEET G5 FOR LAYOUT AND ADDITIONAL INFORMATION.
9. MATCH UNIVERSITY AVENUE TYPICAL MATERIAL SECTION ON SHEET B1 FOR MATERIALS AT BUS PULLOUT AND SIDEWALK.

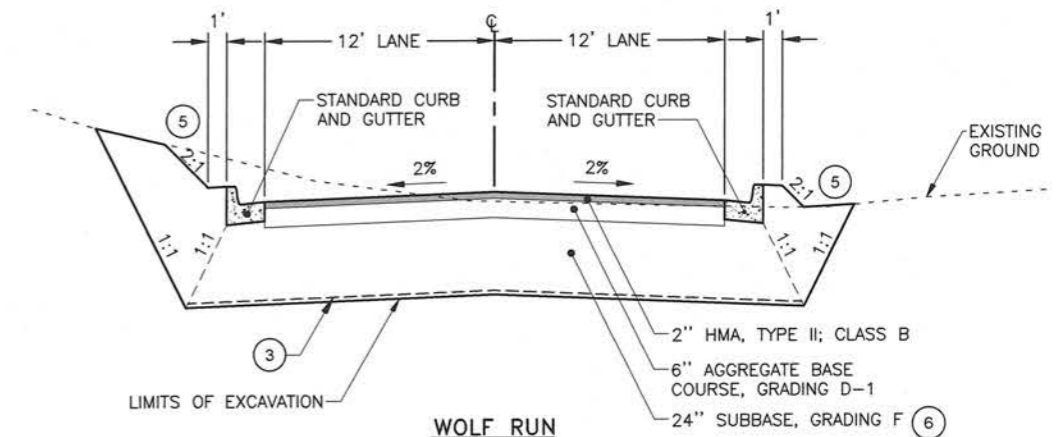


HIGH SCHOOL ACCESS RD
"HS" 10+00 TO "HS" 12+00



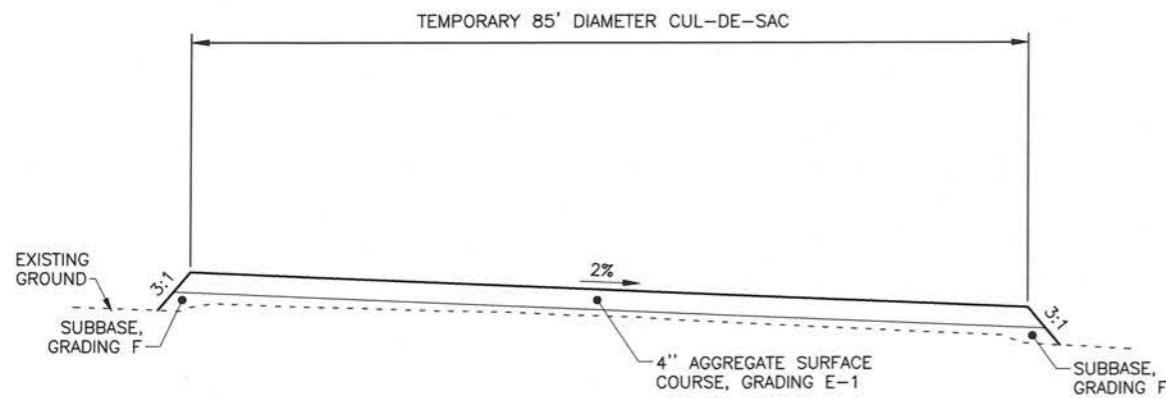
NOYES SLOUGH DITCH TYPICAL
"01" 96+98 RT

7 SEE GRADING SHEET G7 FOR 96+98 DITCH CONTROL POINTS.



WOLF RUN
"WR" 13+07 TO "WR" 15+18

- 5 MAINTAIN CUT/FILL SLOPES WITHIN THE ROW. "WR" 15+00 TO "WR" 15+18 RT
- 6 FROM "WR" 13+65 TO "WR" EOP PLACE CURB AND GUTTER, HMA AND AGGREGATE BASE COURSE. OMIT SUBBASE LAYER.



TEMPORARY WOLF RUN CUL-DE-SAC
"WR" 11+98 TO "WR" 13+07

4. SEE GRADING SHEET G8 - WOLF RUN GRADING PLAN FOR LAYOUT AND MORE INFORMATION.

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC805, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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TYPICAL SECTIONS



ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	QUANTITY
201(1B)	CLEARING	LUMP SUM	ALL REQUIRED
201(2B)	GRUBBING	LUMP SUM	ALL REQUIRED
202(1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	ALL REQUIRED
202(2)	REMOVAL OF PAVEMENT	SQUARE YARD	22,300
202(3)	REMOVAL OF SIDEWALK	SQUARE YARD	3,300
202(9)	REMOVAL OF CURB AND GUTTER	LINEAR FOOT	5,600
202(10)	SINGLE MAIL BOX INSTALLATION	EACH	1
202(12)	DOUBLE MAIL BOX INSTALLATION	EACH	2
202(23)	REMOVAL OF EXISTING BRIDGE NO. 1317	LUMP SUM	ALL REQUIRED
203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD	22,500
301(1)	AGGREGATE BASE COURSE, GRADING D-1	TON	5,200
301(3)	AGGREGATE SURFACE COURSE, GRADING E-1	TON	300
304(1)	SUBBASE, GRADING F	TON	26,000
306(1)	ATB	TON	3,250
306(102)	ASPHALT BINDER, GRADE PG 52-28	TON	147
401(1B)	HMA, TYPE II; CLASS B	TON	4,000
401(4)	ASPHALT BINDER, GRADE PG 52-40	TON	220
401(8B)	HMA PRICE ADJUSTMENT, TYPE II; CLASS B	CONTINGENT SUM	ALL REQUIRED
401(15)	ASPHALT MATERIAL PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
402(1)	STE-1 ASPHALT FOR TACK COAT	TON	7
603(1)-72	72 INCH CSP	LINEAR FOOT	158
603(21)-12	12 INCH CORRUGATED POLYETHYLENE PIPE	LINEAR FOOT	30
603(21)-18	18 INCH CORRUGATED POLYETHYLENE PIPE	LINEAR FOOT	1,184
604(1)	STORM SEWER MANHOLE	EACH	4
604(2)	SANITARY SEWER MANHOLE	EACH	1
604(3)	RECONSTRUCT EXISTING MANHOLE	EACH	1
604(5)	INLET, TYPE A	EACH	15
608(1A)	CONCRETE SIDEWALK, 4 INCHES THICK	SQUARE YARD	2,690
608(1B)	CONCRETE SIDEWALK, 6 INCHES THICK	SQUARE YARD	350
608(2)	ASPHALT SIDEWALK	TON	30
608(6)	CURB RAMP	EACH	22
608(101)	COLORLED TEXTURED CONCRETE, 4 INCHES THICK	SQUARE YARD	987
609(1)	CURB, TYPE 4	LINEAR FOOT	390
609(2)	CURB AND GUTTER, TYPE 1	LINEAR FOOT	9,575
611(102)	RIPRAP, CLASS I	LUMP SUM	ALL REQUIRED
613(2)	CULVERT MARKER POST	EACH	2
615(1)	STANDARD SIGN	SQUARE FOOT	536
615(6)	SALVAGE SIGN	EACH	52
617(4)	RAILROAD FURNISHED SIGNAL BASE	EACH	2
617(5)	RIGID METAL CONDUIT WITH PULL WIRE	LINEAR FOOT	800
617(7)	TYPE II JUNCTION BOX	EACH	5
617(106)	JUNCTION BOX, TYPE III	EACH	2

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	C1	C2

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	QUANTITY
618(2)	SEEDING	POUND	355
620(1)	TOPSOIL	SQUARE YARD	2,100
621(1)-A	TREE, BIRCH (BETULA PAPERIFERA), 2" CALIPER	EACH	44
621(1)-B	TREE, CANADA RED (PRUNUS VIRGINIANA), 2" CALIPER	EACH	7
621(1)-C	TREE, SIBERIAN LARCH (LARIX SIBIRICA), 6' HT.	EACH	9
621(1)-D	TREE, WHITE SPRUCE (PICEA GLAUCA), 5' HT.	EACH	13
621(2)-A	SHRUB, DWARF KOREAN LILAC (SYRINGA MEYERI 'PALIBIN'), 24" HT.	EACH	43
621(2)-B	SHRUB, FALSE SPIREA (SORBARIA SORBIFOLIA), 24" HT.	EACH	211
621(2)-C	SHRUB, HIGHBUSH CRANBERRY (VIBURNUM EDULE), 36" HT.	EACH	199
621(2)-D	SHRUB, POTENTILLA (DASIPHORA FRUTICOSA), 24" HT.	EACH	63
621(2)-E	SHRUB, ROSE (ROSA ACICULARIS), 24" HT.	EACH	57
621(104)-A	PERENNIAL, NATIVE GERANIUM (GERANIUM ERIANTHUM), 1 GAL.	EACH	103
621(104)-B	PERENNIAL, NATIVE IRIS (IRIS SETOSA), 1 GAL.	EACH	169
621(110)	PLANT MAINTENANCE AND REPLACEMENT	CONTINGENT SUM	ALL REQUIRED
621(111)	RAIN GARDEN	LUMP SUM	ALL REQUIRED
626(1)-8	SANITARY SEWER CONDUIT, 8 INCH	LINEAR FOOT	222
626(106)	CSP CASING FOR SANITARY SEWER, 18 INCH	LINEAR FOOT	152
626(107)	SANITARY SEWER CLEANOUT	EACH	1
627(1)-14	14-INCH DUCTILE IRON WATER CONDUIT, CLASS 350	LINEAR FOOT	301
627(5)	FIRE HYDRANT INSTALLATION	EACH	1
627(110)	INSTALL BUTTERFLY VALVE 14-INCH	EACH	1
630(2)	GEOTEXTILE, STABILIZATION	SQUARE YARD	1,400
630(3B)	GEOTEXTILE, REINFORCEMENT- TYPE 2	SQUARE YARD	22,000
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD	50
639(101)	APPROACH	EACH	13
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
641(1)	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
641(5)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CONTINGENT SUM	ALL REQUIRED
641(6)	WITHHOLDING	CONTINGENT SUM	ALL REQUIRED
641(7)	SWPPP MANAGER	LUMP SUM	ALL REQUIRED
642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642(3)	THREE PERSON SURVEY PARTY	HOUR	60
642(6)	REPLACE EXISTING WITH PRIMARY MONUMENT	EACH	2

PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)7743-3200
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ESTIMATE OF QUANTITIES



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	C2	C2

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	QUANTITY
643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
643(3)	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQUIRED
643(23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
643(25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED
643(102)	ROAD CLOSURE	LUMP SUM	ALL REQUIRED
643(117)	PUBLIC INFORMATION	LUMP SUM	ALL REQUIRED
644(1)	FIELD OFFICE	LUMP SUM	ALL REQUIRED
644(2)	FIELD LABORATORY	LUMP SUM	ALL REQUIRED
644(6)	VEHICLES	LUMP SUM	ALL REQUIRED
645(1)	TRAINING PROGRAM, 1 TRAINEES/APPRENTICES	LABOR HOUR	500
646(1)	CPM SCHEDULING	LUMP SUM	ALL REQUIRED
660(1)	TRAFFIC SIGNAL SYSTEM COMPLETE, UNIVERSITY/SANDVIK	LUMP SUM	ALL REQUIRED
660(3)	HIGHWAY LIGHTING SYSTEM COMPLETE	LUMP SUM	ALL REQUIRED
660(7)	TEMPORARY SIGNAL SYSTEM COMPLETE, UNIVERSITY/GEIST/JOHANSEN	LUMP SUM	ALL REQUIRED
660(145)	TRAFFIC SIGNAL MODIFICATIONS, UNIVERSITY/GEIST-JOHANSEN	LUMP SUM	ALL REQUIRED
661(5)	MODIFY EXISTING LOAD CENTER	EACH	1
661(6)	TRANSFORMER, 5KVA	EACH	1
662(122)	FIBER OPTIC INTERCONNECT, INFRASTRUCTURE	LUMP SUM	ALL REQUIRED
663(104)	ELECTRICAL RELOCATION, SECONDARY SERVICE(S)	LUMP SUM	ALL REQUIRED
665(102)	TELECOMMUNICATIONS-Vault, DUCT BANK AND CONDUIT SYSTEM	LUMP SUM	ALL REQUIRED
670(1)	PAINTED TRAFFIC MARKINGS	LUMP SUM	ALL REQUIRED
670(104)	MMA PAVEMENT MARKINGS LONGITUDINAL INLAID	LINEAR FOOT	20,344
670(105)	MMA PAVEMENT MARKINGS RAILROAD SYMBOLS INLAID	EACH	8
670(107)	MMA TRANSVERSE MARKINGS INLAID	SQUARE FOOT	3,373
670(109)	MMA PAVEMENT MARKINGS ARROW INLAID	EACH	41

ESTIMATING FACTORS

ITEM NUMBER	ITEM	FACTOR
301(1)	AGGREGATE BASE COURSE, GRADING D-1	1.96 TONS/CUBIC YARD
301(3)	AGGREGATE SURFACE COURSE, GRADING E-1	1.96 TONS/CUBIC YARD
304(1)	SUBBASE, GRADING F	2 TONS/CUBIC YARD
306(1)	ATB	1.96 TONS/CUBIC YARD
306(102)	ASPHALT BINDER, GRADE PG 52-28	4.5%/TON
401(1B)	HMA, TYPE II; CLASS B	1.96 TONS/CUBIC YARD
401(4)	ASPHALT BINDER, GRADE PG 52-40	5.5%/TON
402(1)	STE-1 ASPHALT FOR TACK COAT	0.0003 TONS/SQUARE YARD
608(2)	ASPHALT SIDEWALK	1.96 TONS/CUBIC YARD
618(2)	SEEDING	4.0 LBS/1,000 SQUARE FEET

ESTIMATED LUMP SUM QUANTITIES

ITEM NUMBER	ITEM	QUANTITY
201(1B)	CLEARING	0.7 ACRES
201(2B)	GRUBBING	2.25 ACRES
202(1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	
	LIGHT POLE BASE	11 EACH
	GCI LINE	1,396.7 LINEAR FOOT
	GCI STRUCTURE	5 EACH
	SD PIPE	876 LINEAR FOOT
	SD STRUCTURE	7 EACH
	WATER VALVE	2 EACH
	WATER PIPE	41.7 LINEAR FOOT
	FENCE	48.2 LINEAR FOOT
	CULVERT PIPE	135.5 LINEAR FOOT
	MAILBOX	7 EACH
	GUARDRAIL	102 LINEAR FOOT
	BUILDING FOUNDATION	1 EACH
	MISC	3 EACH
202(23)	REMOVAL OF EXISTING BRIDGE NO. 1317	1 EACH
611(102)	RIPRAP, CLASS 1	23 CUBIC YARD
665(102)	TELECOMMUNICATIONS-Vault, DUCT BANK AND CONDUIT SYSTEM	
	ACS CONDUIT	4,854 LINEAR FOOT
	GCI CONDUIT	431 LINEAR FOOT
	ACS VAULT 6'X8'X8'	1 EACH
	ACS VAULT 4878	1 EACH
	ACS PEDESTAL	2 EACH
	12 INCH CSP CASING	192 LINEAR FOOT

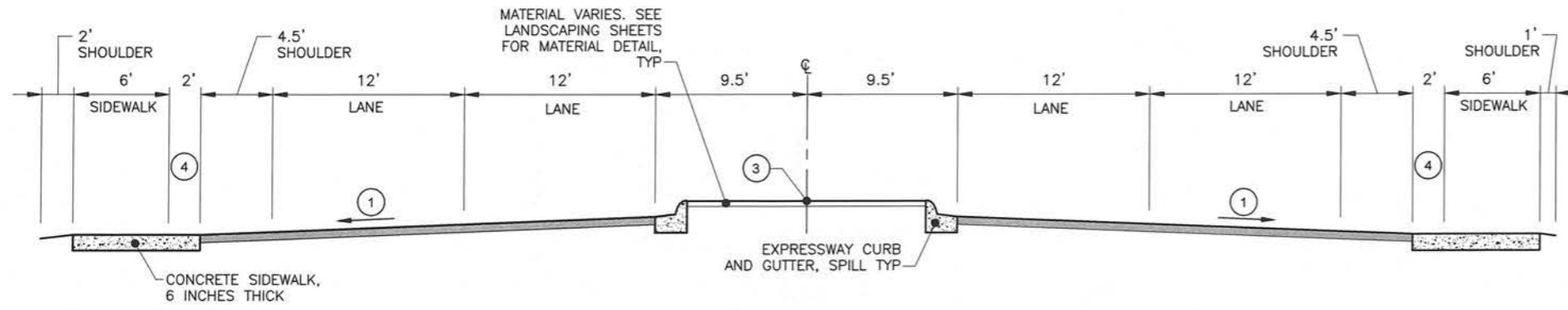
NOTES

- SEE SIGNING AND STRIPING SHEETS H1-H16 FOR SIGNING AND STRIPING SUMMARY SHEETS.

ESTIMATE OF QUANTITIES



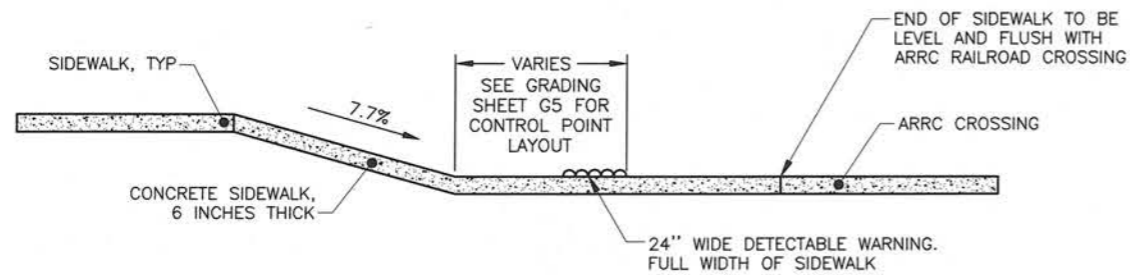
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	E1	E13



UNIVERSITY AVE RAILROAD CROSSING
NTS

NOTES:

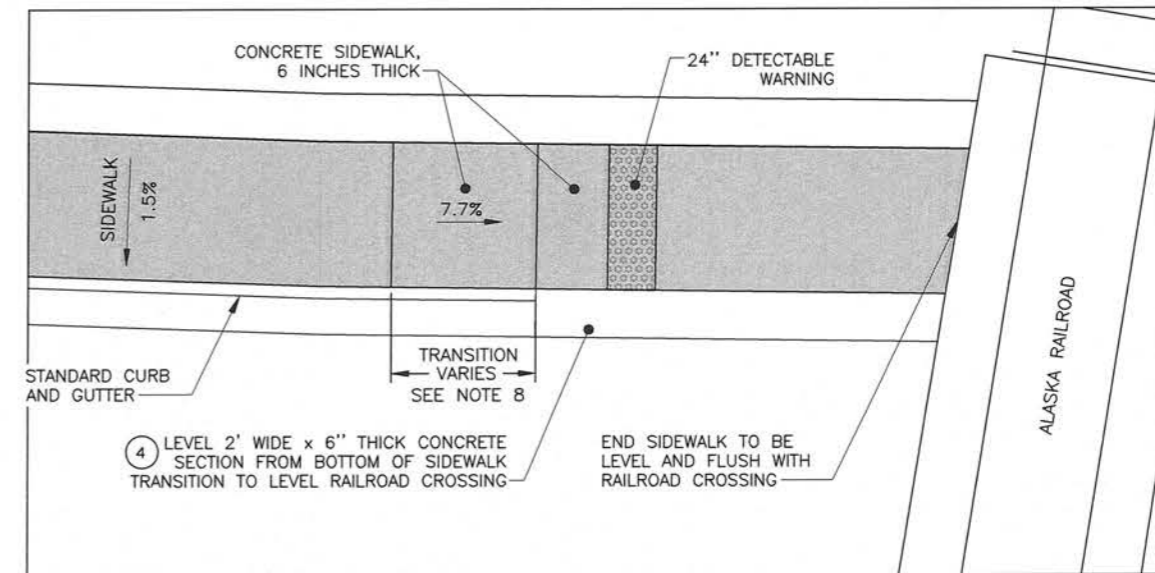
- 1 MATCH A LEVEL CROSS GRADE WITH THE ROADWAY AND SIDEWALK AT THE RAILROAD CROSSING.
- 2 FROM "01" 116+18 TO "01" 117+10.33 TRANSITION FROM A NORMAL CROWN TO A LEVEL CROSS GRADE AT THE ARRC TRACKS. AT THE ARRC TRACKS MATCH CROSS GRADE AND FROM "01" 117+20.33 TO "01" 118+12 TRANSITIONS BACK TO A NORMAL CROWN.
- 3 FOUNDATION FOR THE GATE TO BE INSTALLED BY THE CONTRACTOR, AND ARRC TO PROVIDE AND INSTALL GATE IN THE CENTER OF THE RAISED MEDIAN.
- 4 SEE SIDEWALK RAMP TRANSITION DETAIL PLAN VIEW FOR LEVEL RAILROAD CROSSING DETAILS. WORK IS PAID FOR UNDER 608(1B) CONCRETE SIDEWALK, 6 INCHES THICK. SEE SUMMARY SHEET ON SHEET G20 FOR MORE INFORMATION. FOR CONTROL LAYOUT SEE SHEET G5.
- 5 ARRC WILL REMOVE, RELOCATE, AND INSTALL CONTROL BUNGALOW, GATES, AND CANTILEVER LIGHTS AND STRUCTURES, EXCEPT FOR CONDUIT, J-BOXES, AND MEDIAN FOUNDATIONS.



SIDEWALK RAMP TRANSITION DETAIL - RAILROAD CROSSING
SECTION VIEW
NTS

NOTES:

6. INSTALL FEDERAL YELLOW DETECTABLE WARNINGS IN THE TRANSITION RAMP AS SHOWN IN DETAIL. DETECTABLE WARNINGS TO BE CAST IRON 24" WIDE, AND THE FULL WIDTH OF THE RAMP. PROVIDE TILES WITH TRUNCATED DOMES MEETING SECTION 705.1 OF THE 2006 ADA STANDARDS FOR TRANSPORTATION FACILITIES. ALIGN TRUNCATED DOME PATTERN IN THE PREDOMINANT DIRECTION OF WHEELCHAIR TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
7. CONCRETE SHALL RECEIVE A COARSE BROOMED FINISH RUNNING PERPENDICULAR TO THE CURB ON RAMP RUNS AND UPPER LANDINGS.
8. SEE SHEETS G18 AND G19 FOR ADDITIONAL NOTES ON RAMPS AND DETECTABLE WARNINGS.



SIDEWALK RAMP TRANSITION DETAIL
PLAN VIEW

RAILROAD CROSSING
DETAILS (1 OF 2)

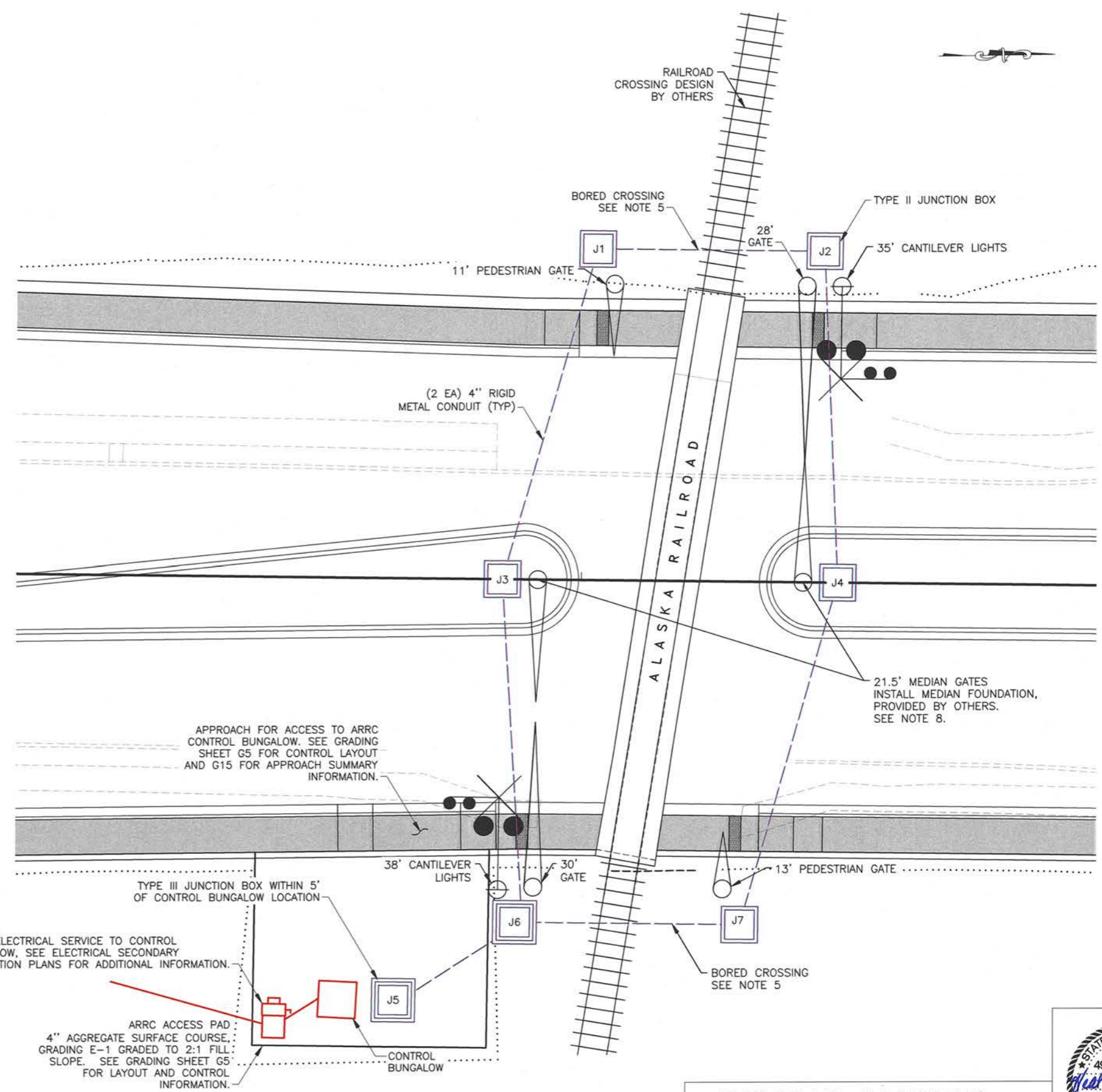
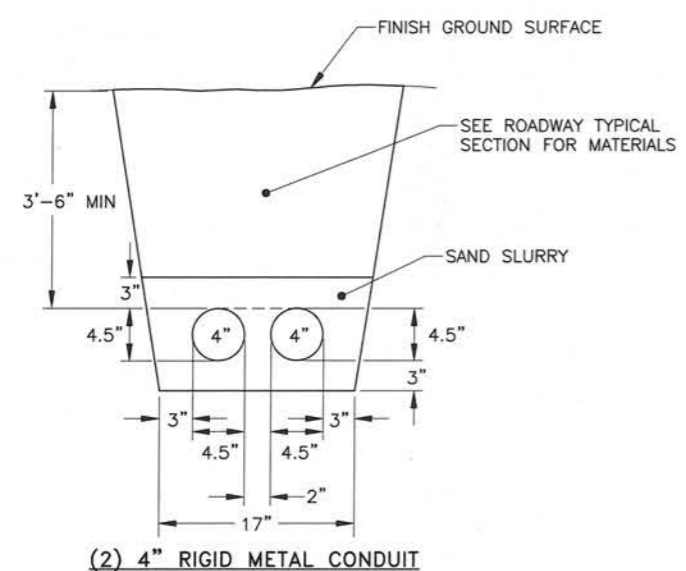


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	E2	E13

GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT ARRC PROJECT MANAGER AS STATED IN SPEC SECTION 105-1.06 TO COORDINATE ALL WORK AND FINALIZE FIELD FIT LOCATIONS PRIOR TO J-BOX AND 4" RMC INSTALLATION.
2. GROUNDING COLLARS SHALL BE INSTALLED ON ALL CONDUIT RISERS AND ALL CONDUIT SHALL BE BONDED TO FORM A CONTINUOUS ELECTRICALLY SECURE SYSTEM WITH THE GROUND AT THE CONTROL BUNGALOW.
3. CONDUIT SHALL TERMINATE AT JUNCTION BOXES AT HEIGHT OF NO MORE THAN 6" ABOVE BOTTOM OF BOX.
4. FOR ANY OPEN TRENCH CONDUIT INSTALLATION, CONTRACTOR SHALL PLACE 6" WIDE WARNING TAPE 1' BELOW GROUND SURFACE DIRECTLY ABOVE CONDUIT LINE.
5. ALL CONDUIT CROSSINGS UNDER ARRC SHALL BE BORED AT A MINIMUM OF 5'6" BELOW THE BASE OF THE RAIL EXCEPT CONDUIT RUNS BETWEEN ARRC JUNCTION BOXES J1-J2, AND J6-J7. RUNS BETWEEN ARRC JUNCTION BOXES SHALL BE BORED AT A MINIMUM 3'6" BELOW THE BASE OF RAIL AND MAINTAIN THIS DEPTH TO ENSURE SMOOTH CABLE PULL THROUGH JUNCTION BOXES.
6. CONTRACTOR SHALL COMPLY WITH ARRC EXCAVATION SHORING BASIC REQUIREMENTS FOR DRILL PIT EXCAVATIONS NEAR ARRC TRACKS.
7. THE WORD "SIGNAL" TO BE EMBOSSED ON COVER OF THE JUNCTION BOX LIDS DEPICTED ON THIS PLAN SHEET.
8. ARRC WILL REMOVE, RELOCATE, AND INSTALL CONTROL BUNGALOW, GATES, AND CANTILEVER LIGHTS AND STRUCTURES, EXCEPT FOR CONDUIT, J-BOXES, AND MEDIAN FOUNDATIONS.
9. SEE ARRC STANDARD DETAIL 23.24-04: FOUNDATION, GALVANIZED STEEL HIGHWAY GRADE CROSSING FLASHERS/GATES.
10. ARRC WILL RAISE AND REPROFILE THE TRACKS, AND REMOVE AND REPLACE CONCRETE CROSSING PANELS TO THE NEW DESIGN WIDTH OF UNIVERSITY AVENUE
11. A PAVEMENT PATCH DUE TO ARRC TRACK RAISE AND CONCRETE CROSSING PANEL WORK MAY BE REQUIRED. THE PROJECT ENGINEER SHALL APPROVE LOCATION AND AREA PRIOR TO PAVEMENT PATCH TO WORK COMMENCING.

617(7) TYPE II JUNCTION BOX 617(106) JUNCTION BOX, TYPE III					
J-BOX NO.	ALIGNMENT	STATION	OFFSET	QUANTITY (EACH)	REMARKS
J1	"01"	"FIELD FIT"	LT	1	TYPE II
J2	"01"	"FIELD FIT"	LT	1	TYPE II
J3	"01"	"FIELD FIT"	C	1	TYPE II
J4	"01"	"FIELD FIT"	C	1	TYPE II
J5	"01"	"FIELD FIT"	RT	1	TYPE III
J6	"01"	"FIELD FIT"	RT	1	TYPE III
J7	"01"	"FIELD FIT"	RT	1	TYPE II
PAY ITEM TOTALS				5	TYPE II
PAY ITEM TOTALS				2	TYPE III



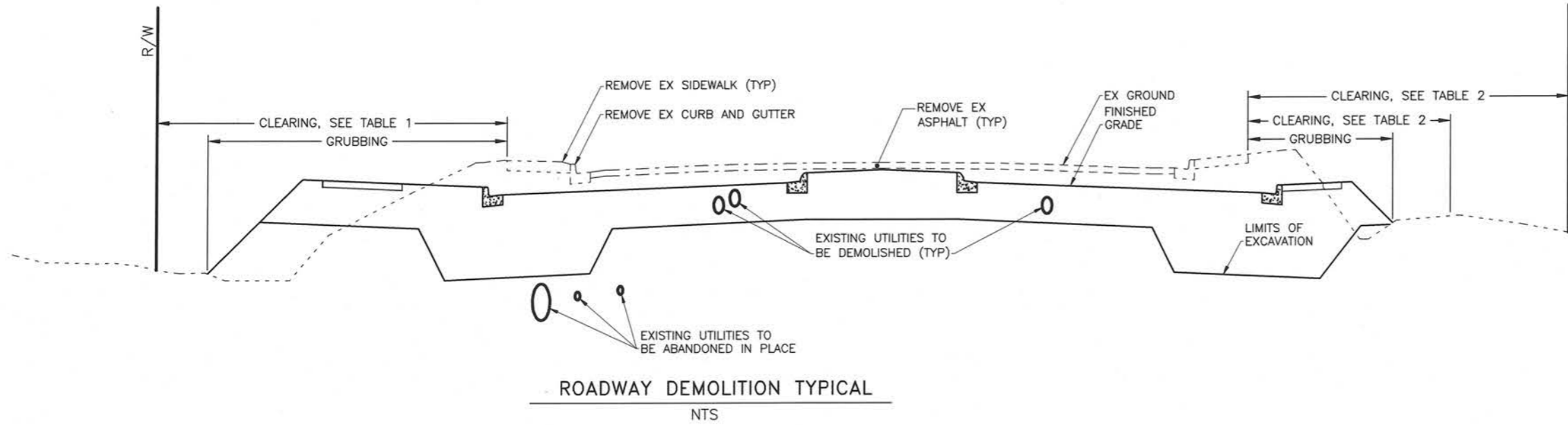
**SIGNAL CONDUIT DETAIL
PLAN VIEW**

**RAILROAD CROSSING
DETAILS (2 OF 2)**



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)7743-3200
 P:\2011\1114701FB\C_Segment Improvement Packages\Segment 1B\B-C\0007\cns1114701FB-Seg-1B-E2_Wed_Jun/06/18_06:57pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	E3	E13



GENERAL DEMOLITION NOTES:

- GRUBBING EXTENDS FROM EDGE OF EXISTING SIDEWALK TO CUT/FILL LIMIT. CLEARING TO OCCUR IN AREAS WHERE TREES/SHRUBBERY ARE WITHIN THE CUT/FILL LIMITS. CLEAR TO THE ROW WHERE DEPICTED ON THE DEMO PLANS. DO NOT CLEAR BEYOND THE ROW.
- ALL UTILITIES MUST BE TEMPORARILY OR PERMANENTLY RELOCATED PRIOR TO DEMOLITION. SEE SPECIFICATIONS FOR ALLOWABLE OUTAGES AND OTHER REQUIREMENTS.
- SUPPORT AND PROTECT OTHER UNDERGROUND UTILITIES, CONDUITS, AND STRUCTURES WHICH ARE NOT SCHEDULED FOR DEMOLITION OR ABANDONMENT.
- ABANDON IN PLACE EXISTING UNDERGROUND UTILITIES WHICH ARE NOT BEING INCORPORATED INTO NEW SYSTEMS UNLESS THEY ARE IN CONFLICT WITH THE INSTALLATION OF A NEW UNDERGROUND UTILITY SYSTEM. CRUSH OR PLUG PIPE ENDS OF UTILITIES TO BE ABANDONED WITHIN THE STRUCTURAL SECTIONS WITH 12" NON SHRINK GROUT TO PREVENT UNDERMINING OF THE ROADWAY STRUCTURE.
- REMOVE PORTIONS OF ABANDONED UNDERGROUND UTILITIES THAT ARE IN CONFLICT WITH THE INSTALLATION OF NEW UNDERGROUND UTILITY SYSTEMS WITHIN 4' OF CROSSING OR WITHIN THE EXCAVATION LIMITS SHOWN.
- EXISTING ACS DUCT BANK IS TO REMAIN IN PLACE UNTIL FULL RELOCATION CAN OCCUR. PROTECT ACS DUCT BANK AND STRUCTURES DURING CONSTRUCTION.

DEMOLITION INDEX:

	SANITARY SEWER DEMO		CLEARING
	SANITARY SEWER ABANDON IN PLACE		GRUBBING
	WATER DEMO		REMOVAL OF PAVEMENT, CONCRETE, CURB & GUTTER
	WATER ABANDON IN PLACE		
	STORM DRAIN DEMO		
	STORM DRAIN ABANDON IN PLACE		
	ACS DUCT BANK DEMO		
	ACS DUCT BANK ABANDON IN PLACE		
	GCI DEMO		
	GCI ABANDON IN PLACE		
	LIGHTING DEMO		
	FORCE MAIN DEMO		
	FORCE MAIN ABANDON IN PLACE		
	GAS LINE DEMO		
	GAS LINE ABANDON IN PLACE		
	CULVERT DEMO		
	CULVERT ABANDON IN PLACE		
	STRUCTURES		
	FENCE		
	GUARDRAIL		
	BUS SHELTER		
	GUY ANCHOR		
	SIGNS		
	MAILBOX		

① TABLE 1: CLEARING LT SIDE

UNIVERSITY AVE. STATION	CLEARED AREA
97+00 - 98+00	TO THE ROW

① TABLE 2: CLEARING RT SIDE

UNIVERSITY AVE. STATION	CLEARED AREA
100+13 - 102+00	TO THE ROW
109+25 - 110+55	10' OFFSET FROM CUT/FILL LIMITS
110+55 - EOP	AS SHOWN ON PLANS

DEMOLITION DETAILS
(1 OF 2)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	E4	E13

REMOVAL BY OTHERS

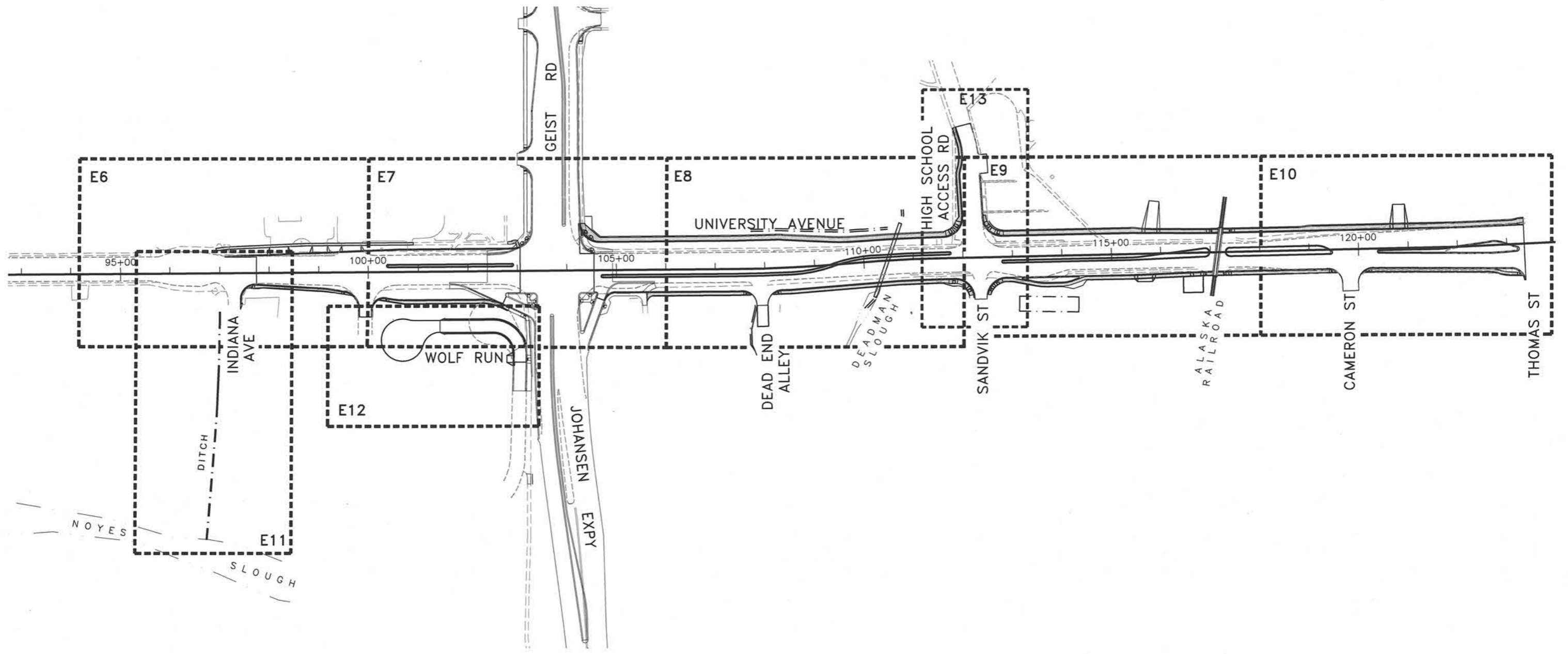
ALIGNMENT	BEGIN	OFFSET	END	OFFSET	QUANTITY	UNIT	REMARKS
01	98+64.42	55.61 LT	-	-	1	EA	OASIS PRIVATE SIGN
01	107+13.28	39.50 RT	107+13.43	87.94 RT	50	LF	CHAIN LINK FENCE
01	108+08.13	72.60 RT	-	-	1	EA	MAILBOX
01	108+08.28	74.42 RT	-	-	1	EA	MAILBOX
01	108+08.55	77.76 RT	-	-	1	EA	MAILBOX
01	108+08.62	77.51 RT	-	-	1	EA	MAILBOX
01	108+10.62	67.68 RT	-	-	1	EA	MAILBOX
01	108+10.64	70.03 RT	-	-	1	EA	MAILBOX
01	108+28.75	43.31 RT	-	-	1	EA	EXISTING SPRINKLER SYSTEM
01	108+29.84	65.00 RT	108+54.47	53.76 RT	40	LF	RETAINING WALL
01	111+79.64	88.18 LT	-	-	1	EA	LIGHT POLE
01	112+40.86	100 LT	-	-	46	SF	LANDSCAPING
01	112+43.94	92 LT	-	-	1	EA	HEADBOLT HEATER
01	112+51.16	45.10 LT	-	-	1	EA	UNIVERSITY PARK BUILDING SIGN
01	112+51.83	35.02 LT	-	-	428	SF	LANDSCAPING
01	112+62.34	90.02 LT	-	-	1	EA	HEADBOLT HEATER
01	113+53.27	51.69 RT	-	-	1	EA	MAILBOX
01	114+62.76	52.96 LT	-	-	1	EA	PRIVATE SIGN, UAF PARKING DECAL REQUIRED
01	116+95.08	34.10 RT	-	-	1	EA	ALASKA RAILROAD CANTILEVER LIGHT
01	117+33.42	21.35 LT	-	-	1	EA	ALASKA RAILROAD GATE
01	117+40.97	30.83 LT	-	-	1	EA	ALASKA RAILROAD CANTILEVER LIGHT
01	117+52.19	55.08 LT	-	-	1	EA	ALASKA RAILROAD CONTROL BUNGALOW

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEGC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)7743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\C0007const11147.01\FB-Seg_1B-E4_Wed_Jun/06/18 06:57pm

DEMOLITION DETAILS
 (2 OF 2)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	E5	E13

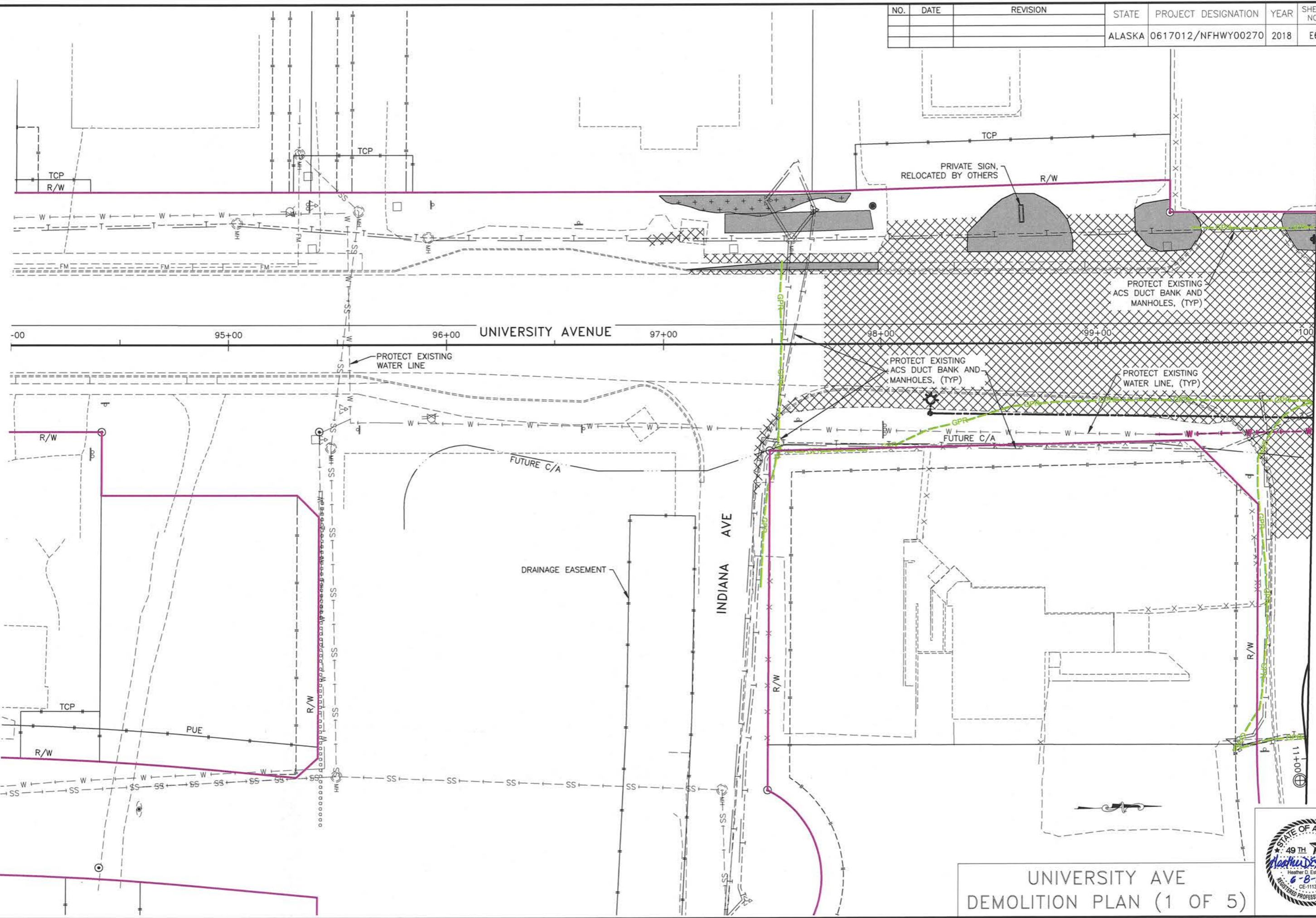


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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DEMOLITION SHEET
LAYOUT INDEX



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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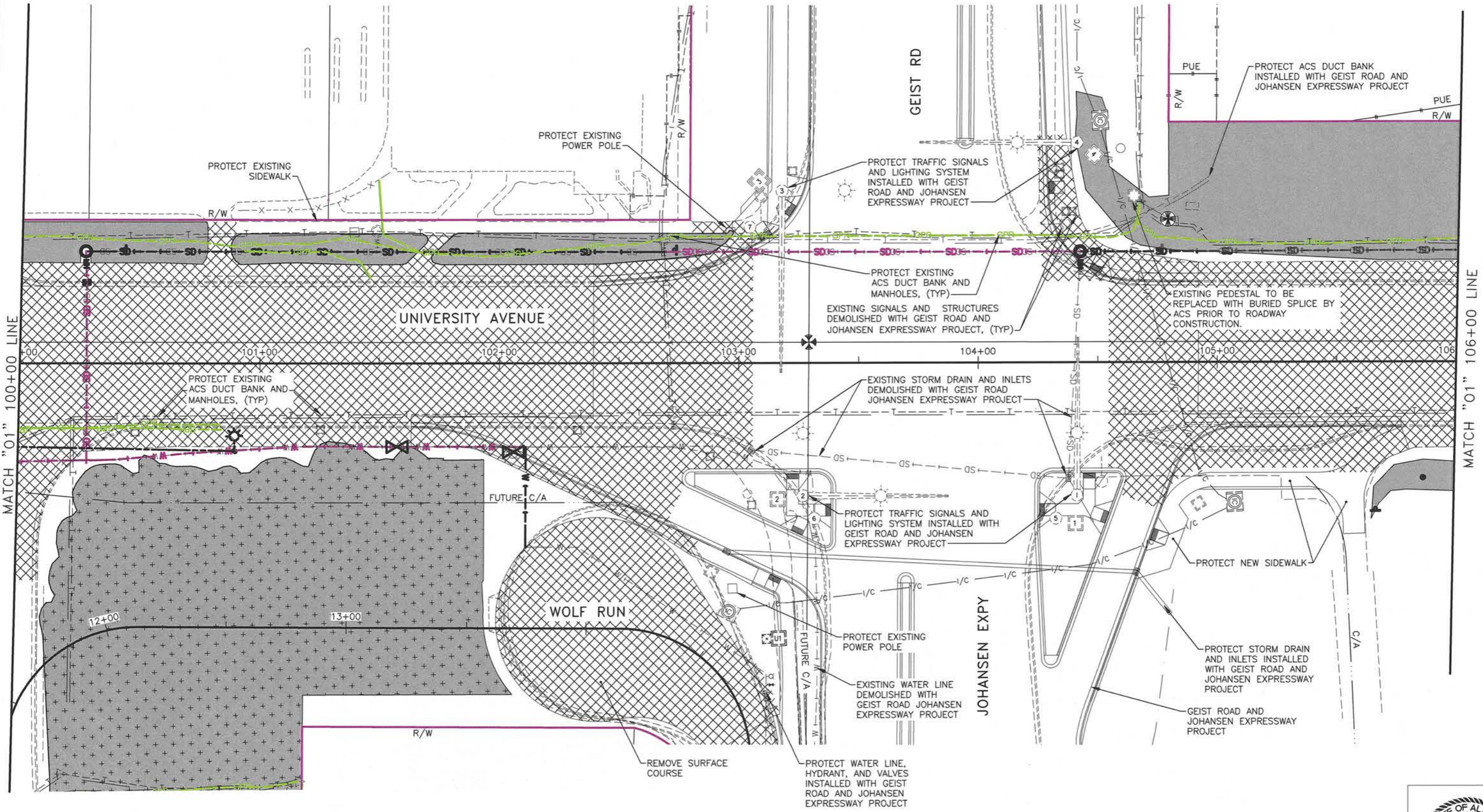


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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UNIVERSITY AVE
DEMOLITION PLAN (1 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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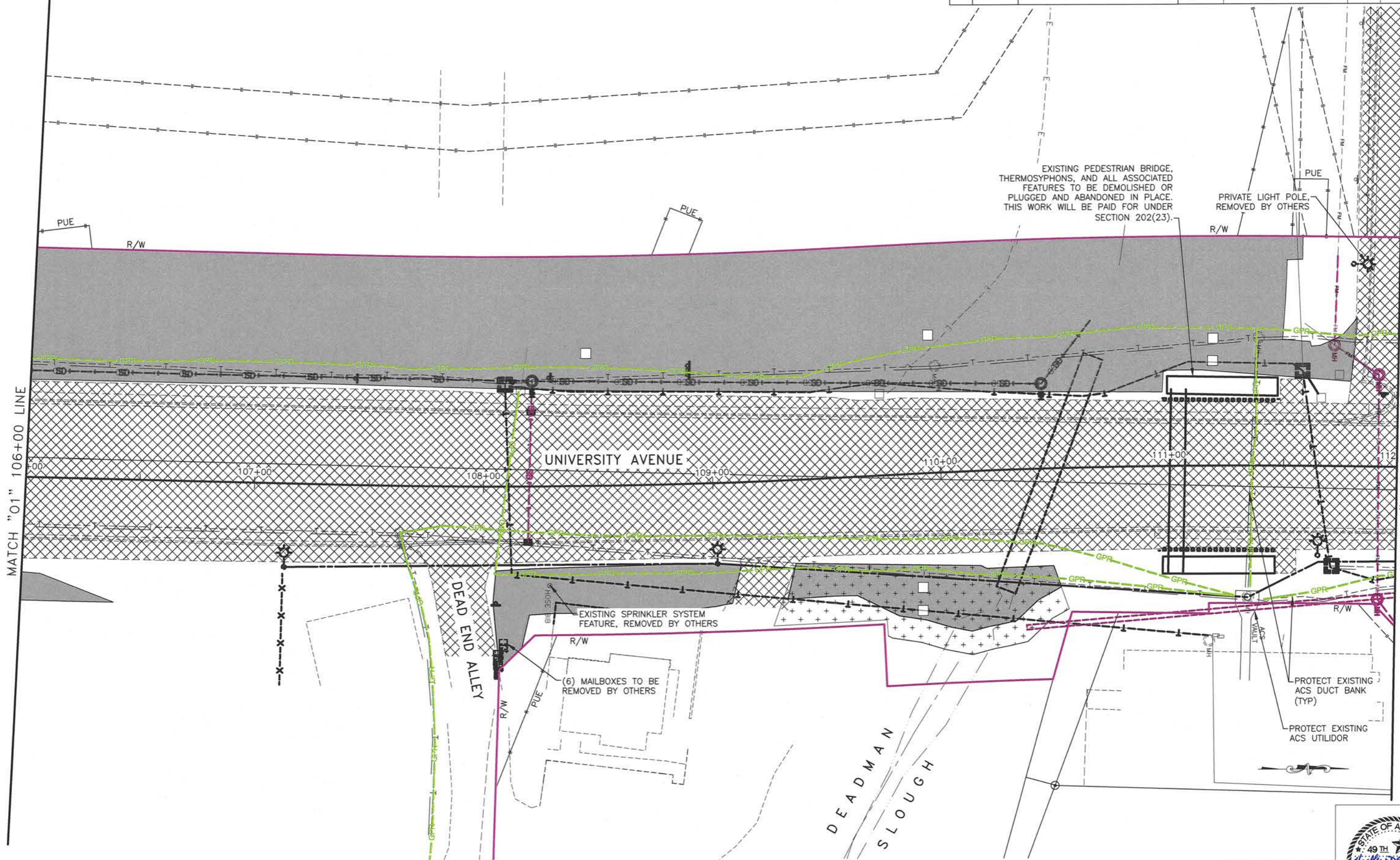


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UNIVERSITY AVE DEMOLITION
PLAN (2 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	E8	E13



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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UNIVERSITY AVE DEMOLITION
PLAN (3 OF 5)

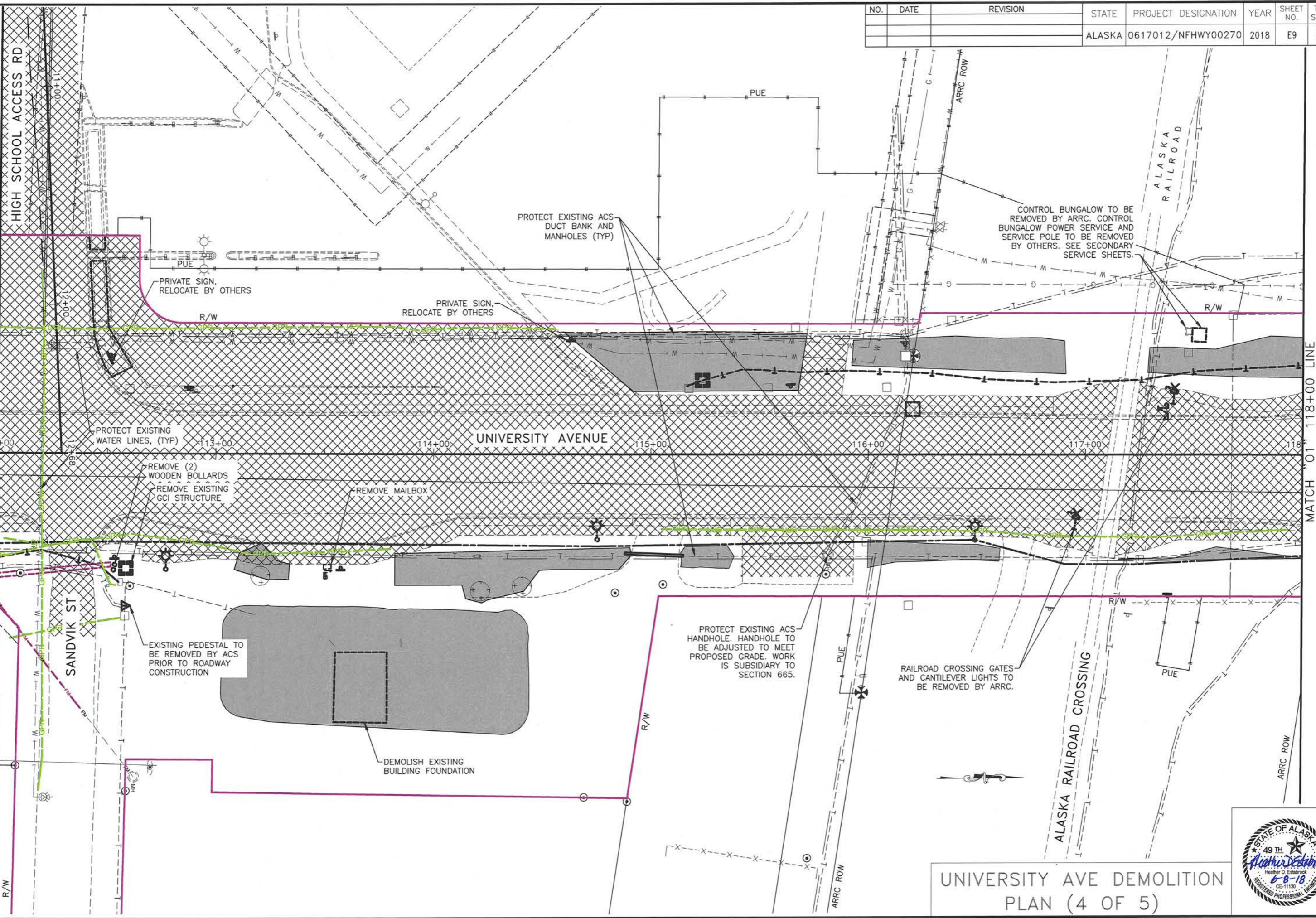


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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MATCH "01" 112+00 LINE

MATCH "01" 118+00 LINE



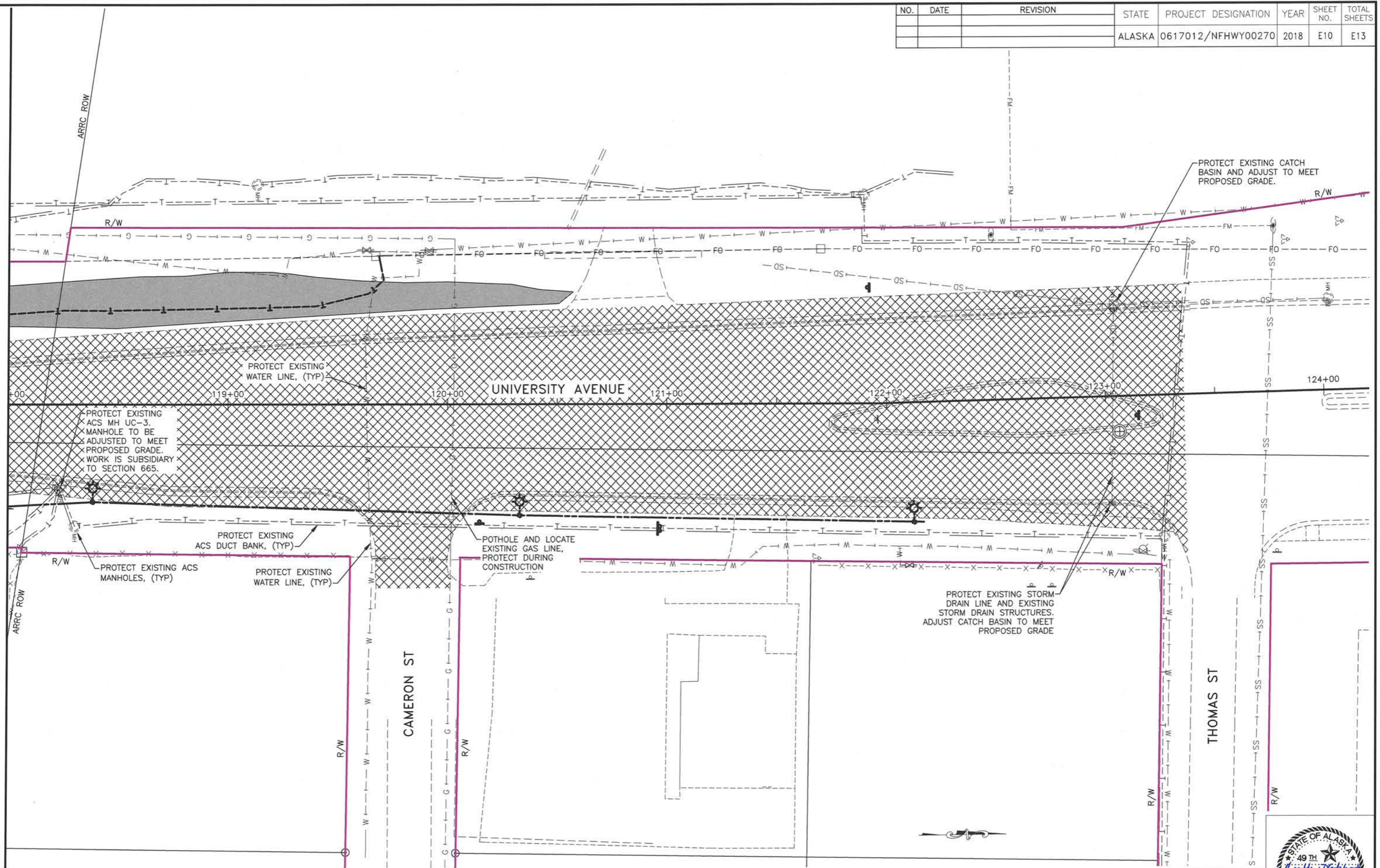
UNIVERSITY AVE DEMOLITION
PLAN (4 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	E10	E13

MATCH "01" 118+00 LINE

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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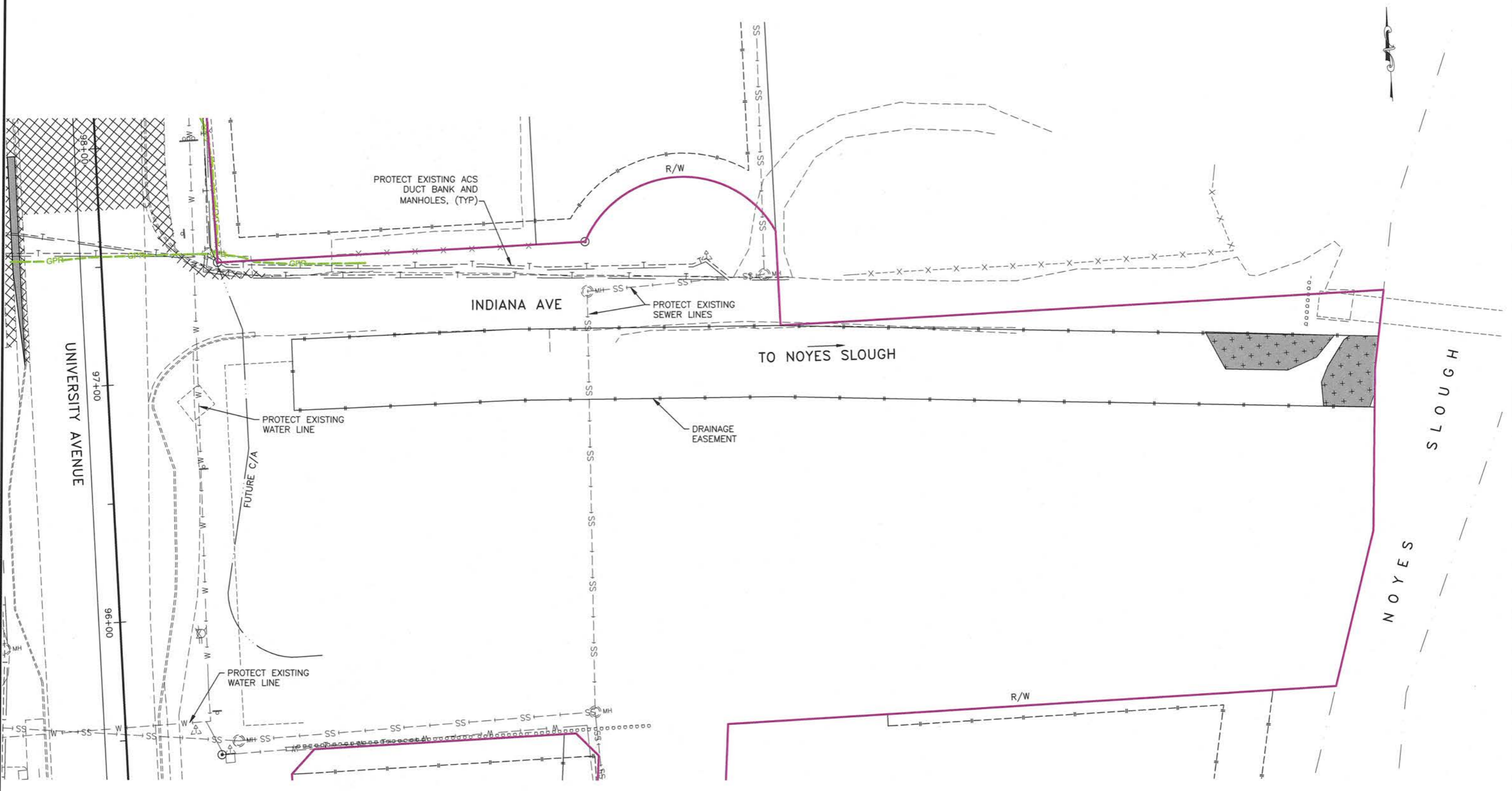


UNIVERSITY AVE DEMOLITION
PLAN (5 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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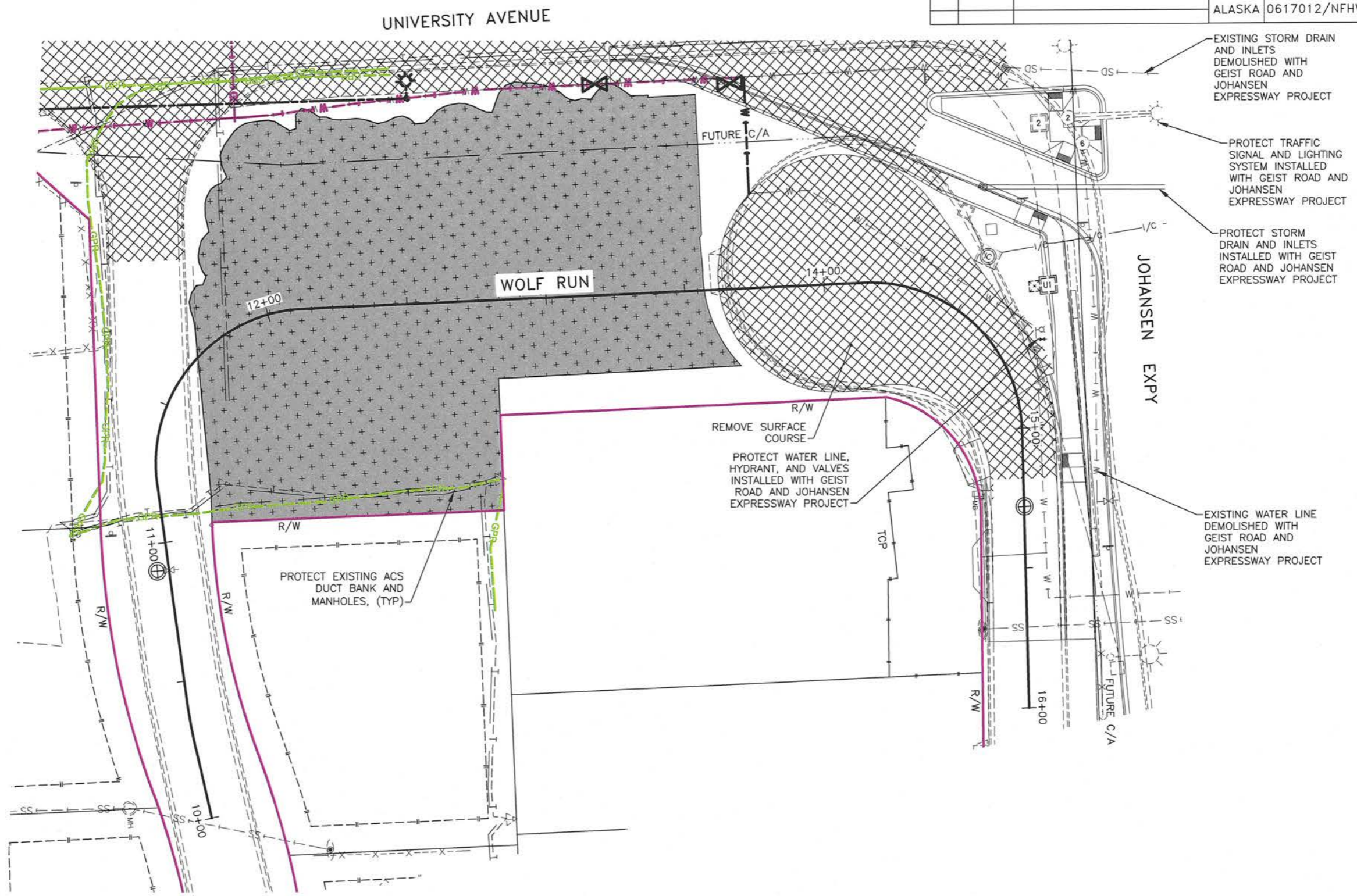
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DITCH TO NOYES SLOUGH
DEMOLITION PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	E12	E13

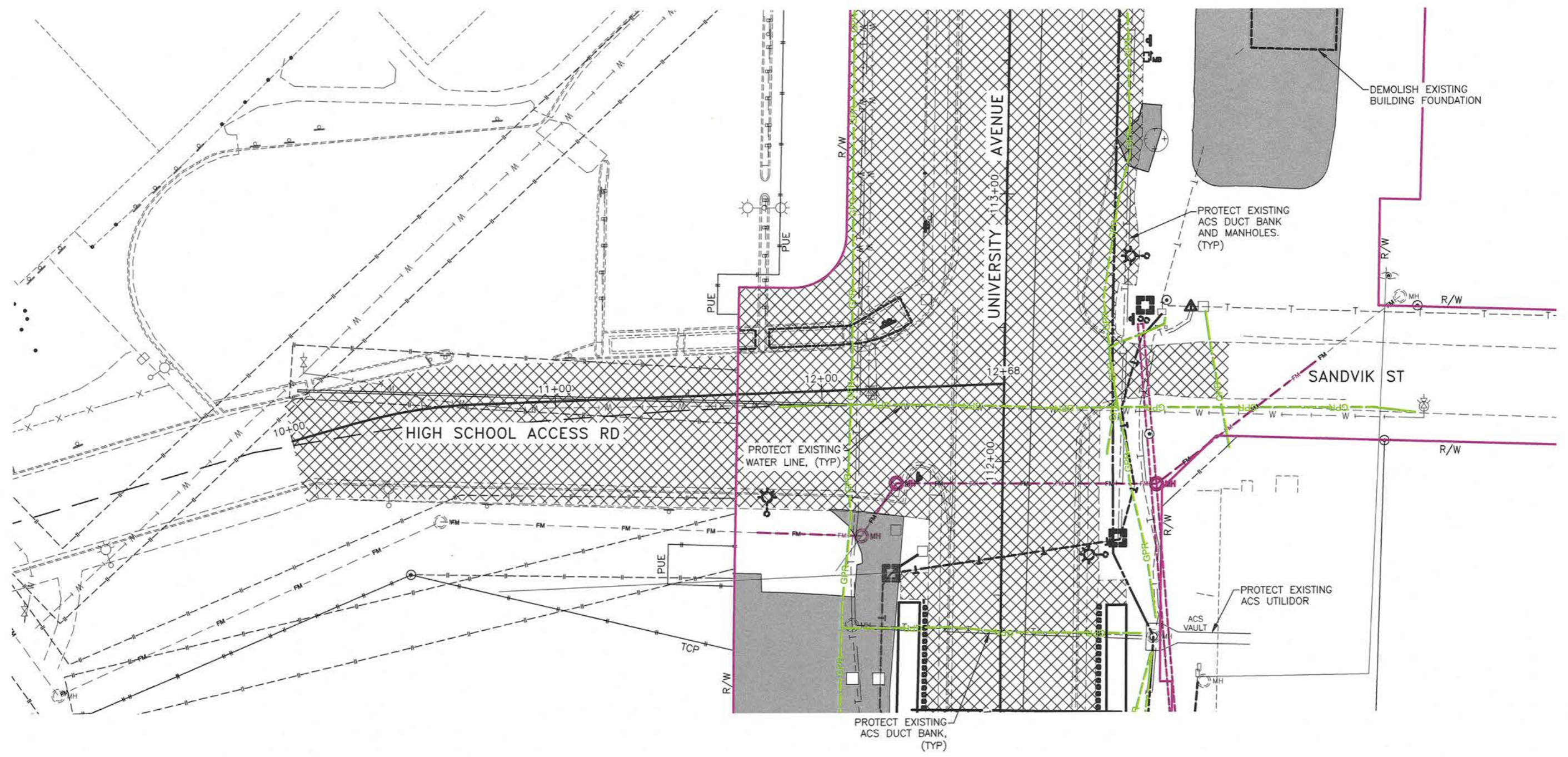


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WOLF RUN DEMOLITION PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	E13	E13

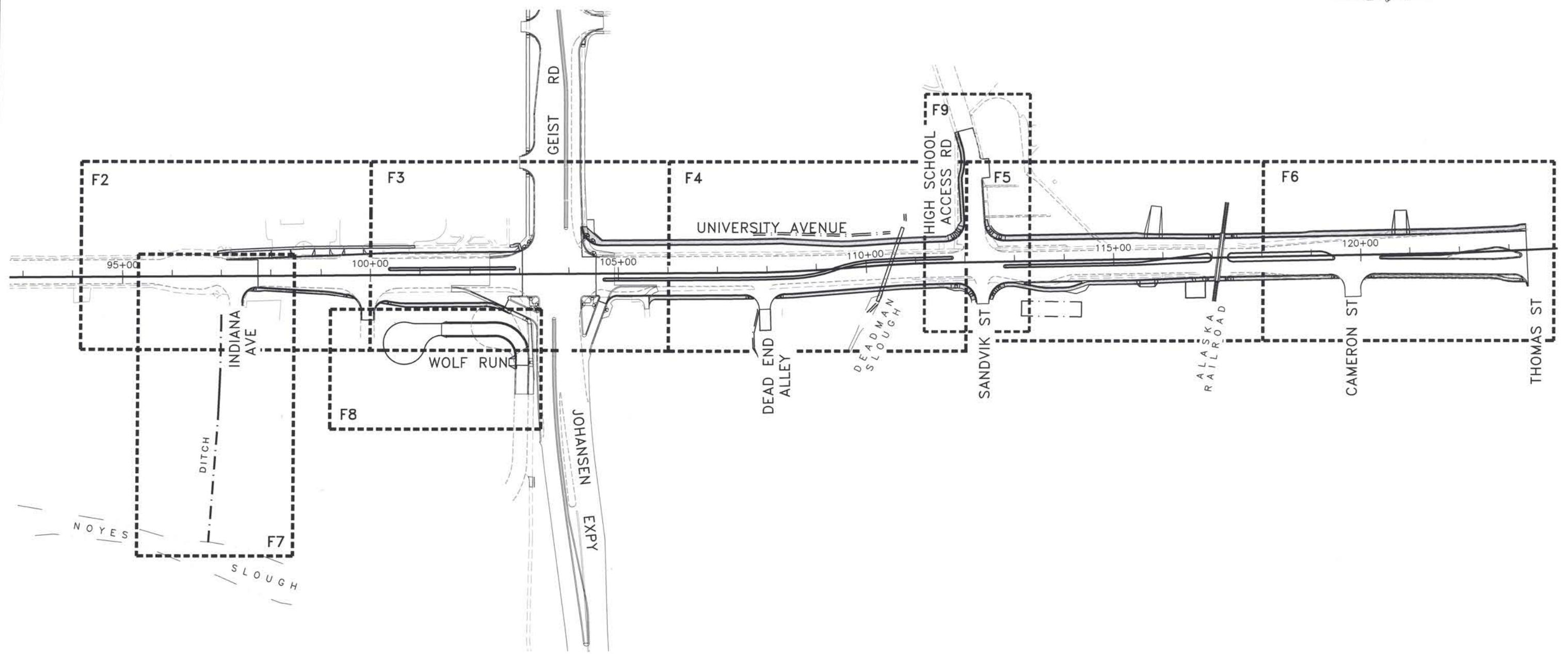


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HIGH SCHOOL ACCESS RD
 DEMOLITION PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	F1	F13

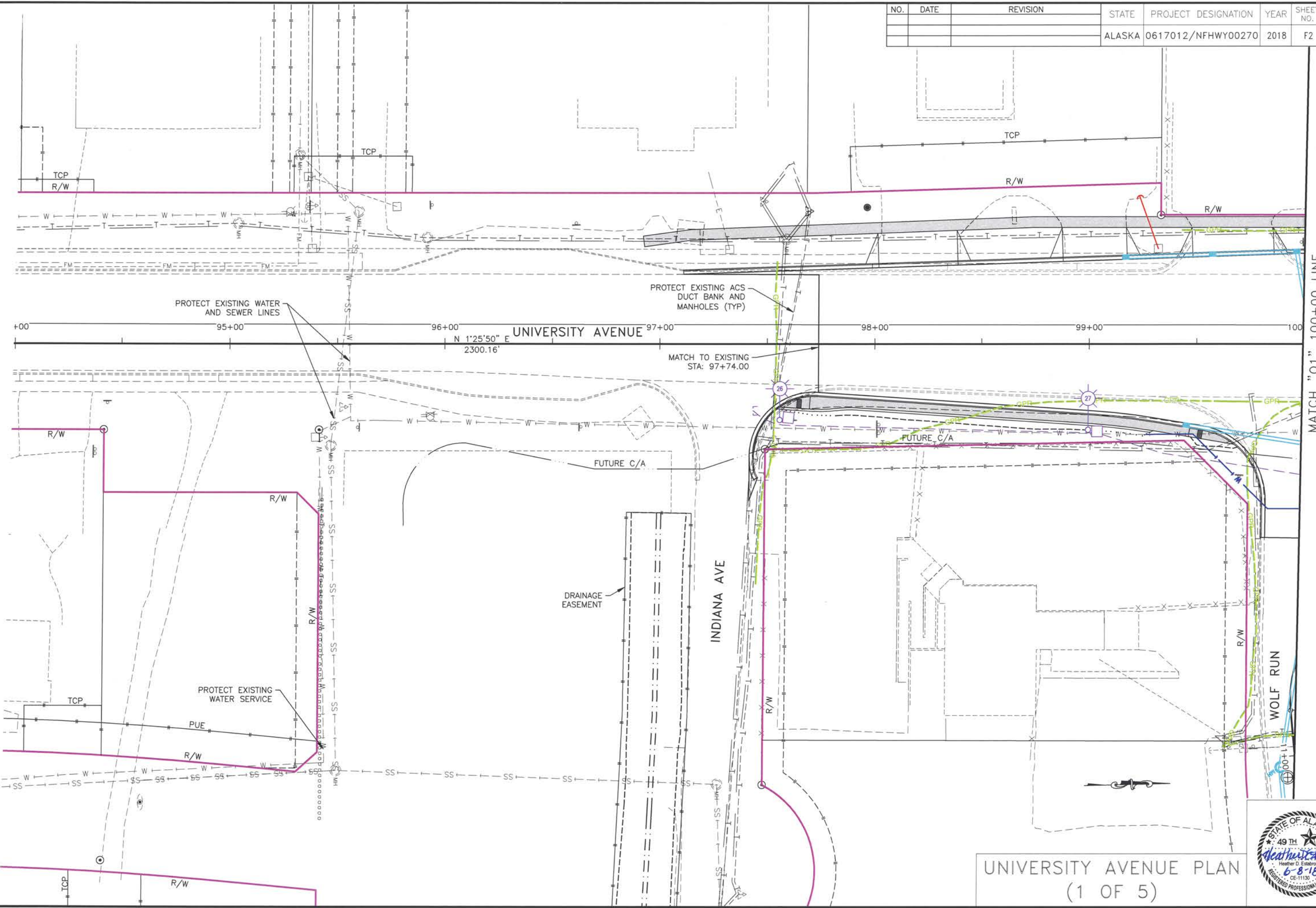


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PLAN SHEET
LAYOUT INDEX



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	F2	F13



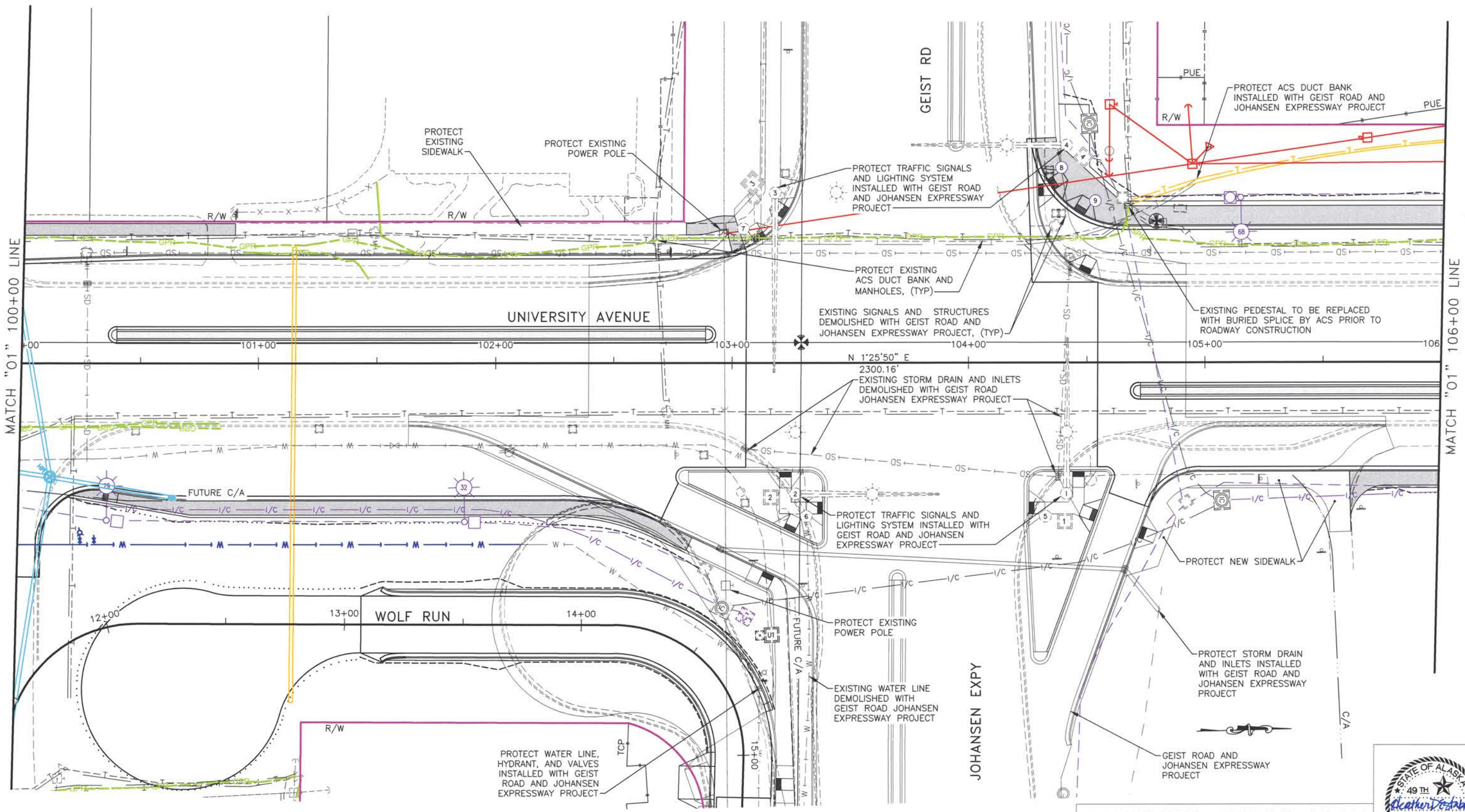
MATCH "01" 100+00 LINE

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECG605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK, 99503, (907)743-3200
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UNIVERSITY AVENUE PLAN
(1 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	F3	F13



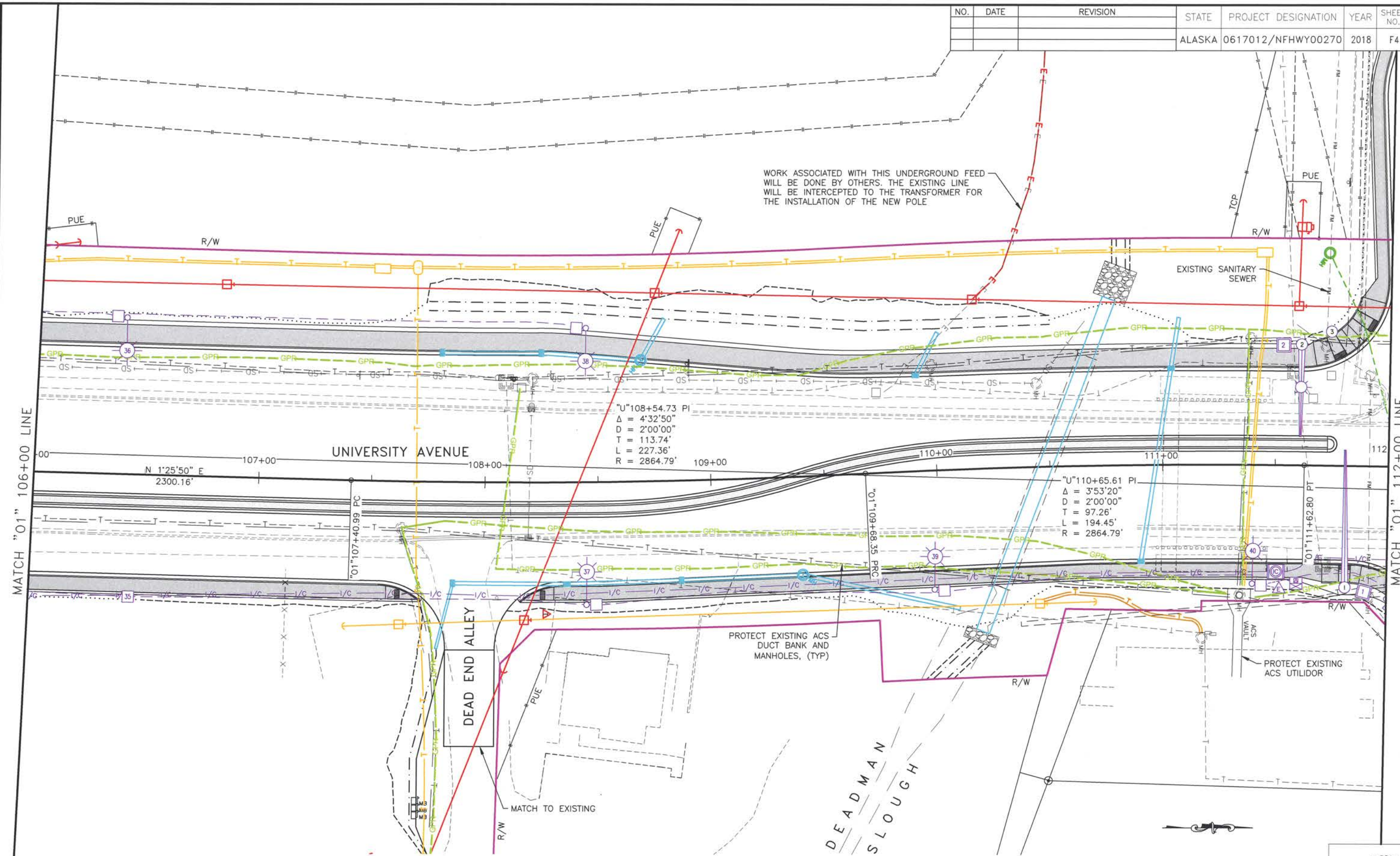
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UNIVERSITY AVENUE PLAN
(2 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	F4	F13

WORK ASSOCIATED WITH THIS UNDERGROUND FEED WILL BE DONE BY OTHERS. THE EXISTING LINE WILL BE INTERCEPTED TO THE TRANSFORMER FOR THE INSTALLATION OF THE NEW POLE



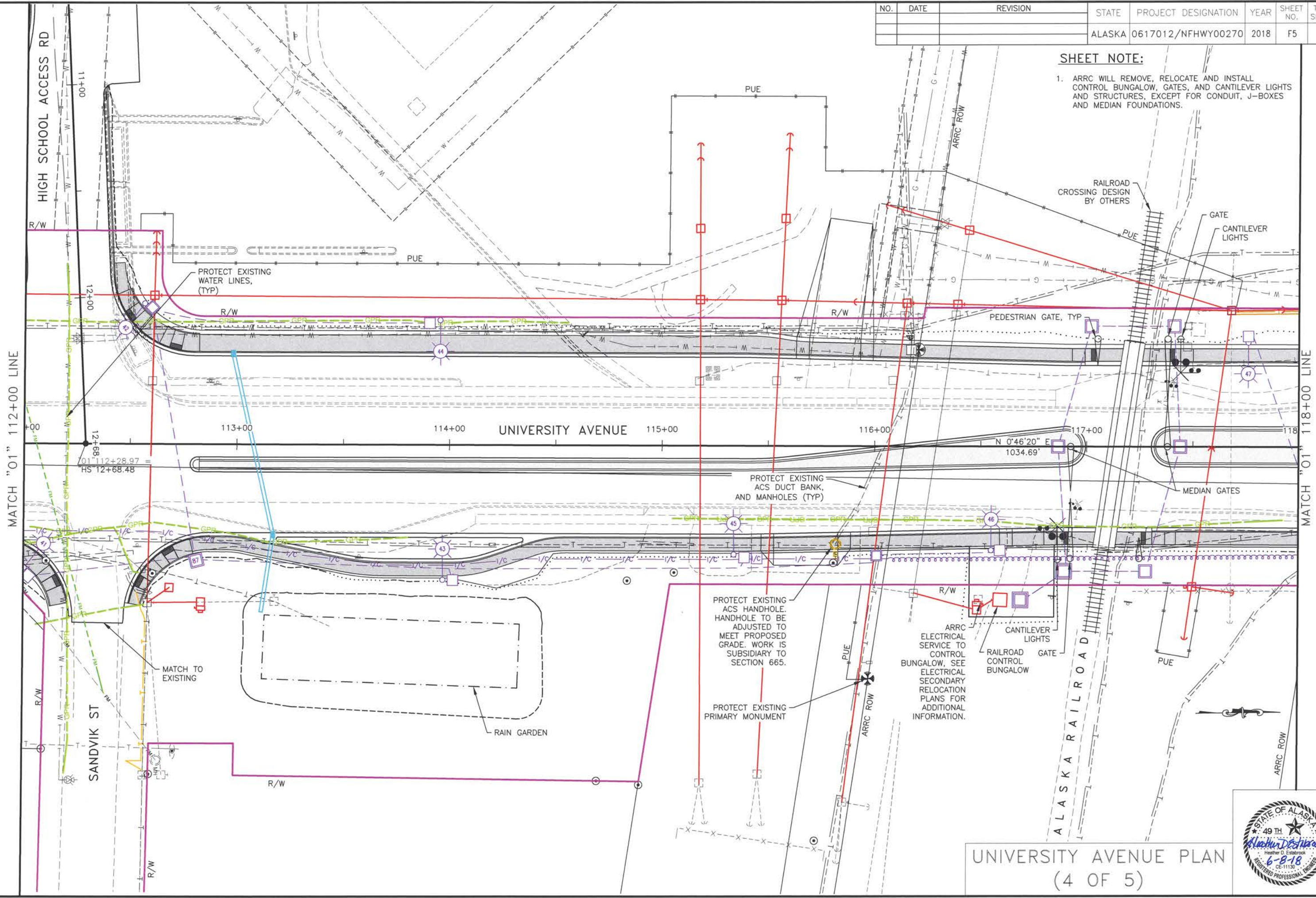
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UNIVERSITY AVENUE PLAN
(3 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	F5	F13

SHEET NOTE:
 1. ARRC WILL REMOVE, RELOCATE AND INSTALL CONTROL BUNGALOW, GATES, AND CANTILEVER LIGHTS AND STRUCTURES, EXCEPT FOR CONDUIT, J-BOXES AND MEDIAN FOUNDATIONS.

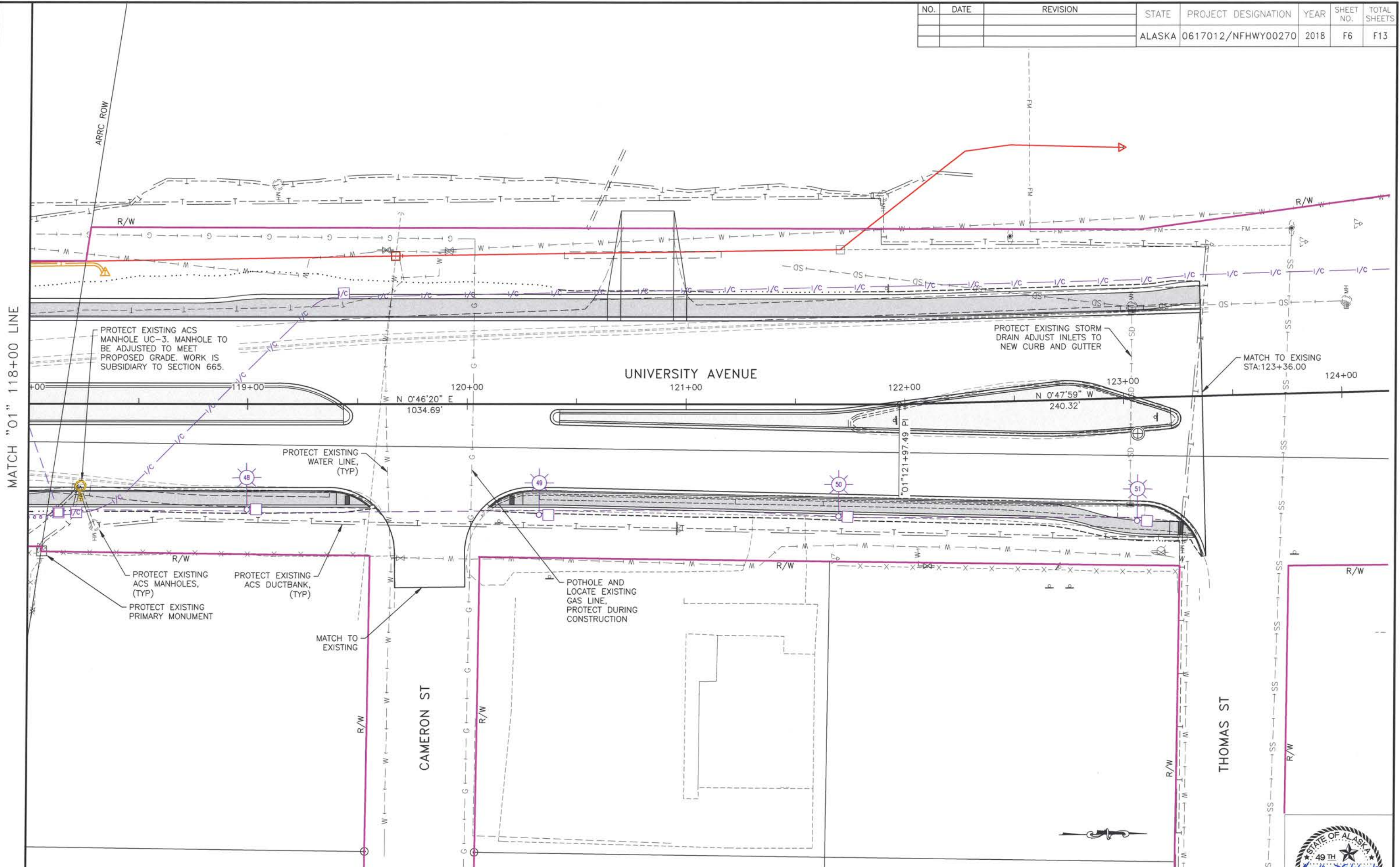


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UNIVERSITY AVENUE PLAN
(4 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	F6	F13



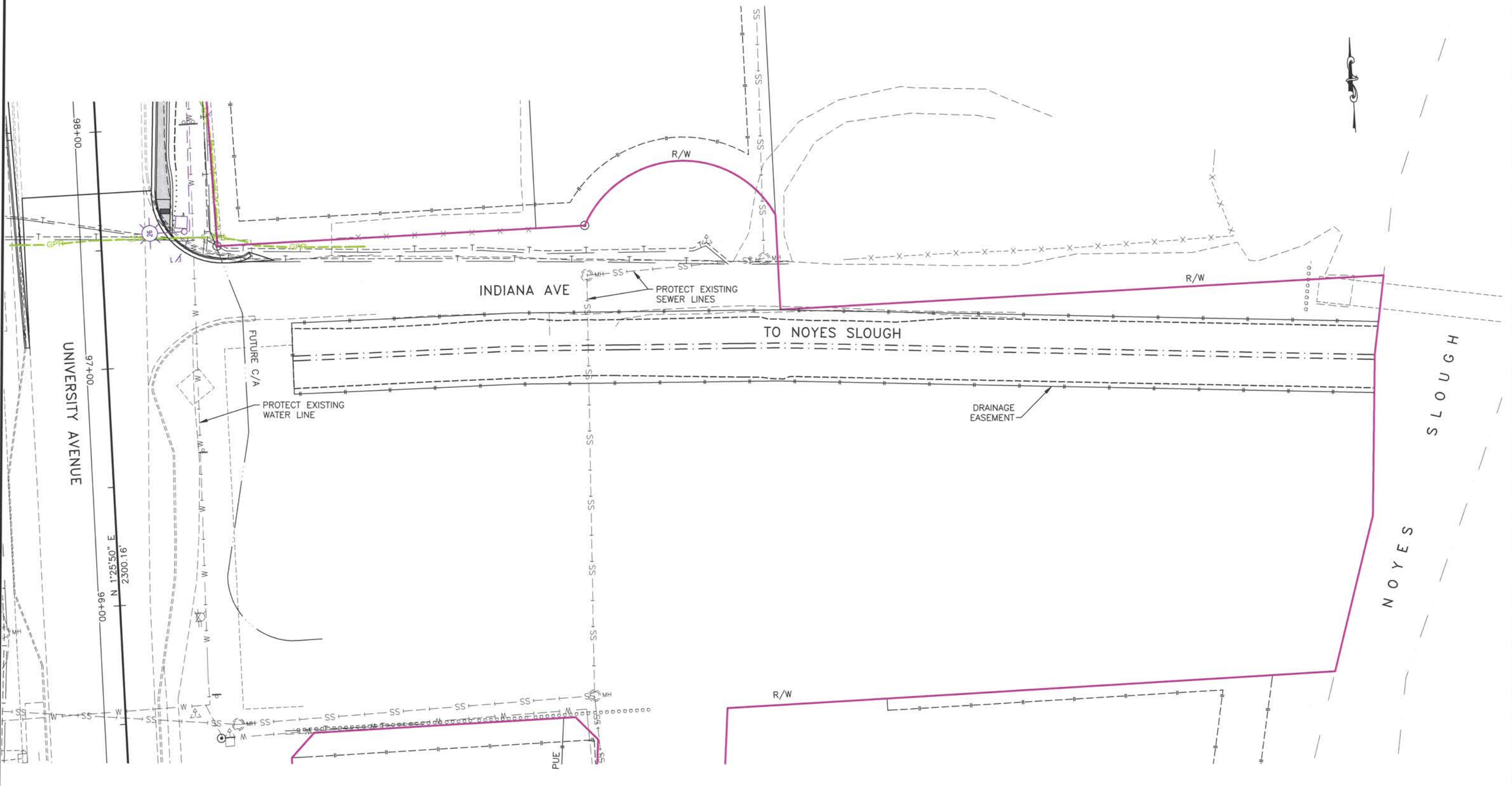
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UNIVERSITY AVENUE PLAN
(5 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	F7	F13

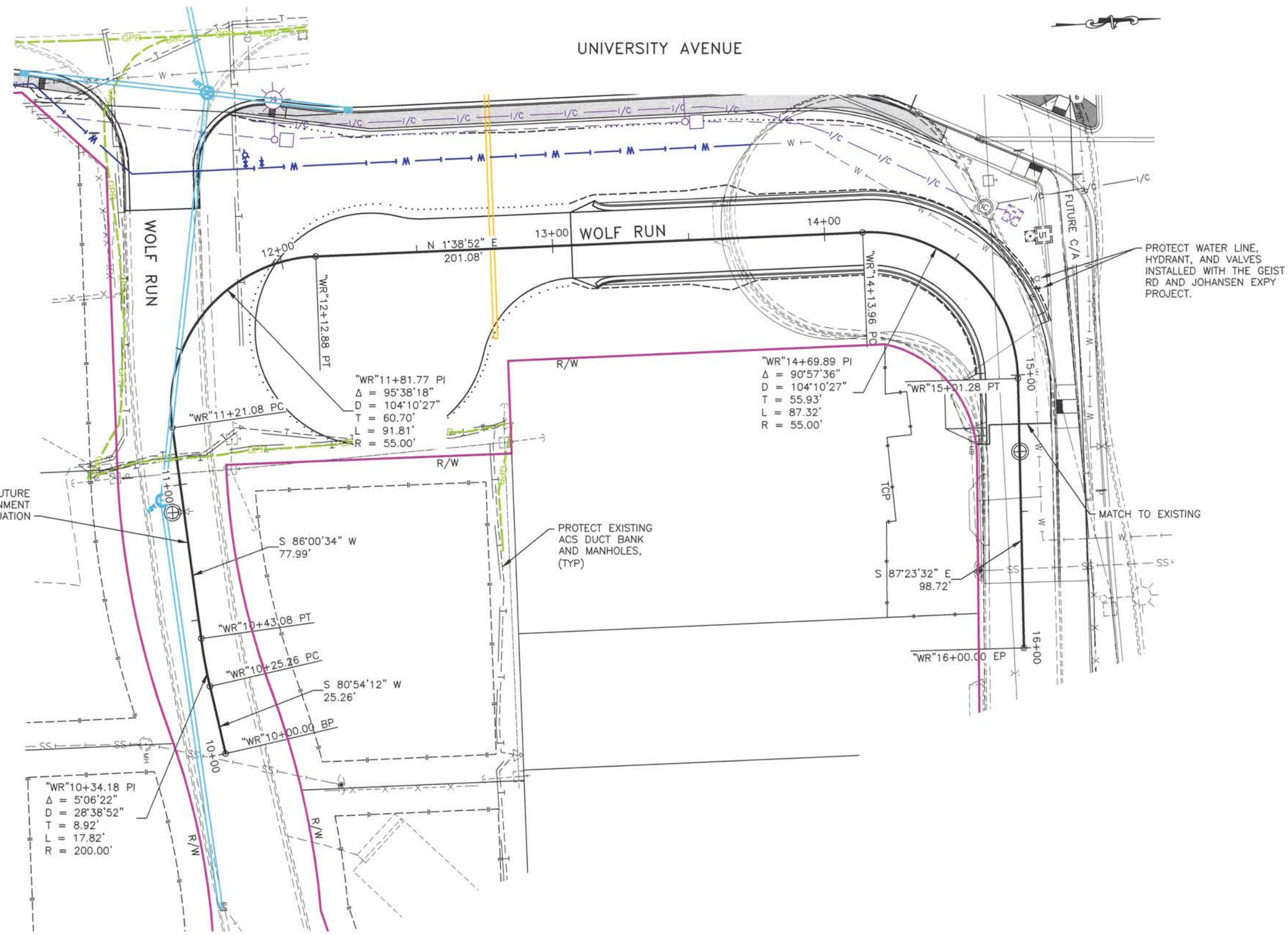
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DITCH TO NOYES SLOUGH
PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	F8	F13

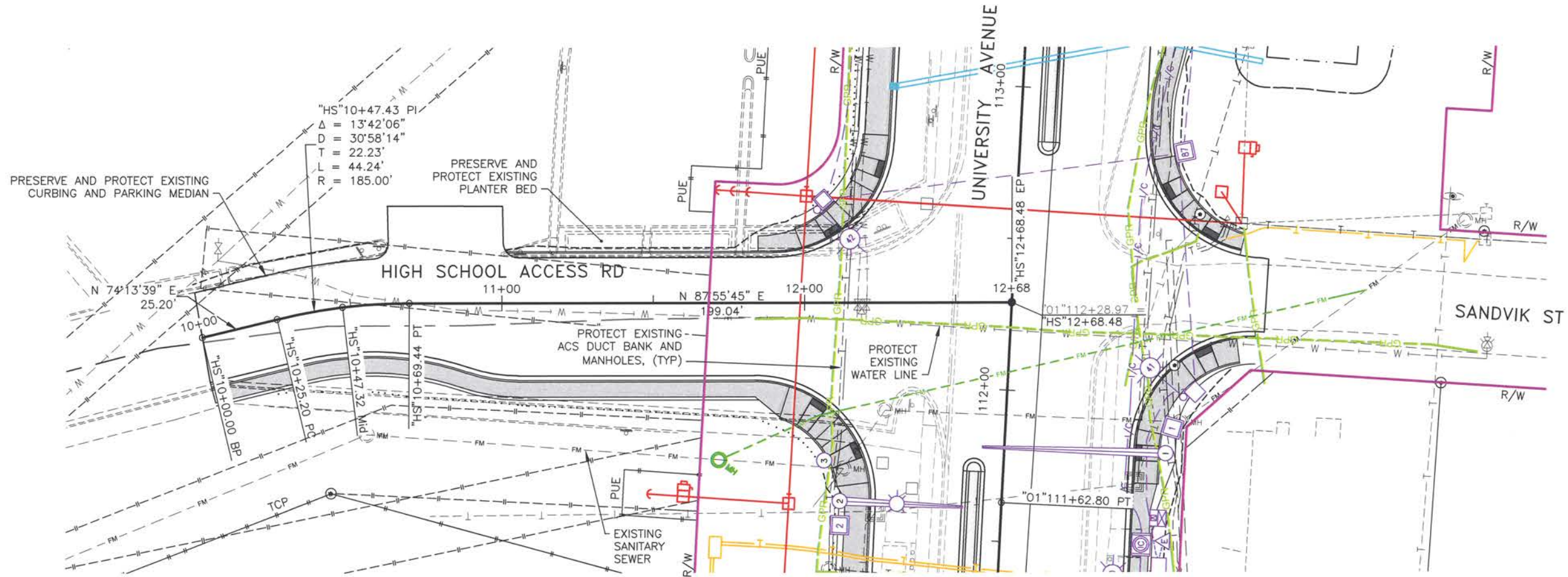


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WOLF RUN PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	F9	F13



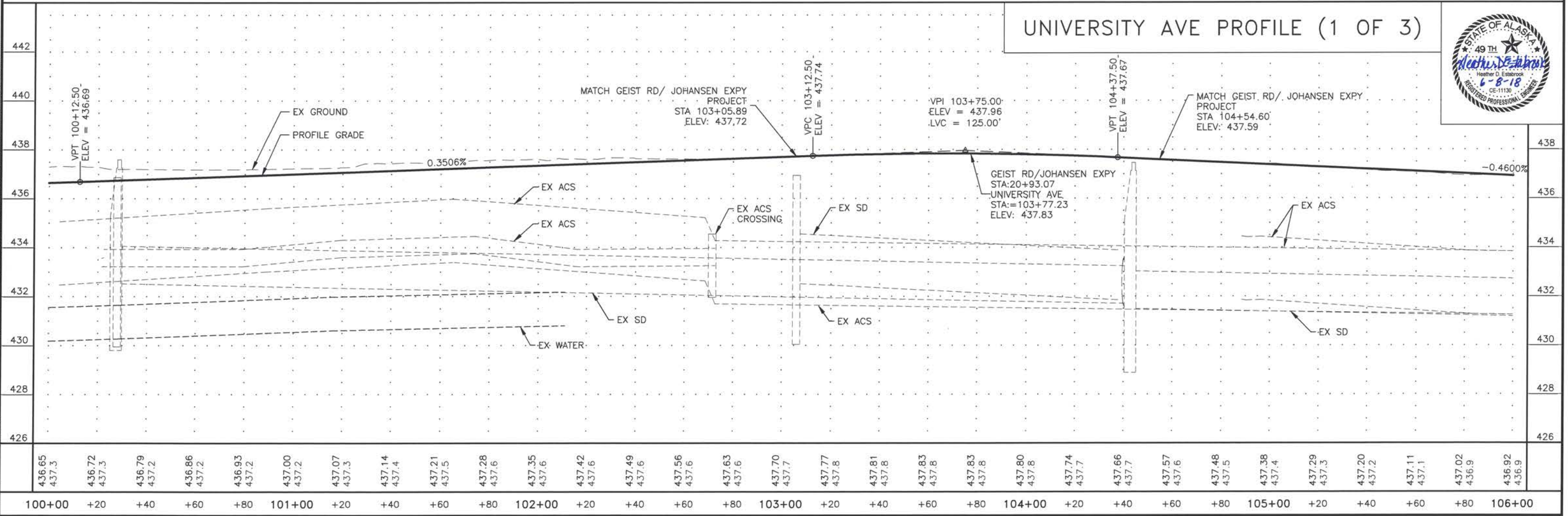
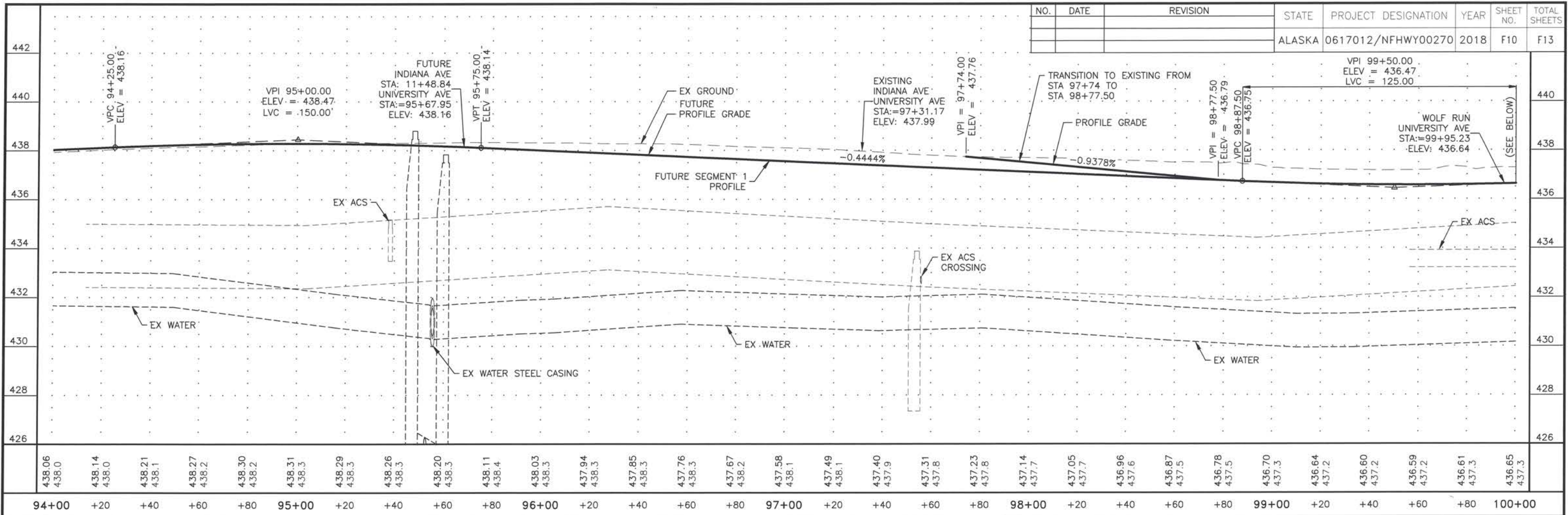
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HIGH SCHOOL ACCESS RD
PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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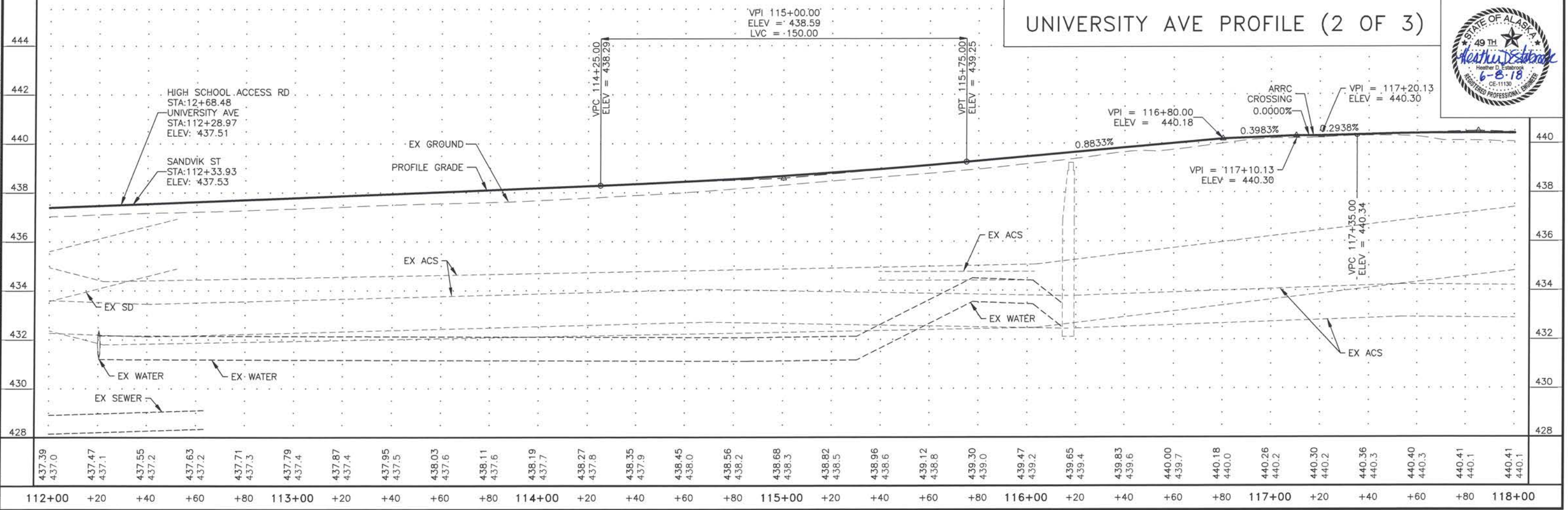
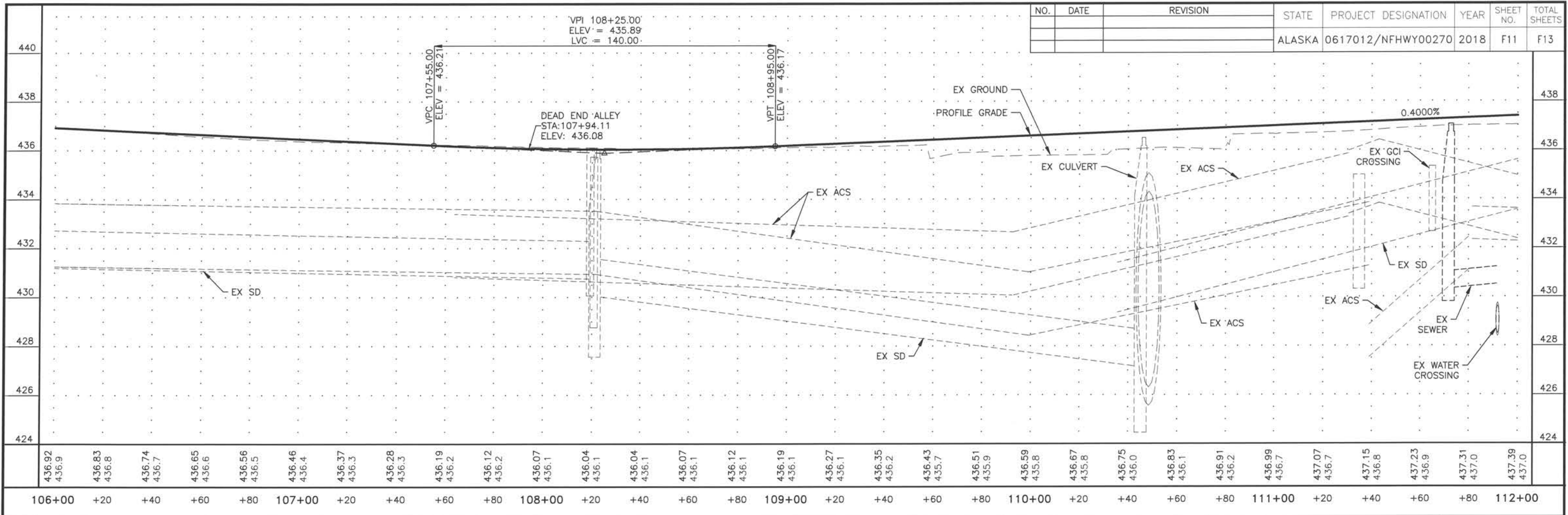


UNIVERSITY AVE PROFILE (1 OF 3)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147.D\FB\C\Segment Improvement Packages\Segment 1B\C\2003const1147.D\FB-Seg-1B-F10 Thu, Jun/07/18 08:55am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	F11	F13

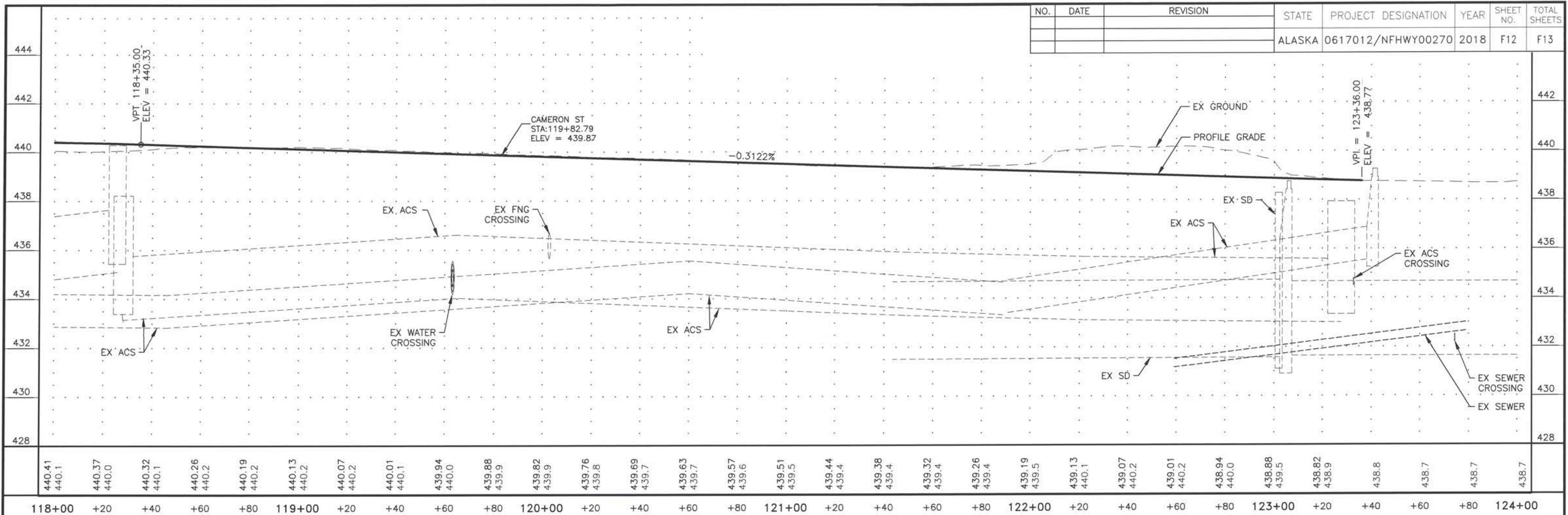


UNIVERSITY AVE PROFILE (2 OF 3)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\114701FB\C\Segment Improvement Packages\Segment 1B-C\2003const\114701FB-Seg-1B-F11_Thu_Jun07/18_08.dwg

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	F12	F13

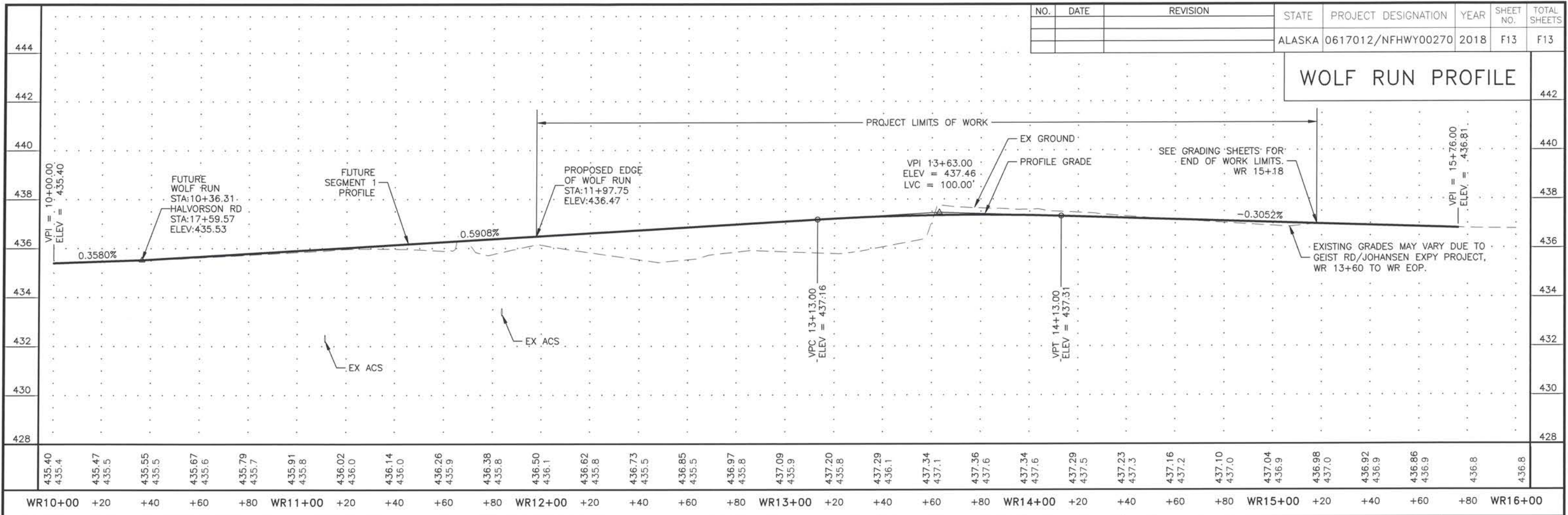


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECCE605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.0\FB\C\Segment Improvement Packages\Segment 1B\1B-C\2003cns11147.0\FB-Seg-1B-F12_Thu_Jun07/18 08:34am

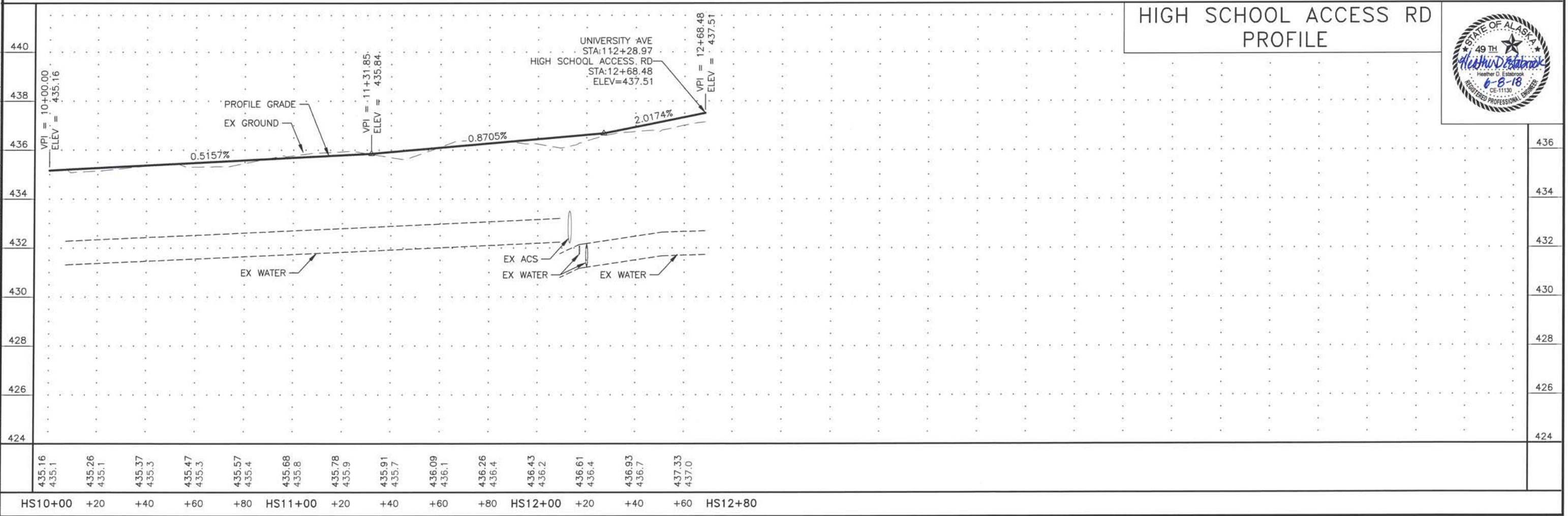


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	F13	F13

WOLF RUN PROFILE

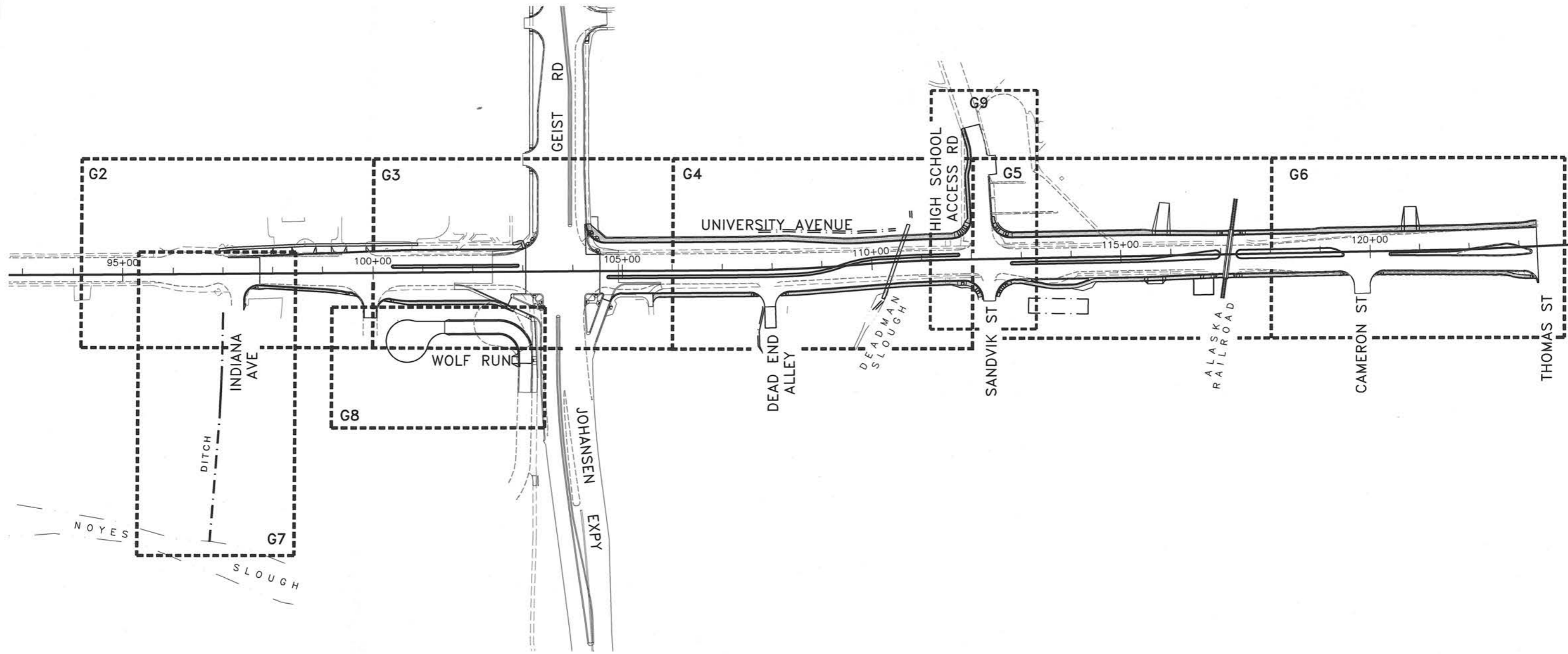


HIGH SCHOOL ACCESS RD PROFILE



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECCE605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147.0\FB\C\Segment Improvement Packages\Segment 1B-C\2003const1147.0\FB-Seg-1B-F13 Thu, Jun/07/18 08:35am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	G1	G21

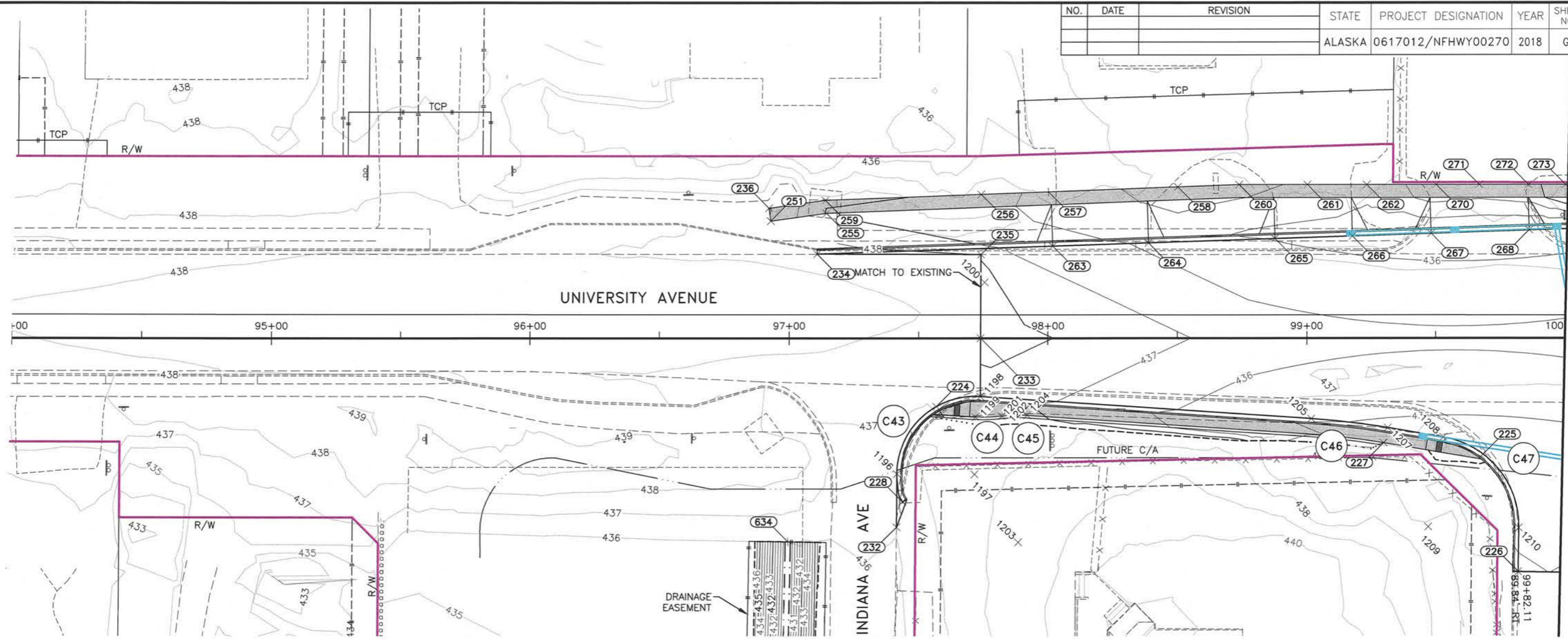


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1114701FB\C\Segment Improvement Packages\Segment 1B\B-C\0005\1114701FB-Seg-1B-G1.Fri, Jun/08/18 03:40pm

GRADING SHEET
LAYOUT INDEX



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	G2	G21



G2 CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C43	30	1196	LOC-PC	97+41.82	52.25 RT	68477.06	18336.56	436.51
		1197	LOC-RP	97+71.84	52.41 RT	68507.07	18337.48	
		1198	LOC-PT	97+74.00	22.44 RT	68509.98	18307.57	
C44	52	1199	SW-PC	97+72.10	30.33 RT	68507.88	18315.41	437.77
		1200	SW-RP	97+75.47	21.44 LT	68512.54	18263.74	
		1201	SW-PT	97+82.30	29.99 RT	68518.08	18315.32	437.70
C45	49	1202	SW-PC	97+82.30	29.99 RT	68518.08	18315.32	437.70
		1203	SW-RP	97+88.83	78.55 RT	68523.40	18364.03	
		1204	SW-PT	97+92.09	29.66 RT	68527.88	18315.24	437.58
C46	302.3	1205	LOC-PC	99+01.82	30.97 RT	68637.54	18319.29	436.07
		1206	LOC-RP	98+81.58	332.56 RT	68609.78	18620.28	
		1207	LOC-PT	99+31.50	34.44 RT	68667.13	18323.50	435.92
C47	35	1208	LOC-PC	99+53.12	38.07 RT	68688.65	18327.67	435.83
		1209	LOC-RP	99+47.32	72.59 RT	68681.99	18362.03	
		1210	LOC-PT	99+82.32	73.02 RT	68716.97	18363.34	435.66

NOTES

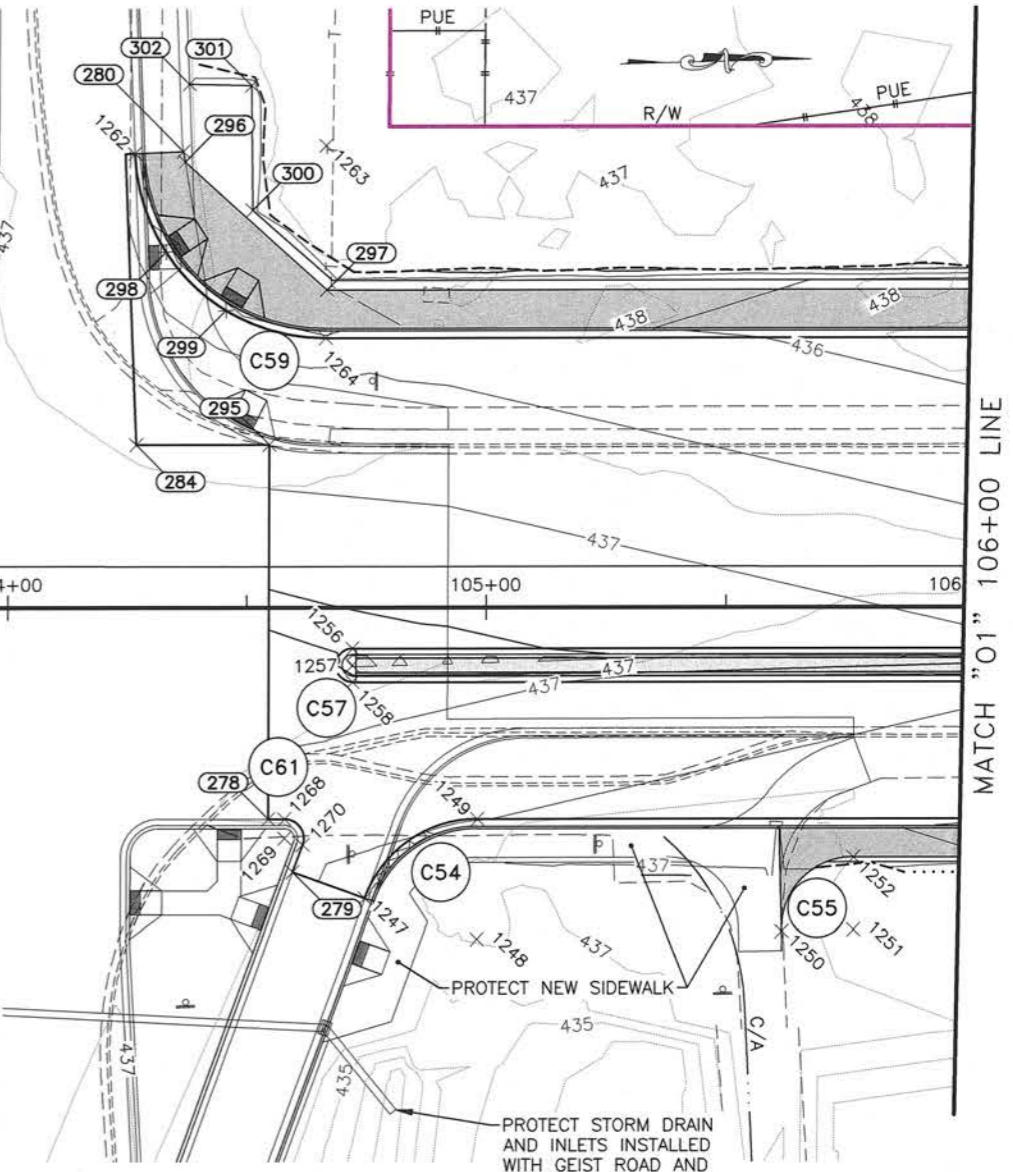
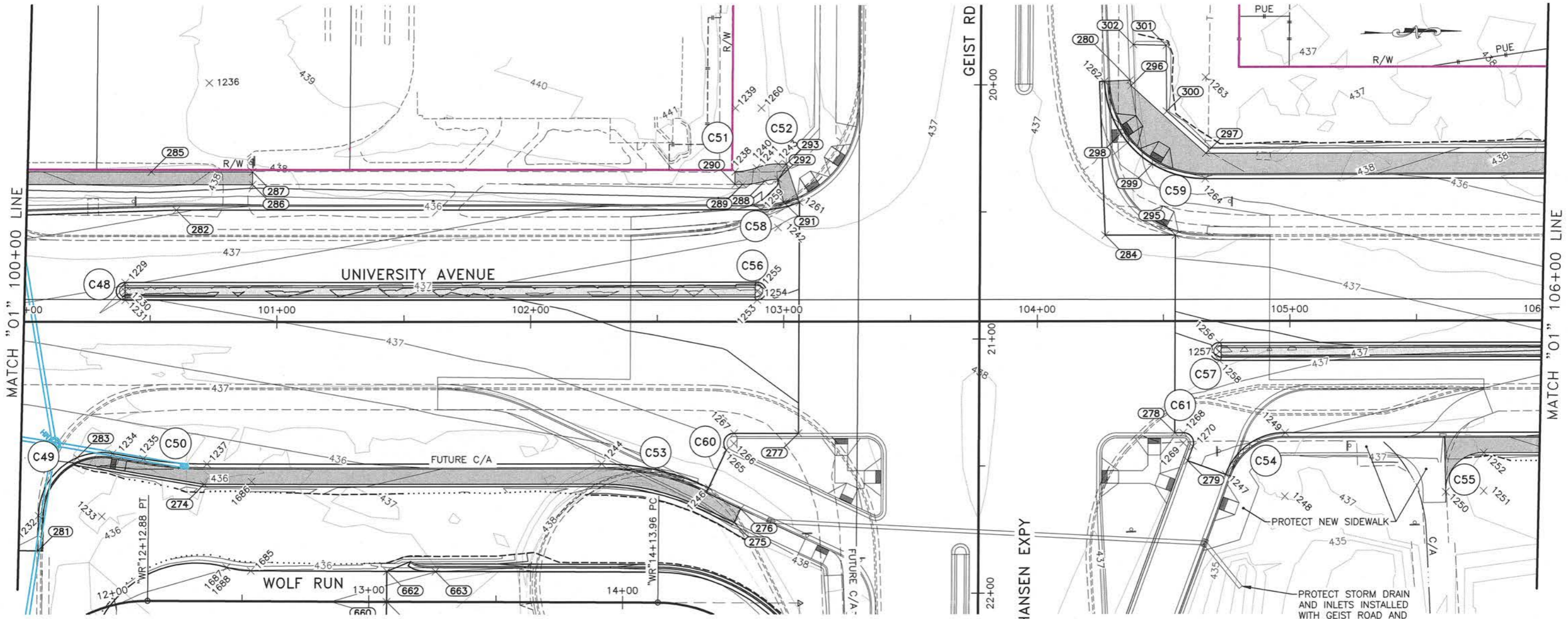
- SEE SHEET G10-G11 FOR CONTROL POINT TABLES.
- SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.
- PROVIDED ANTICIPATED EXISTING ELEVATIONS FROM STATION "01" 96+92 TO 103+00 LT. THIS MAY TURN OUT TO BE DIFFERENT IN THE FIELD. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER ON SIDEWALK AND DRIVEWAY GRADES AND ELEVATIONS PRIOR TO ASPHALT PLACEMENT.

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147.01\FB\C_Segment Improvement Packages\Segment 1B\1B-C\2002\inst1147.01b-seg-1b-g2 Fr, Jun/08/18 05:44pm

UNIVERSITY AVE GRADING
PLAN (1 OF 5)



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	G3	G21



G3 CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C48	3.5	1229	LOC-PC	100+40.00	15.50 LT	68776.84	18276.28	436.48
		1230	LOC-RP	100+40.00	12.00 LT	68776.75	18279.78	
		1231	LOC-PT	100+40.00	8.50 LT	68776.66	18283.28	436.96
C49	25	1232	LOC-PC	100+06.28	76.23 RT	68740.84	18367.14	435.73
		1233	LOC-RP	100+31.28	76.54 RT	68765.82	18368.08	
		1234	LOC-PT	100+35.42	51.89 RT	68770.58	18343.53	435.73
C50	150	1235	LOC-PC	100+47.60	53.93 RT	68782.70	18345.88	435.73
		1236	LOC-RP	100+72.43	94.00 LT	68811.22	18198.61	
		1237	LOC-PT	100+72.43	56.00 RT	68807.47	18348.57	435.78
C51	25	1238	SW-PC	102+80.52	59.00 LT	69018.37	18238.80	
		1239	SW-RP	102+80.52	84.00 LT	69018.99	18213.81	
		1240	SW-PT	102+89.05	60.50 LT	69026.93	18237.51	437.94
C52	25	1241	SW-PC	102+89.05	60.50 LT	69026.93	18237.51	437.94
		1242	SW-RP	102+97.58	37.00 LT	69034.87	18261.22	
		1243	SW-PT	102+97.58	62.00 LT	69035.50	18236.23	437.52

G3 CURVE LAYOUT TABLE (CON'T)

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C53	100	1244	LOC-PC	102+28.21	56.00 RT	68963.21	18352.46	436.33
		1245	LOC-RP	102+28.21	156.00 RT	68960.71	18452.43	
		1246	LOC-PT	102+70.59	65.42 RT	69005.33	18362.93	
C54	25	1247	LOC-PC	104+74.76	60.45 RT	69209.57	18363.06	
		1248	LOC-RP	104+98.20	68.92 RT	69232.79	18372.11	
		1249	LOC-PT	104+98.26	44.00 RT	69233.47	18347.20	436.51
C55	15	1250	SW-PC	105+61.82	67.37 RT	69296.43	18372.16	
		1251	SW-RP	105+76.82	67.00 RT	69311.43	18372.16	
		1252	SW-PT	105+76.82	52.00 RT	69311.81	18357.16	436.64
C56	3.5	1253	LOC-PC	102+89.50	8.50 LT	69026.09	18289.51	437.83
		1254	LOC-RP	102+89.50	12.00 LT	69026.17	18286.01	
		1255	LOC-PT	102+89.50	15.50 LT	69026.26	18282.51	437.35
C57	3.5	1256	LOC-PC	104+72.00	8.50 RT	69208.11	18311.06	437.68
		1257	LOC-RP	104+72.00	12.00 RT	69208.02	18314.56	
		1258	LOC-PT	104+72.00	15.50 RT	69207.93	18318.06	437.20

G3 CURVE LAYOUT TABLE (CON'T)

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C58	40	1259	LOC-PC	102+90.84	44.00 LT	69028.31	18254.05	436.80
		1260	LOC-RP	102+90.84	84.00 LT	69029.31	18214.06	
		1261	LOC-PT	103+05.89	46.94 LT	69043.43	18251.49	436.91
C59	40	1262	LOC-PC	104+26.23	94.36 LT	69164.92	18207.09	436.32
		1263	LOC-RP	104+66.20	96.00 LT	69204.92	18206.45	
		1264	LOC-PT	104+66.20	56.00 LT	69203.92	18246.43	436.39

NOTES

- SEE SHEET G10-G11 FOR CONTROL POINT TABLES.
- SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.
- PROVIDED ANTICIPATED EXISTING ELEVATIONS FROM STATION "01" 96+92 TO 103+00 LT. THIS MAY TURN OUT TO BE DIFFERENT IN THE FIELD. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER ON SIDEWALK AND DRIVEWAY GRADES AND ELEVATIONS PRIOR TO ASPHALT PLACEMENT.

FOR CONTINUATION OF CURVE POINTS SEE SHEET G8

UNIVERSITY AVE GRADING PLAN (2 OF 5)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200 P:\2011\1114701\FB\C\Segment Improvement Packages\Segment 1B\B-C3 Fr. Jun/08/18 05:44pm

G4 CURVE LAYOUT TABLE

G4 CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C62	2916.8	1293	SW-PC	107+40.99	52.00 RT	69475.93	18361.26	435.88
		1294	SW-RP	109+68.35	2864.79 LT	69548.74	15445.38	
		1295	SW-PT	107+71.07	52.00 RT	69506.55	18361.86	435.56
C63	2916.8	1296	SW-PC	108+17.12	52.00 RT	69553.43	18362.16	435.35
		1297	SW-RP	107+40.99	2864.79 LT	69548.74	15445.38	
		1298	SW-PT	108+52.55	52.00 RT	69589.50	18361.88	435.66
C64	36.5	1299	SW-PT	111+86.98	74.69 LT	69924.05	18227.60	436.39
		1300	SW-RP	111+60.90	81.50 LT	69898.02	18220.44	0.00
		1301	SW-PC	111+65.50	54.90 LT	69902.31	18247.09	436.88
C65	32	1302	SW-PC	111+83.09	51.25 RT	69918.47	18353.47	437.00
		1303	SW-RP	111+83.09	81.50 RT	69918.07	18383.72	
C66	2908.8	* 1356	SW-PT	112+12.87	76.19 RT	69947.92	18378.82	437.26
		1305	LOC-PC	107+40.99	44.00 RT	69476.13	18353.26	435.40
		1306	LOC-RP	109+68.35	2864.79 LT	69548.74	15445.38	
		1307	LOC-PT	107+54.13	44.00 RT	69489.46	18353.56	435.34

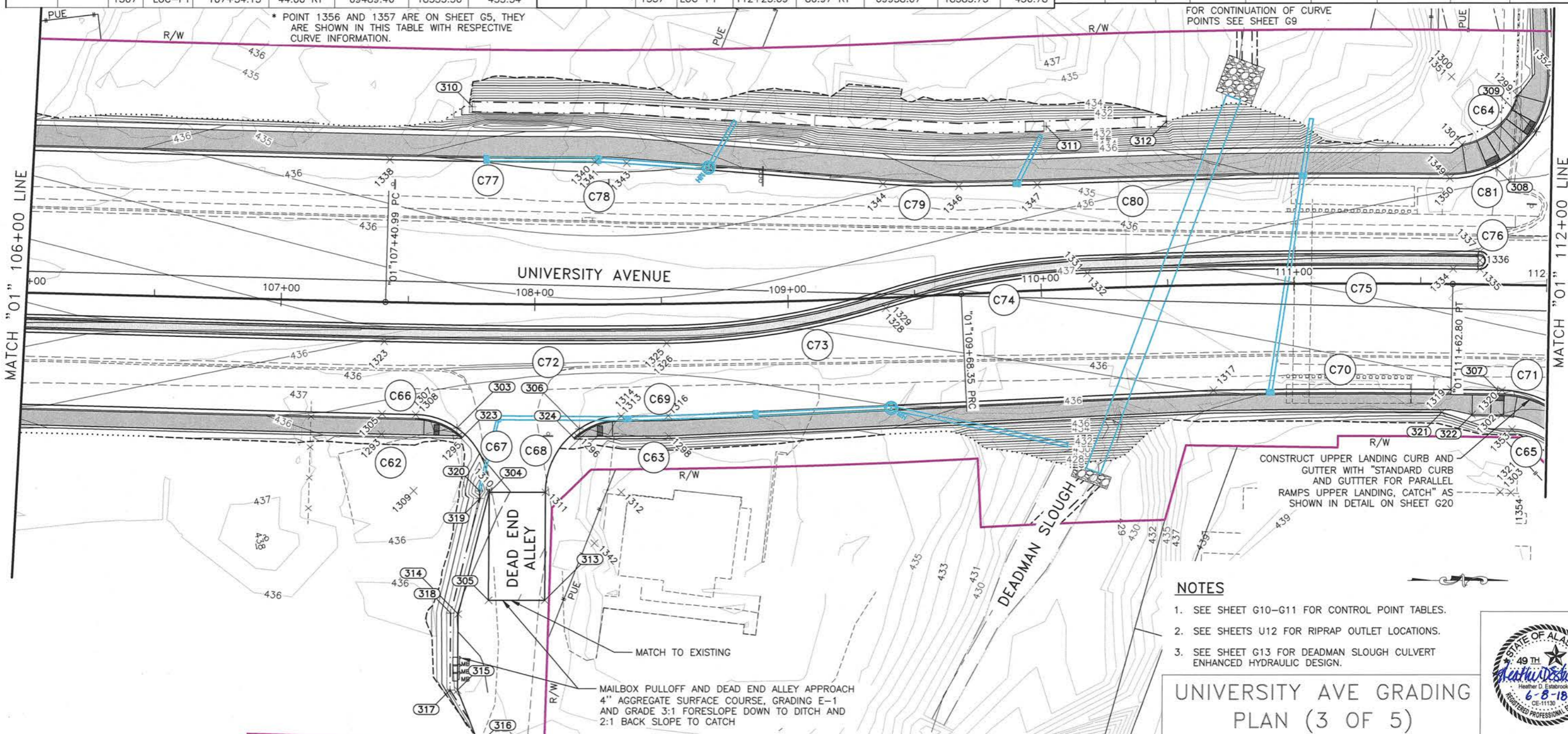
NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C67	30	1308	LOC-PC	107+54.13	44.00 RT	69489.46	18353.56	435.34
		1309	LOC-RP	107+54.13	74.00 RT	69488.85	18383.56	
		1310	LOC-PT	107+83.37	73.54 RT	69518.85	18383.56	434.84
C68	30	1311	LOC-PC	108+04.82	73.93 RT	69540.85	18384.09	435.28
		1312	LOC-RP	108+34.06	74.00 RT	69570.85	18384.09	
		1313	LOC-PT	108+34.06	44.00 RT	69570.62	18354.09	435.16
		1314	LOC-PC	108+34.06	44.00 RT	69570.62	18354.09	435.16
C69	2908.8	1315	LOC-RP	107+40.99	2864.79 LT	69548.74	15445.38	
		1316	LOC-PT	108+52.42	44.00 RT	69589.26	18353.89	435.18
		1317	LOC-PC	110+67.46	41.50 RT	69804.36	18343.75	436.03
C70	2823.3	1318	LOC-RP	111+62.80	2864.79 RT	69860.26	21166.48	
		1319	LOC-PT	111+62.80	41.50 RT	69898.31	18343.45	436.41
		1320	LOC-PC	111+83.09	41.50 RT	69918.60	18343.72	436.49
C71	40	1321	LOC-RP	111+83.09	81.50 RT	69918.07	18383.72	
		* 1357	LOC-PT	112+23.09	80.97 RT	69958.07	18383.73	436.78

G4 CURVE LAYOUT TABLE (CON'T)

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C72	2880.3	1323	LOC-PC	107+40.99	15.50 RT	69476.84	18324.77	435.97
		1324	LOC-RP	109+68.35	2864.79 LT	69548.74	15445.38	
		1325	LOC-PCC	108+52.00	15.50 RT	69588.44	18325.40	435.74
C73	300	1326	LOC-PCC	108+52.00	15.50 RT	69588.44	18325.40	435.74
		1327	LOC-RP	108+52.00	284.50 LT	69584.30	18025.42	
		1328	LOC-PRC	109+38.48	4.04 RT	69674.85	18311.43	436.26
C74	300	1329	LOC-PRC	109+38.48	4.04 RT	69674.85	18311.43	436.26
		1330	LOC-RP	110+18.44	294.00 RT	69765.39	18597.44	
		1331	LOC-PCC	110+18.44	6.00 LT	69754.32	18297.65	436.78
C75	2870.8	1332	LOC-PCC	110+18.44	6.00 LT	69754.32	18297.65	436.78
		1333	LOC-RP	111+62.80	2864.79 RT	69860.26	21166.48	
		1334	LOC-PT	111+62.80	6.00 LT	69898.95	18295.95	437.36

* POINT 1356 AND 1357 ARE ON SHEET G5, THEY ARE SHOWN IN THIS TABLE WITH RESPECTIVE CURVE INFORMATION.

FOR CONTINUATION OF CURVE POINTS SEE SHEET G9



NOTES

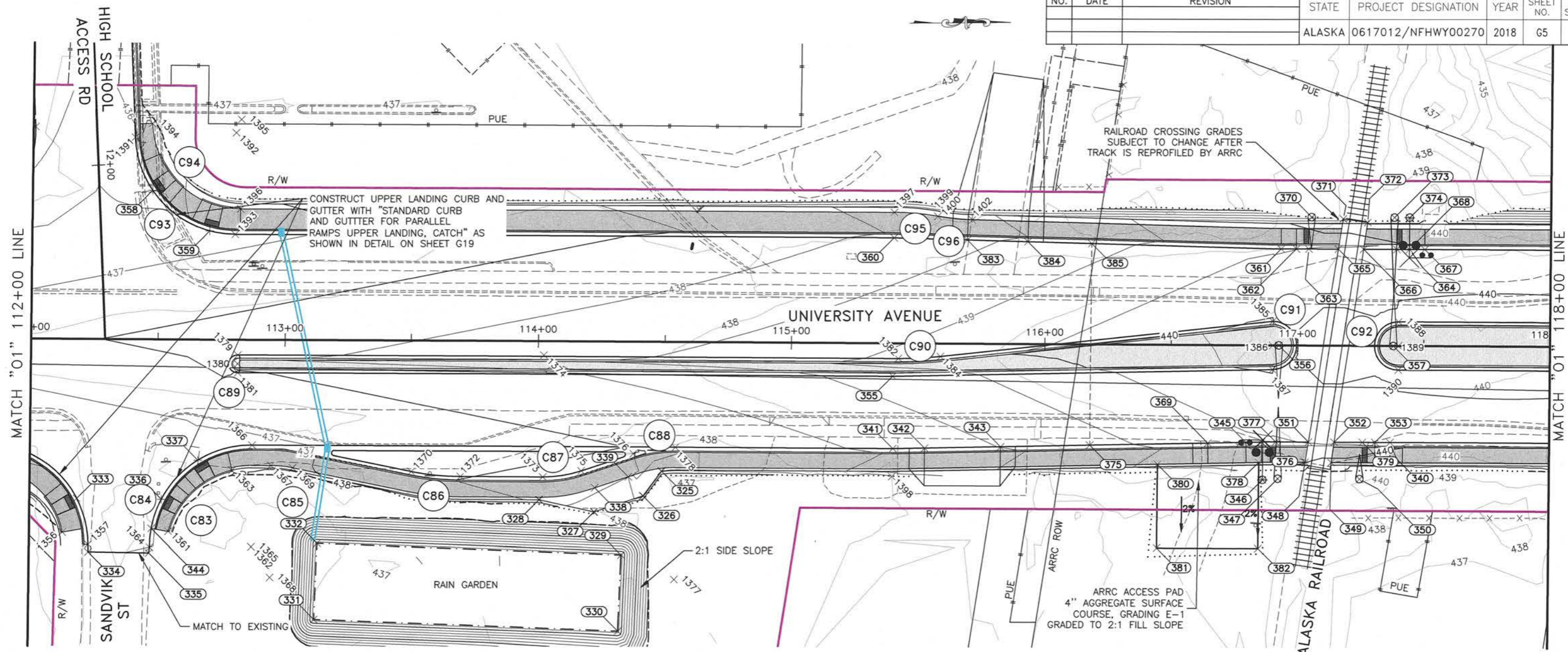
1. SEE SHEET G10-G11 FOR CONTROL POINT TABLES.
2. SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.
3. SEE SHEET G13 FOR DEADMAN SLOUGH CULVERT ENHANCED HYDRAULIC DESIGN.

UNIVERSITY AVE GRADING
PLAN (3 OF 5)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147\01\FB\C\Segment Improvement Packages\Segment 1B-1B-C\2002\cst1147\01b-seg-1b-c4 Fr. Jun/08/18 05:45pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	G5	G21



NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C83	36.5	1361	SW-PC	112+54.76	75.63 RT	69989.80	18378.81	437.21
		1362	SW-RP	112+87.45	81.50 RT	70022.41	18385.13	
		1363	SW-PT	112+79.63	51.42 RT	70015.00	18354.95	437.38
C84	40	1364	EP-PC	112+47.45	81.97 RT	69982.41	18385.06	437.04
		1365	EP-RP	112+87.45	81.50 RT	70022.41	18385.13	
		1366	EP-PT	112+87.45	41.50 RT	70022.95	18345.13	436.91
C85	44	1367	SW-PC	112+94.85	49.50 RT	70030.24	18353.23	437.43
		1368	SW-RP	112+94.85	93.50 RT	70029.65	18397.22	
		1369	SW-PT	113+03.48	50.35 RT	70038.86	18354.20	437.45
C86	98	1370	LOC-PC	113+50.48	51.60 RT	70085.84	18356.08	437.36
		1371	LOC-RP	113+69.70	44.50 LT	70106.36	18260.25	
		1372	LOC-PT	113+69.70	53.50 RT	70105.04	18358.24	437.48
C87	48	1373	LOC-PC	114+02.21	53.50 RT	70137.54	18358.68	437.61
		1374	LOC-RP	114+02.21	5.50 RT	70138.19	18310.68	
		1375	LOC-PT	114+17.39	51.04 RT	70152.75	18356.42	437.62
C88	50.5	1376	LOC-PC	114+37.99	44.17 RT	70173.45	18349.83	437.57
		1377	LOC-RP	114+54.44	93.50 RT	70189.22	18399.38	
		1378	LOC-PT	114+54.43	41.50 RT	70189.91	18347.38	437.59

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C89	3.5	1379	LOC-PC	112+81.50	6.00 RT	70017.48	18309.55	437.84
		1380	LOC-RP	112+81.50	9.50 RT	70017.43	18313.05	
		1381	LOC-PT	112+81.50	13.00 RT	70017.39	18316.55	437.46
C90	150	1382	LOC-PC	115+42.19	6.00 RT	70278.15	18313.07	439.10
		1383	LOC-RP	115+42.19	144.00 LT	70280.17	18163.08	
		1384	LOC-PT	115+58.76	5.08 RT	70294.72	18312.37	439.21
C91	9.5	1385	LOC-PC	116+90.00	9.50 LT	70426.15	18299.56	440.03
		1386	LOC-RP	116+90.00	0.00 RT	70426.02	18309.06	
		1387	LOC-PT	116+90.00	9.50 RT	70425.90	18318.56	440.03
C92	9.5	1388	LOC-PC	117+40.00	9.50 LT	70476.15	18300.23	440.17
		1389	LOC-RP	117+40.00	0.00 RT	70476.02	18309.73	
		1390	LOC-PT	117+40.00	9.50 RT	70475.89	18319.23	440.17
C93	40	1391	LOC-PC	112+40.04	79.52 LT	69977.18	18223.49	436.04
		1392	LOC-RP	112+79.99	81.50 LT	70017.15	18222.04	
		1393	LOC-PT	112+79.99	41.50 LT	70016.62	18262.04	436.88
C94	35.3	1394	SW-PC	112+46.78	85.00 LT	69983.99	18218.09	436.86
		1395	SW-RP	112+81.99	86.75 LT	70019.22	18216.82	
		1396	SW-PT	112+81.99	51.50 LT	70018.74	18252.06	437.40

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C95	104	1397	SW-PC	115+40.00	51.50 LT	70276.73	18255.54	438.65
		1398	SW-RP	115+40.00	52.50 RT	70275.33	18359.53	
		1399	SW-PRC	115+57.16	50.07 LT	70293.87	18257.20	438.78
C96	96	1400	SW-PRC	115+57.16	50.07 LT	70293.87	18257.20	438.78
		1401	SW-RP	115+73.00	144.76 LT	70310.99	18162.74	
		1402	SW-PT	115+70.76	48.78 LT	70307.46	18258.67	438.89

NOTES

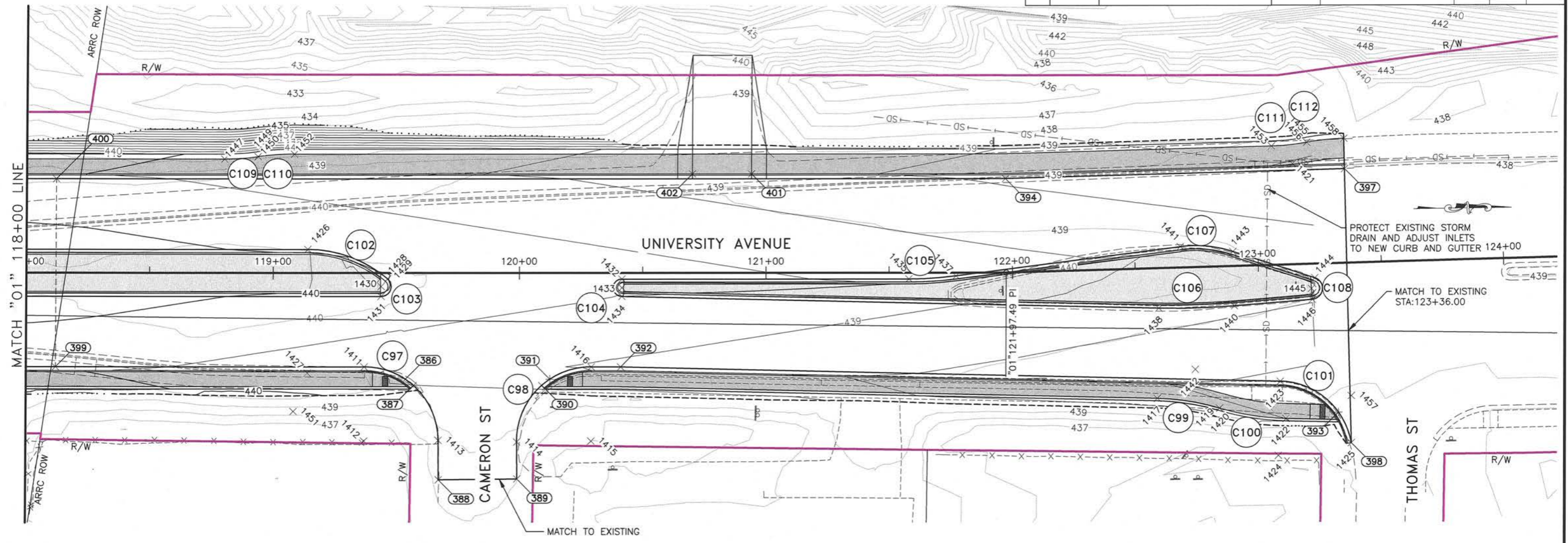
- SEE SHEET G10 - G11 FOR CONTROL POINT TABLES.
- SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.
- SEE SHEETS E1/E2 FOR RAILROAD CROSSING DETAILS.

UNIVERSITY AVE GRADING
PLAN (4 OF 5)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\2002const1147.01b-seg-1b-G5 Fr. Jun/08/18 05:45pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	G6	G21



G6 CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C97	30	1411	LOC-PC	119+37.15	38.00 RT	70672.64	18350.39	439.26
		1412	LOC-RP	119+37.15	68.00 RT	70672.23	18380.38	
		1413	LOC-PT	119+67.15	67.67 RT	70702.23	18380.46	
C98	30	1414	LOC-PC	119+99.15	68.33 RT	70734.23	18381.55	
		1415	LOC-RP	120+29.15	68.00 RT	70764.23	18381.62	
		1416	LOC-PT	120+29.15	38.00 RT	70764.63	18351.63	438.97
C99	97	1417	SW-PC	122+57.70	52.62 RT	70994.41	18367.67	438.61
		1418	SW-RP	122+52.84	149.50 RT	70990.90	18464.61	
		1419	SW-PRC	122+82.94	57.28 RT	71019.70	18371.98	438.56
C100	103	1420	SW-PRC	122+82.94	57.28 RT	71019.70	18371.98	438.56
		1421	SW-RP	123+14.89	40.63 LT	71050.29	18273.63	
		1422	SW-PT	123+09.73	62.24 RT	71046.57	18376.56	438.50
C101	30	1423	LOC-PC	123+07.81	47.12 RT	71044.43	18361.47	437.92
		1424	LOC-RP	123+06.31	77.08 RT	71043.35	18391.45	
		1425	LOC-PT	123+36.00	72.80 RT	71072.98	18386.75	0.00
C102	50	1426	LOC-PC	119+14.00	9.50 LT	70650.13	18302.58	439.90
		1427	LOC-RP	119+14.00	40.50 RT	70649.46	18352.57	
		1428	LOC-PCC	119+46.45	2.46 RT	70682.41	18314.97	440.04

G6 CURVE LAYOUT TABLE (CON'T)

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C103	4	1429	LOC-PCC	119+46.45	2.46 RT	70682.41	18314.97	440.04
		1430	LOC-RP	119+43.85	5.50 RT	70679.78	18317.98	
		1431	LOC-PT	119+43.85	9.50 RT	70679.72	18321.98	439.80
C104	3.5	1432	LOC-PC	120+41.50	2.50 RT	70777.46	18316.29	439.74
		1433	LOC-RP	120+41.50	6.00 RT	70777.41	18319.79	
		1434	LOC-PT	120+41.50	9.50 RT	70777.36	18323.29	439.50
C105	150	1435	LOC-PC	121+58.13	2.50 RT	70894.08	18317.87	439.38
		1436	LOC-RP	121+58.13	147.50 LT	70896.10	18167.88	
		1437	LOC-PT	121+77.14	1.29 RT	70913.11	18316.91	439.29
C106	300	1438	LOC-PC	122+59.18	16.15 RT	70995.38	18331.18	438.69
		1439	LOC-RP	122+74.21	283.48 LT	71006.22	18031.38	
		1440	LOC-PT	122+90.02	16.11 RT	71026.21	18330.71	438.59
C107	50	1441	LOC-PC	122+68.42	8.40 LT	71004.27	18306.51	438.81
		1442	LOC-RP	122+73.39	41.35 RT	71009.94	18356.19	
		1443	LOC-PT	122+89.87	5.85 LT	71025.76	18308.75	438.80
C108	4.5	1444	LOC-PC	123+22.95	5.69 RT	71059.00	18319.84	438.92
		1445	LOC-RP	123+21.47	9.94 RT	71057.57	18324.11	
		1446	LOC-PT	123+21.70	14.43 RT	71057.87	18328.60	438.53

G6 CURVE LAYOUT TABLE (CON'T)

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C109	97	1447	SW-PC	118+80.00	46.00 LT	70616.63	18265.62	439.92
		1448	SW-RP	118+80.00	143.00 LT	70617.93	18168.63	
		1449	SW-PRC	118+93.65	46.97 LT	70630.29	18264.84	439.89
C110	104	1450	SW-PRC	118+93.65	46.97 LT	70630.29	18264.84	439.89
		1451	SW-RP	119+08.28	56.00 RT	70643.53	18367.99	
		1452	SW-PT	119+08.28	48.00 LT	70644.94	18264.00	439.86
C111	106	1453	SW-PC	123+06.50	48.00 LT	71041.80	18266.38	438.62
		1454	SW-RP	123+06.50	144.00 LT	71040.46	18170.39	
		1455	SW-PRC	123+20.91	49.09 LT	71056.19	18265.09	438.59
C112	104	1456	SW-PRC	123+20.91	49.09 LT	71056.19	18265.09	438.59
		1457	SW-RP	123+36.53	53.73 RT	71073.24	18367.68	
		1458	SW-PT	123+36.00	50.27 LT	71071.26	18263.70	0.00

NOTES

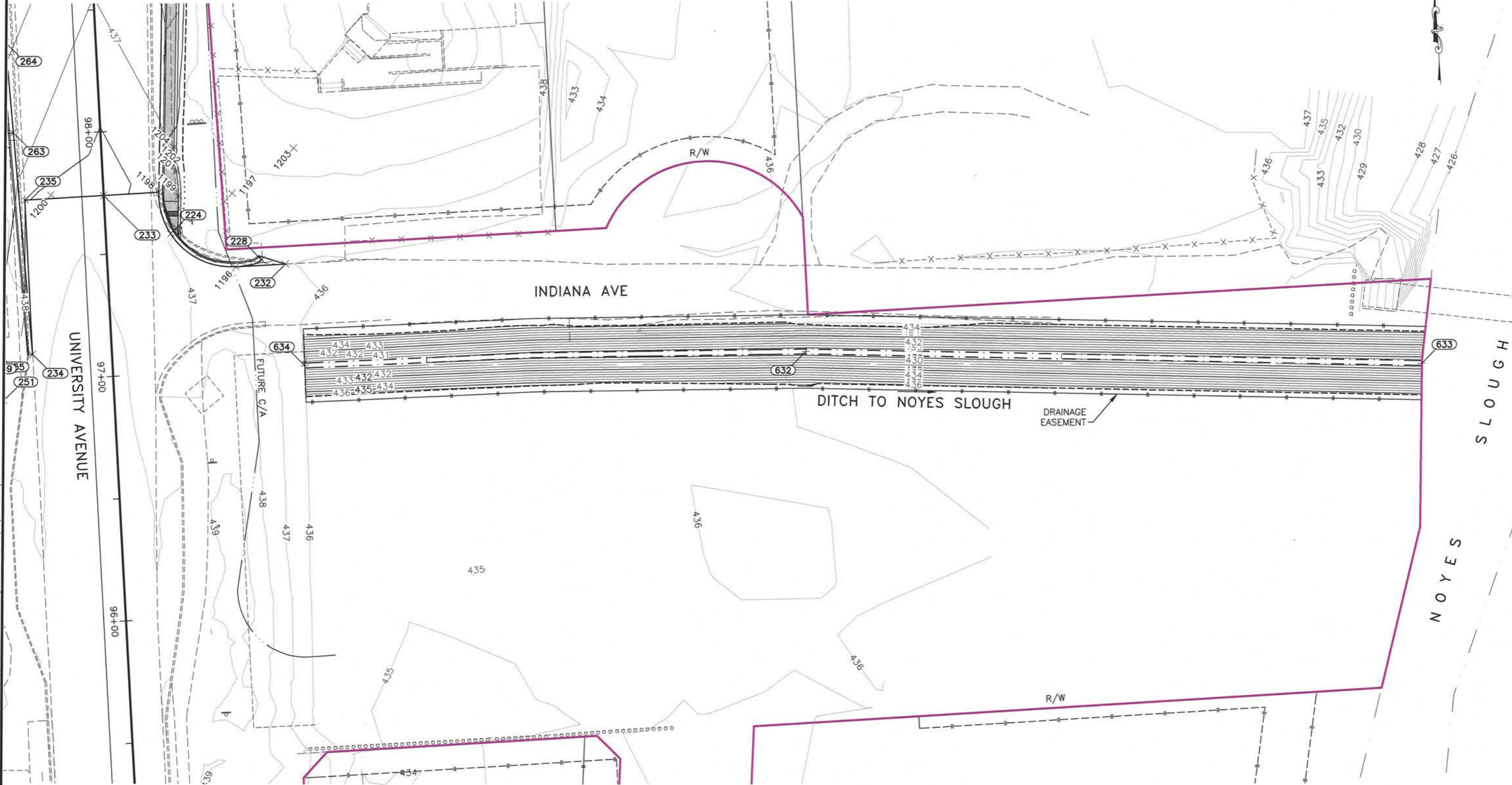
- SEE SHEET G10-G11 FOR CONTROL POINT TABLES.
- SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.

UNIVERSITY AVE GRADING
PLAN (5 OF 5)



PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AFCC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1114701\FB\C\Segment Improvement Packages\Segment 1B-C\2002cns1114701b-seg-1b-g6 Fr. Jun/08/18 05:45pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	G7	G21



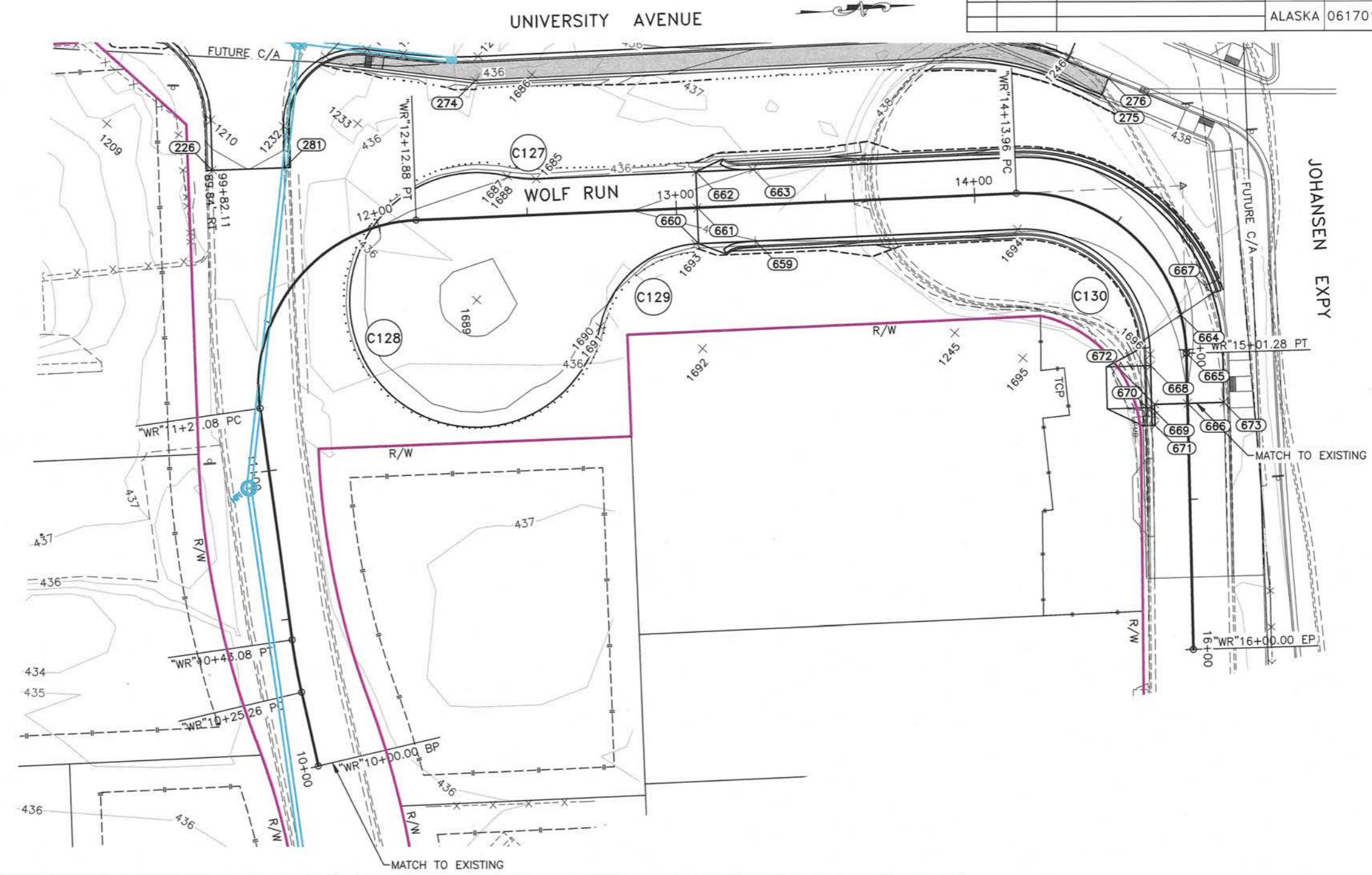
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147.01\FB\C\Segment Improvement Packages\Segment 1B\C\200Zcns\1147.01fb-seg-1b-c7 Fr. Jun/08/18 05:45pm

- NOTES**
- SEE SHEET G10-G11 FOR CONTROL POINT TABLES.
 - SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.

**DITCH TO NOYES SLOUGH
GRADING PLAN**



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	G8	G21



- NOTES**
- SEE SHEET G10-G11 FOR CONTROL POINT TABLES.
 - SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.

G8 CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C127	35	1685	EP-PC	12+53.35	12.00 LT	68824.14	18390.91	436.57
		1686	EP-RP	12+53.35	47.00 LT	68825.15	18355.93	
		1687	EP-PT	12+43.70	13.35 LT	68814.54	18389.28	436.49
C128	42.5	1688	EP-PC	12+43.70	13.35 LT	68814.54	18389.28	436.49
		1689	EP-RP	12+31.99	27.50 RT	68801.66	18429.78	
		1690	EP-PT	12+73.13	38.19 RT	68842.47	18441.66	436.40
C129	35	1691	EP-PC	12+73.13	38.19 RT	68842.47	18441.66	436.40
		1692	EP-RP	13+07.00	47.00 RT	68876.08	18451.43	
		1693	EP-PT	13+05.99	12.01 RT	68876.08	18416.43	436.88
C130	43	1694	LOC-PC	14+13.96	12.00 RT	68984.00	18419.52	437.06
		1695	LOC-RP	15+01.28	55.00 RT	68982.76	18462.51	
		1696	LOC-PT	15+01.28	12.00 RT	69025.72	18464.46	436.80

G3 CURVE LAYOUT TABLE (CON'T)

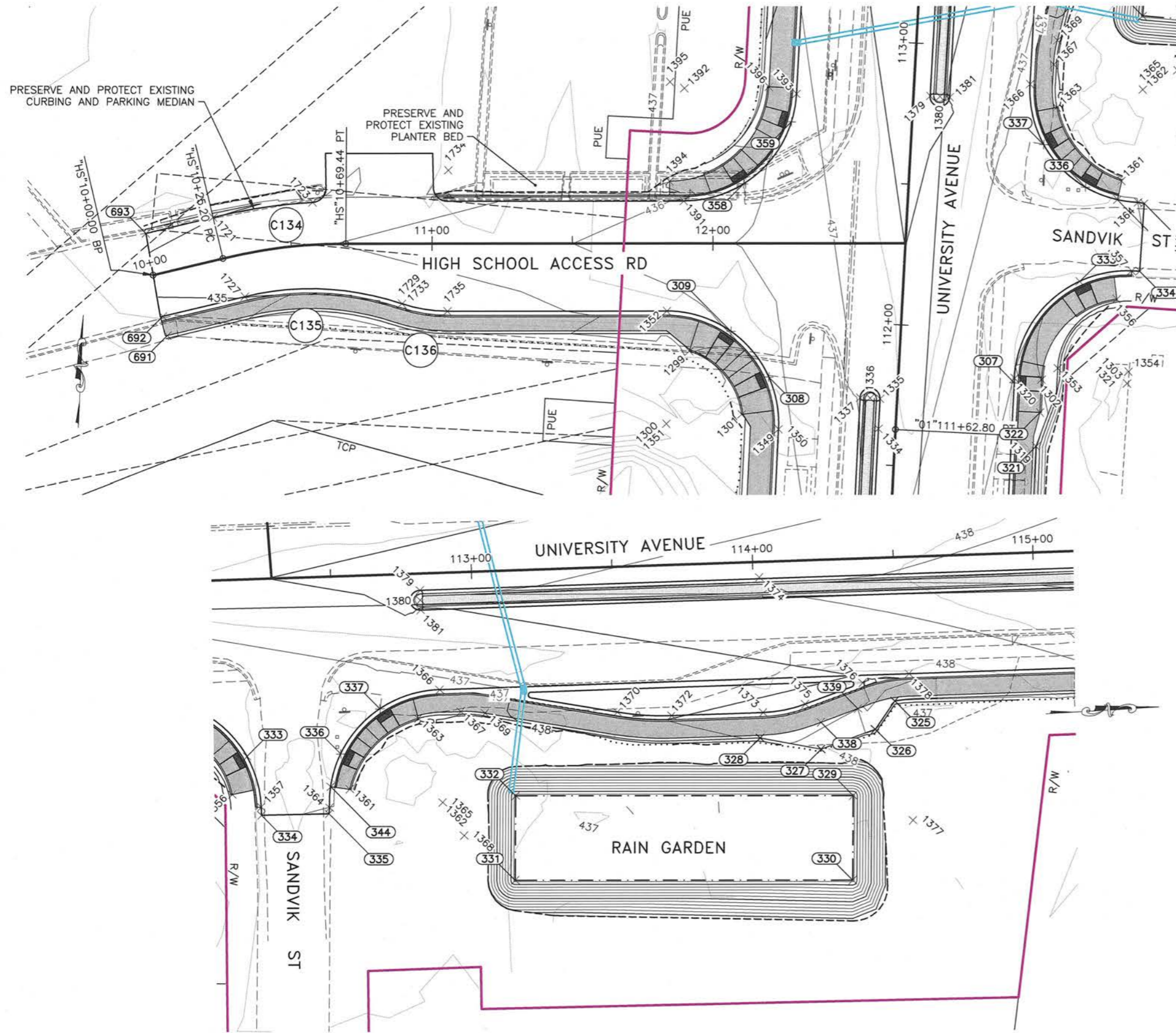
NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C60	4	1265	LOC-PC	102+77.51	50.61 RT	69012.63	18348.30	
		1266	LOC-RP	102+80.54	48.00 RT	69015.72	18345.77	
		1267	LOC-PT	102+80.54	44.00 RT	69015.82	18341.77	
C61	4	1268	LOC-PC	104+58.01	44.00 RT	69193.24	18346.20	
		1269	LOC-RP	104+58.01	48.00 RT	69193.14	18350.20	
		1270	LOC-PT	104+61.77	49.37 RT	69196.86	18351.66	

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\C2002const11147.01b-seg-1b-G8 Fr. Jun/08/18 05:46pm

WOLF RUN GRADING PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	G9	G21



NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C134	200	1721	LOC-PC	10+25.20	15.00 LT	69965.44	18056.26	434.99
		1722	LOC-RP	10+25.20	185.00 RT	69772.97	18110.62	
		1723	LOC-PRC	10+58.51	15.00 LT	69972.06	18091.60	435.16
C135	100	1727	LOC-PC	10+30.00	14.94 RT	69937.77	18068.66	435.02
		1728	LOC-RP	10+36.85	114.86 RT	69841.53	18095.84	
		1729	LOC-PT	10+89.47	21.32 RT	69937.27	18124.73	435.20
C136	50	1733	LOC-PC	10+89.47	21.32 RT	69937.27	18124.73	435.20
		1734	LOC-RP	11+05.63	26.00 LT	69985.14	18139.17	
		1735	LOC-PT	11+05.56	24.00 RT	69935.17	18140.90	435.22

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C76	3.5	1335	LOC-PC	111+73.50	6.00 LT	69909.65	18296.10	437.40
		1336	LOC-RP	111+73.50	9.50 LT	69909.70	18292.60	
		1337	LOC-PT	111+73.50	13.00 LT	69909.75	18289.10	437.02
C77	2809.8	1338	LOC-PC	107+40.99	56.00 LT	69478.62	18253.29	435.16
		1339	LOC-RP	109+68.35	2864.79 LT	69548.74	15445.38	
C78	150	1340	LOC-PRC	108+23.71	56.00 LT	69559.72	18254.15	434.92
		1341	LOC-PRC	108+23.71	56.00 LT	69559.72	18254.15	434.92
		1342	LOC-RP	108+23.71	94.00 RT	69560.30	18404.15	
C79	300	1343	LOC-PT	108+36.43	55.45 LT	69572.20	18254.62	434.93
		1344	LOC-PC	109+39.21	44.74 LT	69673.42	18262.67	435.45
		1345	LOC-RP	109+78.47	342.23 LT	69697.21	17963.62	
C80	2906.3	1346	LOC-PT	109+69.44	42.38 LT	69703.30	18263.55	435.62
		1347	LOC-PC	110+00.00	41.50 LT	69734.31	18262.92	435.76
		1348	LOC-RP	111+62.80	2864.79 RT	69860.26	21166.48	
C81	40	1349	LOC-PRC	111+60.90	41.50 LT	69897.51	18260.43	436.40
		1350	LOC-PRC	111+60.90	41.50 LT	69897.51	18260.43	436.40
		1351	LOC-RP	111+60.90	81.50 LT	69898.02	18220.44	
C82	34	1352	LOC-PT	112+00.80	83.48 LT	69937.99	18218.99	435.81
		1353	SW-PC	111+87.35	56.75 RT	69922.65	18359.03	437.11
		1354	SW-RP	111+87.35	81.75 RT	69922.32	18384.03	0.00
								0.00

NOTES

- SEE SHEET G10-G11 FOR CONTROL POINT TABLES.
- SEE SHEETS U12 FOR RIPRAP OUTLET LOCATIONS.
- SEE LANDSCAPE PLANS FOR RAIN GARDEN LAYOUT, MATERIAL AND DETAILS

HIGH SCHOOL ACCESS RD
GRADING PLAN



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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SHEET G5 CONTROL POINT TABLE

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
361	116+93.00	38.00 LT	70429.54	18271.10	439.47	LOC RAMP
362	116+99.00	38.00 LT	70435.54	18271.18	439.50	LOC RAMP
363	117+04.03	38.00 LT	70440.56	18271.25	439.52	DWT
364	117+44.00	38.00 LT	70480.53	18271.79	439.61	LOC RAMP
365	117+15.81	38.00 LT	70452.34	18271.41	439.54	RR (1)
366	117+25.83	38.00 LT	70462.36	18271.54	439.56	RR (1)
367	117+50.03	38.00 LT	70486.56	18271.87	439.62	LOC RAMP
368	117+39.03	38.00 LT	70475.56	18271.72	439.59	DWT
369	116+64.95	38.59 RT	70400.46	18347.31	439.28	LOC
370	117+05.00	50.50 LT	70441.70	18258.76	438.79	GATE
371	117+17.63	49.91 LT	70454.32	18259.53		RR (1)
372	117+27.32	48.50 LT	70463.99	18261.06	439.83	RR (1)
373	117+38.00	50.50 LT	70474.70	18259.21		GATE
374	117+44.00	50.50 LT	70480.70	18259.29		LIGHT
375	116+18.00	39.69 RT	70353.50	18347.77	438.84	LOC-GB
376	116+85.95	38.10 RT	70421.46	18347.10	439.44	LOC RAMP
377	116+91.47	38.00 RT	70426.98	18347.07	439.47	DWT
378	116+85.00	46.16 RT	70420.40	18355.15	439.92	SW
379	117+26.00	38.00 RT	70461.51	18347.54	439.56	DWT
380	116+45.00	47.09 RT	70380.39	18355.54	439.58	DRWY
381	116+45.00	80.00 RT	70379.95	18388.44		DRWY
382	116+85.00	80.00 RT	70419.95	18388.98		DRWY
383	115+68.95	40.82 LT	70305.53	18266.61	438.38	DRWY
384	115+92.94	40.26 LT	70329.52	18267.49	438.61	DRWY
385	116+18.00	39.68 LT	70354.57	18268.41	438.84	LOC-GB

SHEET G6 CONTROL POINT TABLE

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
386	119+53.73	43.00 RT	70689.15	18355.61	439.41	RAMP
387	119+56.99	45.50 RT	70692.38	18358.15	439.51	LOC
388	119+67.32	83.67 RT	70702.19	18396.46		EP
389	119+99.32	83.32 RT	70734.19	18396.54		EP
390	120+09.31	45.50 RT	70744.69	18358.86	439.43	LOC
391	120+12.57	43.00 RT	70747.99	18356.40	439.30	RAMP
392	120+41.14	38.00 RT	70776.62	18351.79	438.93	LOC
393	123+31.18	60.31 RT	71067.98	18374.33		RAMP
394	121+98.02	38.00 LT	70933.46	18277.89	438.44	LOC
397	123+36.00	38.00 LT	71071.43	18275.97		LOC
398	123+36.00	72.80 RT	71072.98	18386.75		EP
399	118+12.00	38.00 RT	70547.50	18348.70	439.63	LOC-GB
400	118+12.00	38.00 LT	70548.52	18272.71	439.63	LOC-GB
401	120+94.00	40.00 LT	70830.53	18274.51	439.16	DRWY
402	120+70.00	40.00 LT	70806.53	18274.18	439.24	DRWY

SHEET G7 CONTROL POINT TABLE

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
632	14+52.88	42.37 RT	68422.69	18566.45	429.75	FL
633	14+56.54	297.87 RT	68396.29	18817.49	429.28	FL
634	14+50.04	18.00 LT	68434.43	18361.61	430.14	FL

SHEET G8 CONTROL POINT TABLE

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
659	13+26.00	12.00 RT	68896.08	18416.99	436.99	LOC
660	13+07.00	12.00 RT	68877.08	18416.45	436.89	EP
661	13+07.00	0.00 RT	68877.43	18404.45	437.13	EP
662	13+07.00	12.00 LT	68877.77	18392.46	436.89	EP
663	13+26.06	12.00 LT	68896.83	18393.00	436.99	LOC
664	14+88.22	0.00 RT	69036.75	18452.02	437.08	CL
665	15+01.28	0.00 RT	69037.71	18465.01	437.04	CL
666	15+17.95	0.00 RT	69036.95	18481.66	436.99	EP
667	14+84.80	12.00 LT	69047.61	18445.66	436.85	LOC
668	15+05.00	12.00 RT	69025.55	18468.18	436.79	DRWY
669	15+19.00	12.00 RT	69024.91	18482.17	0.00	DRWY
670	15+21.72	11.00 RT	69025.79	18484.93	0.00	LOC
671	15+25.00	11.00 RT	69025.64	18488.21	0.00	EP
672	15+17.95	11.00 RT	69025.96	18481.16	436.77	EP
673	15+17.95	12.00 LT	69048.94	18482.21	436.77	EP

SHEET G9 CONTROL POINT TABLE

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
691	0+00.00	0.00 RT	69922.79	18041.38	0.00	SW
692	0+00.00	0.00 RT	69929.47	18039.30	0.00	EP
693	10+00.90	15.00 LT	69958.83	18032.87	434.86	EP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	G11	G21

NOTES

- (1) RAILROAD CROSSING GRADES ARE SUBJECT TO CHANGE AFTER TRACK IS REPROFILED BY ARRC.

GRADING PLAN CONTROL
TABLES

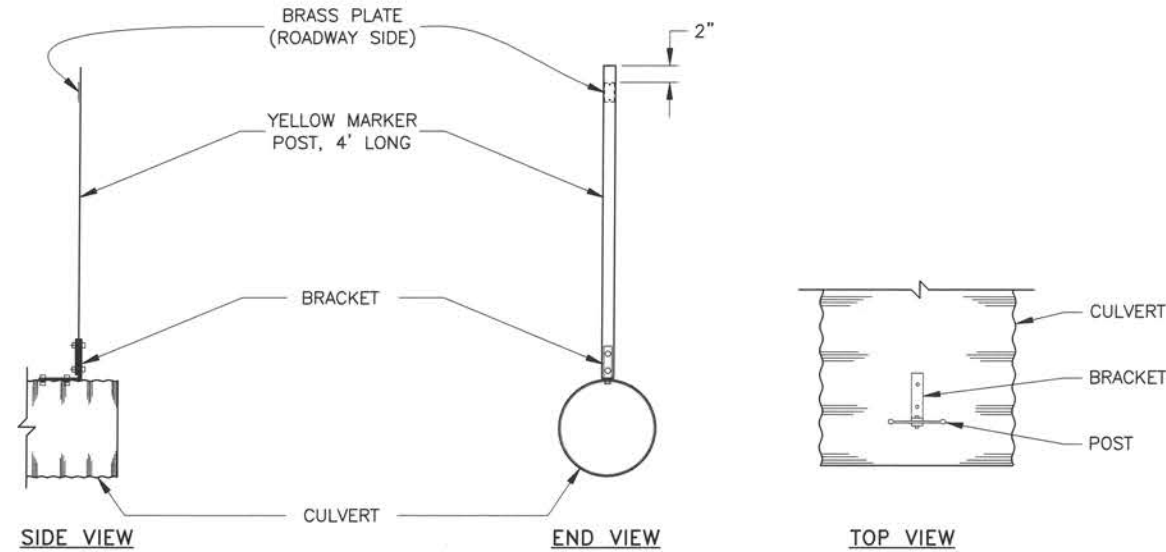


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	G12	G21

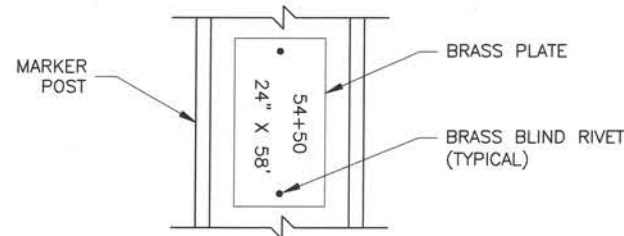
CULVERT SUMMARY							
STATION	LT/C/RT	603(1)-72	INVERT		613(2) CULVERT MARKER POST	SKEW ANGLE	REMARKS
		72"	IN	OUT			
"01" 110+50	C	158	MATCH EX	MATCH EX	2	22' LHF	SEE SHEET G13 FOR ENHANCED HYDRAULIC DESIGN PLACE 6"Ø CULVERT INSIDE OF EXISTING 8"Ø CULVERT. MATCH EXISTING INVERT ELEVATIONS.
TOTAL:		158			2		

SHEET NOTES:

- 72 INCH CSP CULVERT AT DEADMAN SLOUGH SHALL BE 10 GAGE.



CULVERT MARKER POST DETAIL
NTS



BRASS PLATE DETAIL
NTS

STAMP STATION AND PIPE SIZE, USING 3/8" HIGH MINIMUM LETTERS INTO A 2"X4"X 0.064" THICK BRASS PLATE. FASTEN PLATE TO THE SIDE FACING THE ROADWAY WITH TWO 1/8" BRASS BLIND RIVETS.

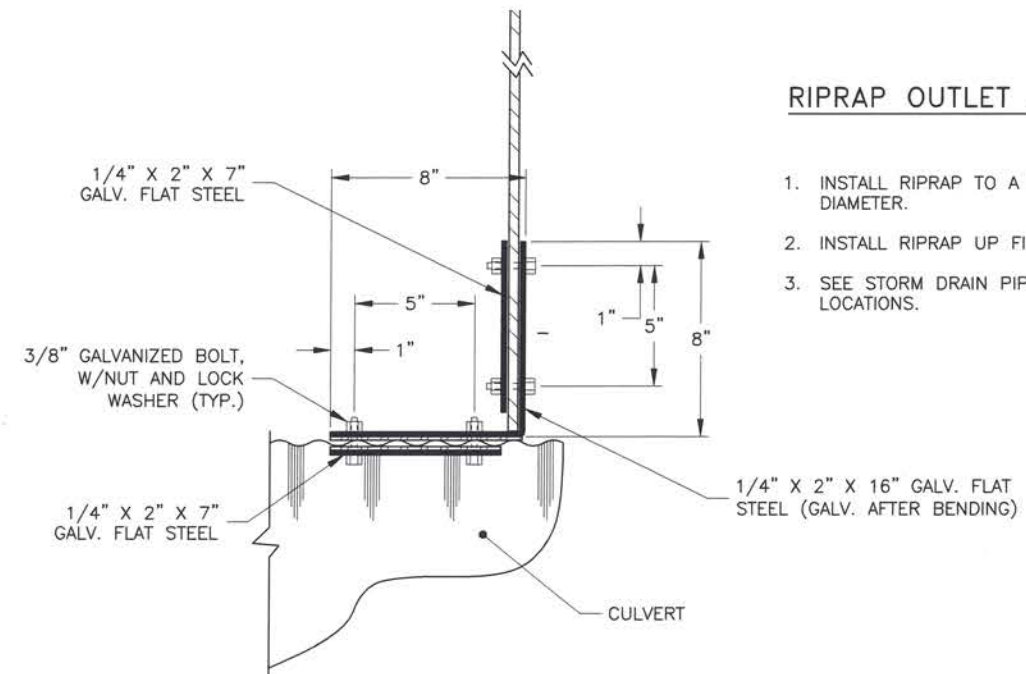


POST DETAIL
NTS

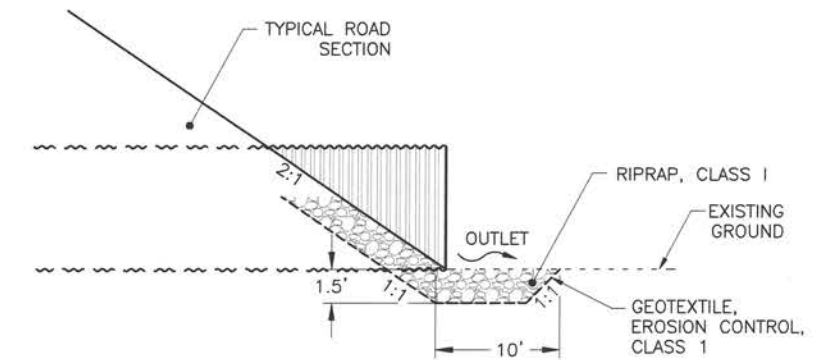
CULVERT MARKER POST DETAILS

CULVERT MARKER POST NOTES:

- MARKER POSTS ARE TO BE INSTALLED ON CROSS CULVERTS ONLY.
- IF CULVERTS ARE CLOSELY SPACED, MARK ONLY THE FIRST AND LAST CULVERT IN SERIES AS APPROVED BY THE ENGINEER.
- DRILL AT BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
- GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.



BRACKET DETAIL
NTS



RIPRAP OUTLET AT STORM DRAIN OUTLET
NTS

- INSTALL RIPRAP TO A WIDTH OF THREE TIMES CULVERT DIAMETER.
- INSTALL RIPRAP UP FILL SLOPE TO CULVERT SPRING LINE.
- SEE STORM DRAIN PIPE SUMMARY FOR RIPRAP OUTLET LOCATIONS.

CULVERT DETAILS

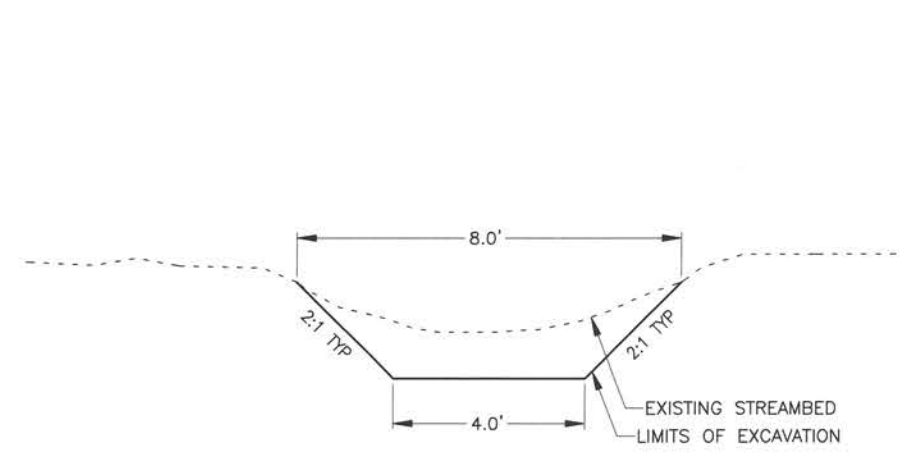


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200 P:\2011\1147.01FB\C_Segment Improvement Packages\Segment 1B\B-C\000808.mxd1147.01FB-Seg_1B-G12 Thu, Jun/07/18 10:55am

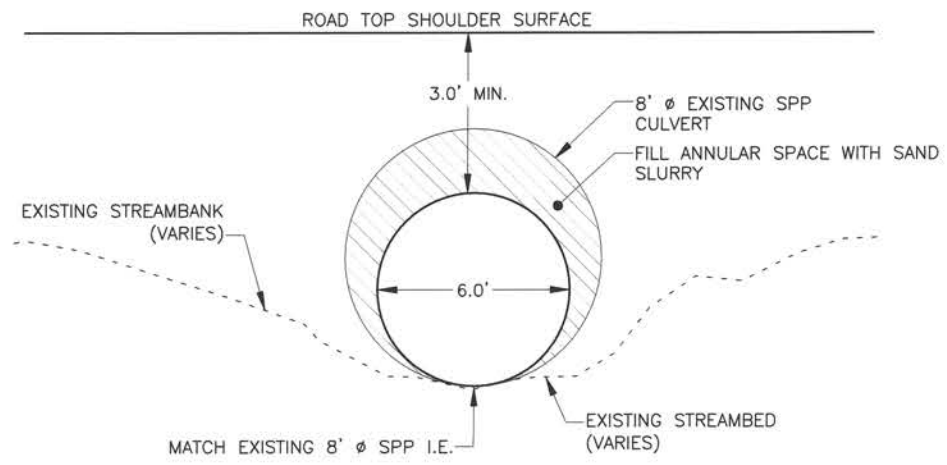
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	G13	G21

NOTES:

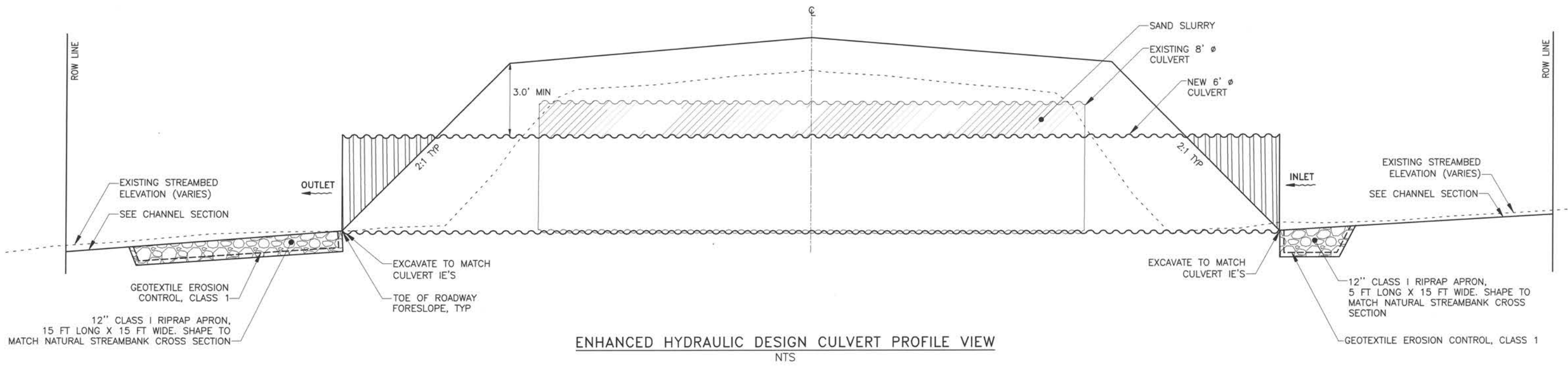
1. INSERT 10 GAGE, 72 INCH CULVERT IN EXISTING 8'Ø SSP. MATCH NEW CULVERT IE TO EXISTING CULVERT. EXCAVATE AT ENDS AS NEEDED FOR NEW LENGTH.
2. EXCAVATE CHANNEL SECTION FROM CULVERT END TO ROW LINE ON EACH SIDE.
3. GEOTEXTILE, EROSION CONTROL, CLASS 1 SHALL BE PLACED UNDERNEATH RIPRAP AT INLET AND OUTLET OF CULVERT.
4. THE CONTRACTOR SHALL COORDINATE THE SAND SLURRY FILL METHOD WITH THE ENGINEER, PRIOR TO FILLING BETWEEN THE CULVERTS.



CHANNEL SECTION



CULVERT END VIEW



ENHANCED HYDRAULIC DESIGN CULVERT PROFILE VIEW
NTS

HYDROLOGIC AND HYDRAULIC SUMMARY
UNIVERSITY AVENUE, DEAD MAN SLOUGH, STATION 110+50

DRAINAGE AREA: 0.15 SQUARE MILES
 DESIGN DISCHARGE: Q2=16CFS; Q10=28CFS; Q50=41CFS; Q100=47CFS
 DESIGN HIGH WATER: 2.65 FEET BELOW TOP OF CULVERT @ Q50.
 ANTICIPATED BACKWATER @ Q100: 2.42 FEET BELOW TOP OF 6-FOOT DIAMETER CULVERT.
 HW/D @ Q50= 0.56
 HW/D @ Q100= 0.60

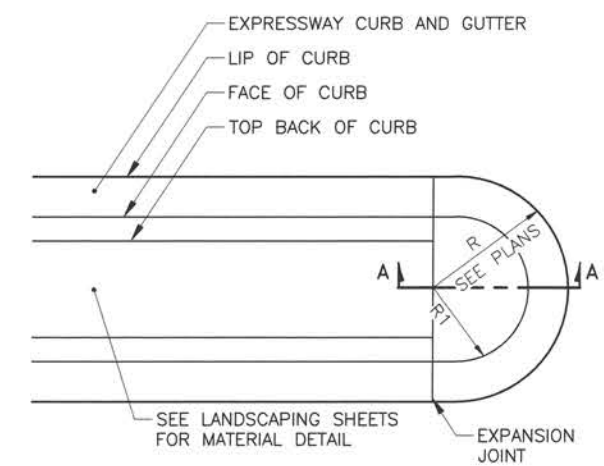
**ENHANCED HYDRAULIC
DESIGN CULVERT DETAILS**



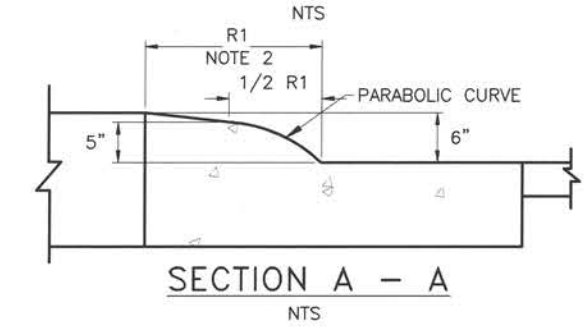
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\C\000808\11147.01\FB-Seg 1B-G13 Thu, Jun/07/18 11:25am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	G14	G21

639(101) APPROACH								
STATION	OFFSET	SKEW ANGLE (90° TYP.)	(1) APPROACH PLAN TYPE	WIDTH (FT)	LENGTH (FT)	RADIUS (FT)	LANDING LENGTH (FT)	REMARKS
"01" 98+19.88	LT	90°	3	37	14	-	- (2)	OASIS RESTAURANT AND LOUNGE
"01" 99+02.08	LT	90°	3	30	13.25	-	- (2)	OASIS RESTAURANT AND LOUNGE
"01" 99+66.62	LT	90°	3	38	11.1	-	- (2)	WELLS FARGO
"01" 99+95.23	RT	89°17'24"	1	24	45	35/25	30	WOLF RUN
"01" 105+58.61	RT	90°	-	9	-	15 LT (3)	-	BIKE PATH NORTH OF GEIST RD/JOHANSEN EXPY
"01" 107+94.11	RT	90°	1	22	72.5	30	30	DEAD END ALLEY
"01" 112+33.93	RT	90°	1	24	42.5	40	30	SANDVIK ST
"01" 115+67.88	RT	90°	2	30	13.12	-	30 (2)	ACCESS TO ELECTRICAL SUBSTATION
"01" 115+80.00	LT	91°20'21"	2	24	63.4	-	30	UAF EMERGENCY ACCESS THROUGH BACK OF LOT
"01" 116+75.00	RT	90°	2	15	39.57	-	33	ACCESS TO ARRC CONTROL BUNGALOW
"01" 119+82.79	RT	90°	1	32	45.5	30	30	CAMERON ST
"01" 120+82.00	LT	90°	2	24	TBD	TBD	TBD	UAF ACCESS
"WR" 15+12.00	RT	90°	4	14	13	-	10	WOLF RUN RESTAURANT BACK ENTRANCE
"HS" 10+81.22	LT	90°	1	38	17	5	30 (2)	HIGH SCHOOL ACCESS RD
TOTAL			13					



RAMPED MEDIAN NOSE DETAIL



SECTION A - A
NTS

RAMPED MEDIAN NOSE NOTES:

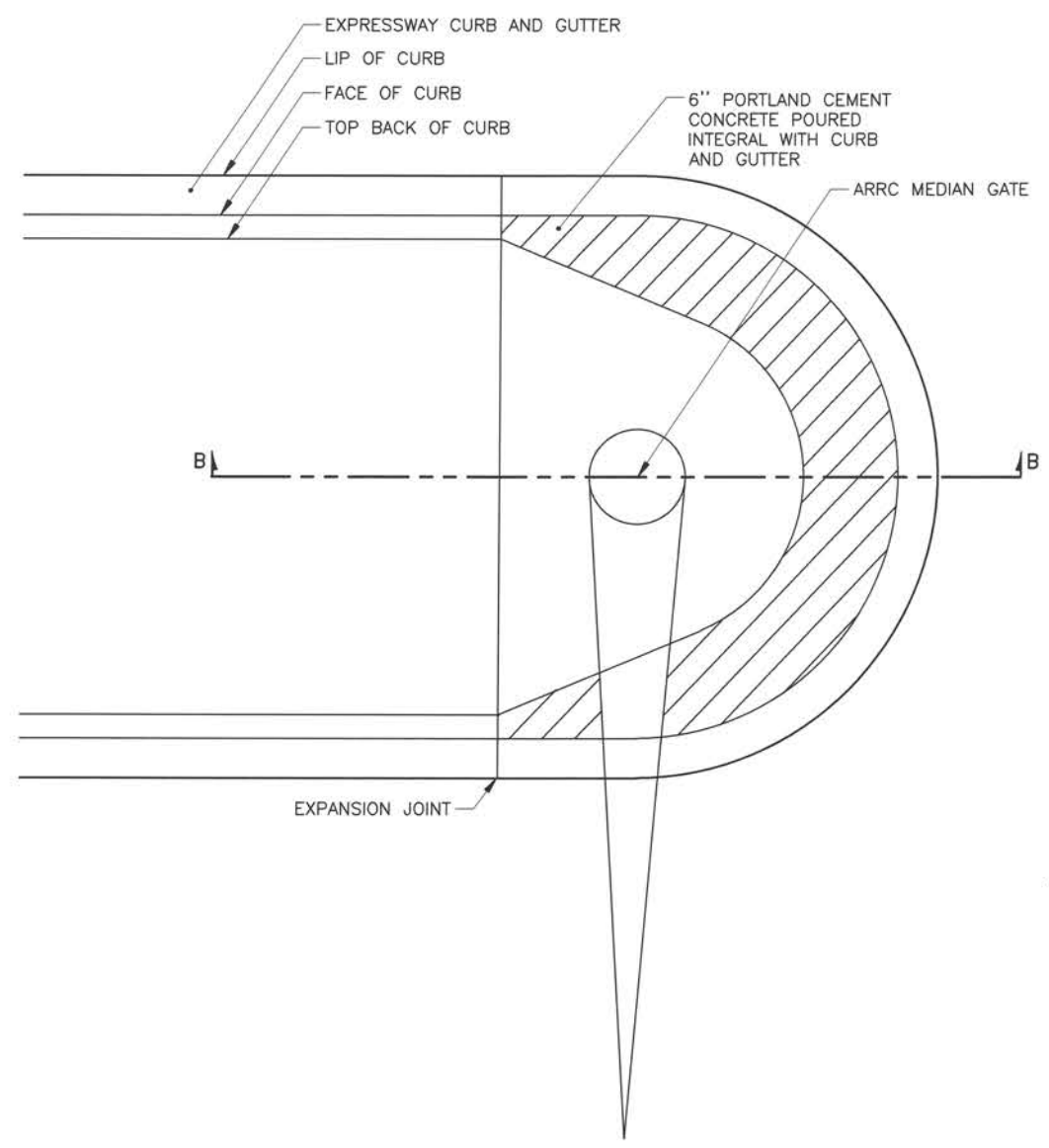
1. CONSTRUCT RAMP MEDIAN NOSE TO RADIUS POINT "R1" OR 3 FEET WHICHEVER IS GREATER.
2. RAMPED MEDIAN NOSE SHALL BE 6" PORTLAND CEMENT CONCRETE POURED INTEGRAL WITH CURB AND GUTTER AND IS SUBSIDIARY TO PAY ITEM 609(2) CURB AND GUTTER TYPE 1.
3. RAMPED MEDIAN NOSE PAINTING IS SUBSIDIARY TO RESPECTIVE STRIPING PAY ITEMS, FOR MORE DETAILS AND INFORMATION ON PAINTING REFER TO SIGNING AND STRIPING PLAN SHEETS AND SPECS.

APPROACH NOTES:

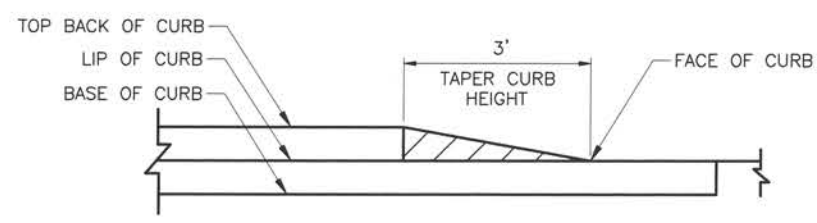
- (1) SEE DETAILS ON G15-G18 FOR APPROACH PLAN TYPE.
- (2) APPROACH LENGTH TIES INTO EXISTING CONDITIONS PRIOR TO FULL LANDING LENGTH.
- (3) THIS APPROACH WAS BUILT DURING GEIST RD/JOHANSEN EXPY PROJECT, THE LT RADIUS NEEDS BUILT IN AND RETROFITTED.

RAILROAD RAMPED MEDIAN NOSE NOTES:

1. CONSTRUCTION OF ISLAND RAMPED MEDIAN NOSE IS SUBSIDIARY TO PAY ITEM 609(2) CURB AND GUTTER, TYPE 1.
2. ISLAND RAMPED MEDIAN NOSE PAINTING IS SUBSIDIARY TO RESPECTIVE STRIPING PAY ITEMS, FOR MORE DETAILS AND INFORMATION ON PAINTING REFER TO THE SIGNING AND STRIPING SHEETS AND SPECS.
3. FOR CLARIFICATION ON LOCATION SEE TABLE BELOW. LOCATION IS AT RADIUS MIDPOINT ALONG LIP OF CURB. THESE STATIONS AND OFFSETS ARE FOR CLARIFICATION PURPOSES, NOT FOR CONSTRUCTION PLACEMENT.



RAILROAD RAMPED MEDIAN NOSE DETAIL
NTS



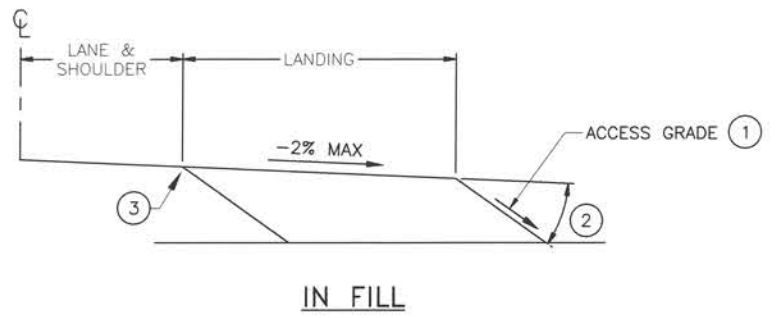
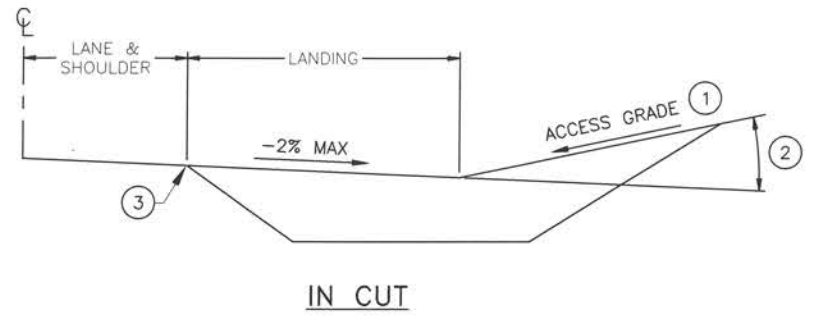
SECTION B - B
NTS

APPROACH SUMMARY AND RAMP NOSE DETAIL

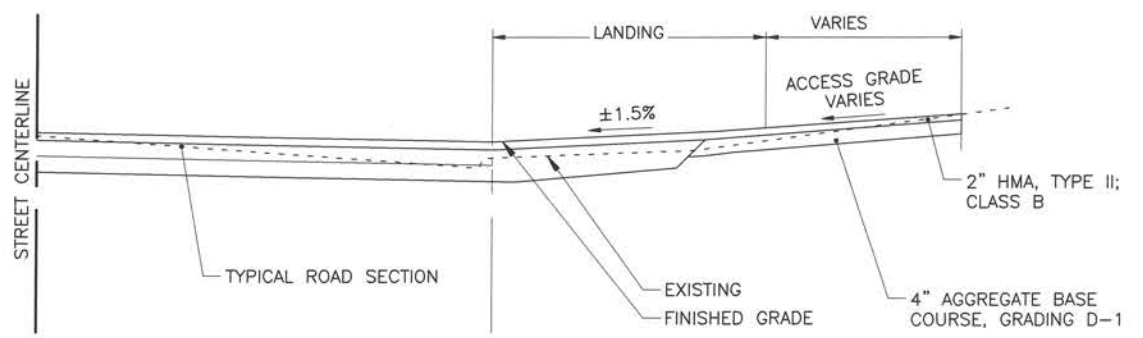


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)774-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\0008const\11147.01\FB-Seg 1B-G14 Thu Jun 07/18 10:55am

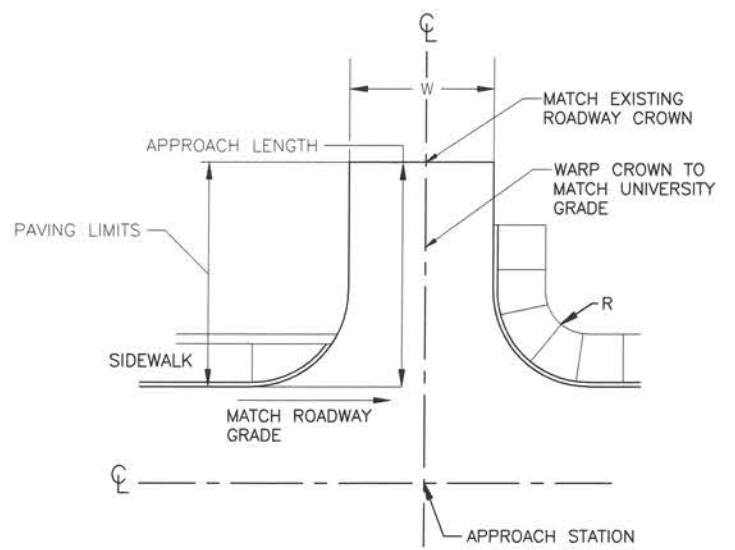
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	G15	G21



- ① MAX RESIDENTIAL ACCESS GRADE IS 15%.
- ② MAX ALGEBRAIC DIFFERENCE FOR COMMERCIAL ACCESS GRADE: 8%
RESIDENTIAL: NONE
- ③ FOR OTHER APPROACH PLAN TYPES FOLLOW THESE CUT AND FILL DETAILS FROM LANDING POINT FOR ACCESS GRADE. THE LANE SHOULDER AND LANDING CONFIGURATION IS DIFFERENT FOR APPROACH TYPE PLAN 2, 3, & 4. SEE SECTION DETAIL FOR SPECIFIC LAYOUT FROM ROADWAY EDGE THROUGH LANDING

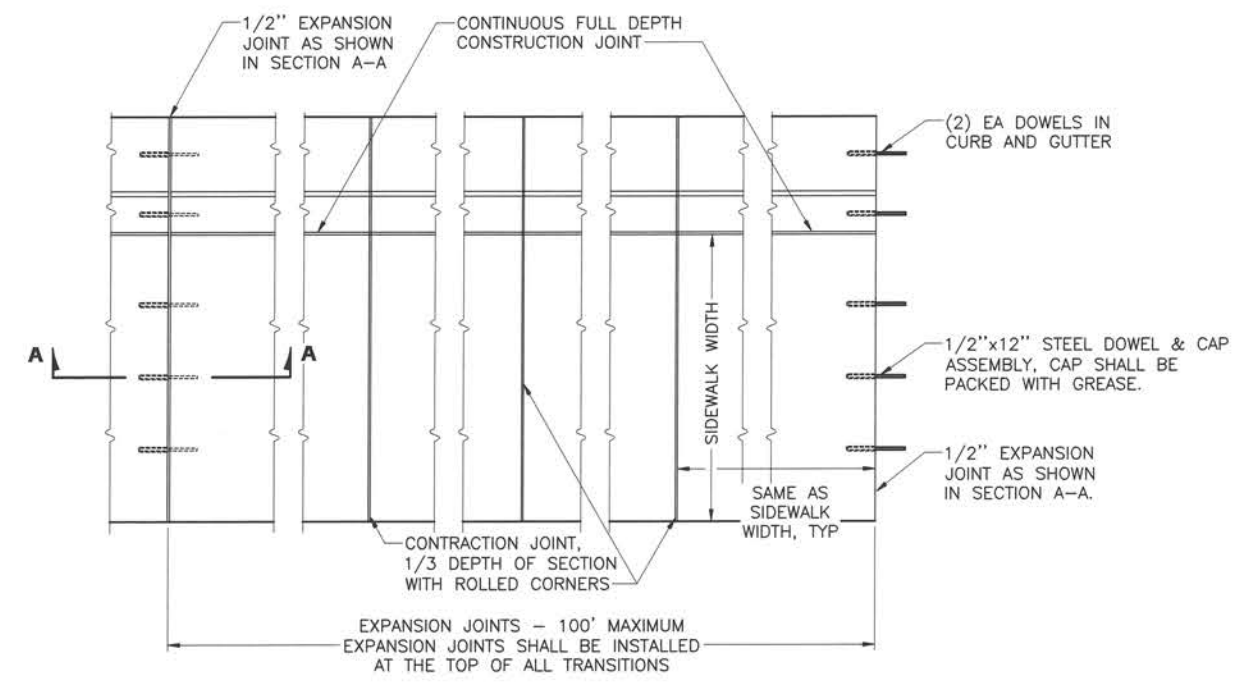


APPROACH PLAN TYPE 1 SECTION DETAIL
NTS

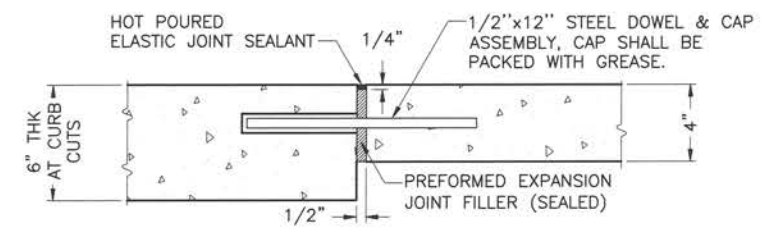


APPROACH PLAN TYPE 1
PLAN DETAIL
NTS

- APPROACH NOTES:
1. MATERIAL FOR CONSTRUCTION OF APPROACH IS PAID FOR UNDER THE RESPECTIVE PAY ITEM.



PLAN VIEW
NTS



PARTIAL SECTION VIEW A - A
NTS

EXPANSION SIDEWALK & CURB AND GUTTER JOINT DETAIL

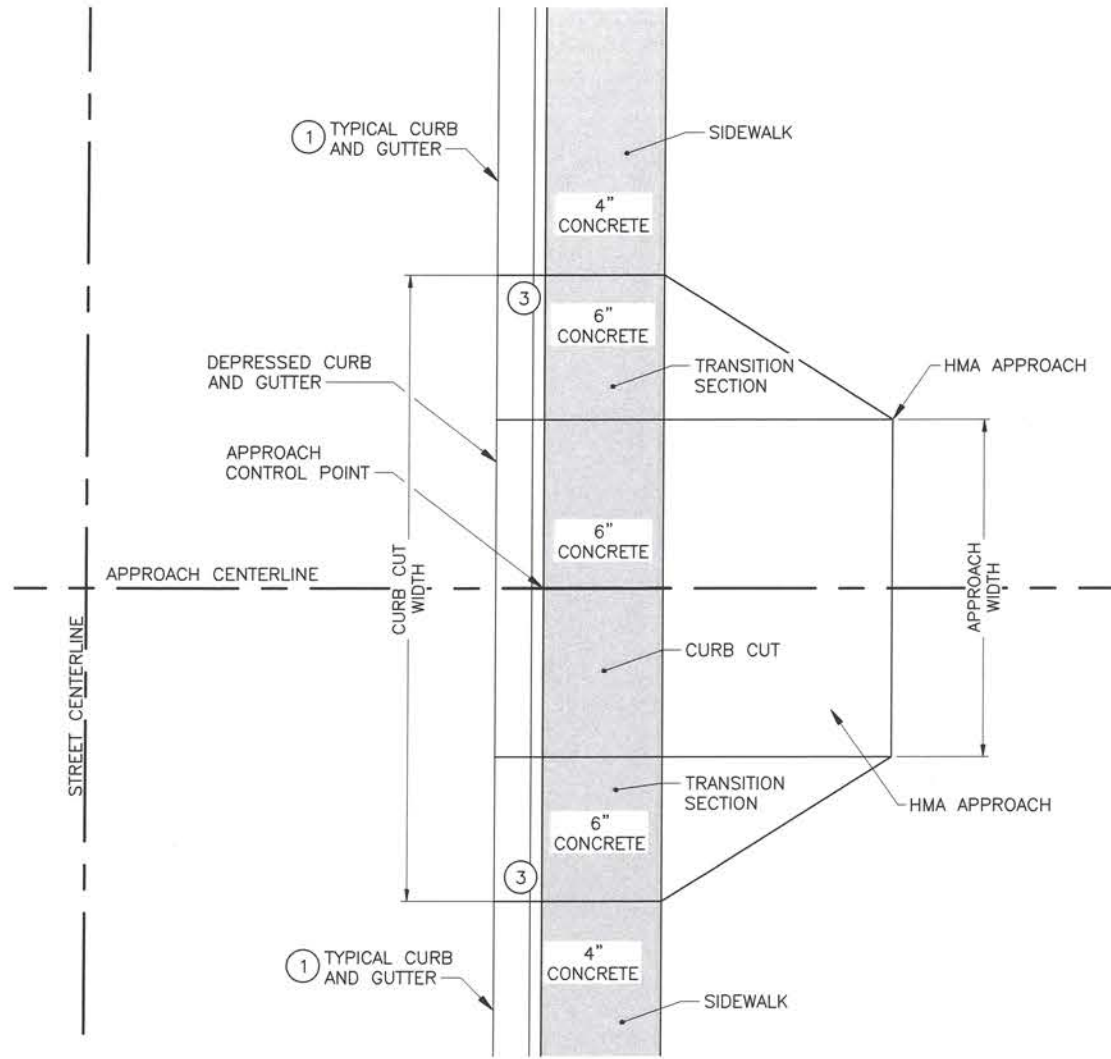
- EXPANSION JOINT NOTES:
1. INSTALL CONTINUOUS FULL DEPTH 1/8" CONSTRUCTION JOINT AT ALL LOCATIONS WHERE SIDEWALK AND CURB (ANY TYPE) MEET.
 2. PROTECT CONCRETE DURING CURE.
 3. SEAL ALL EXPANSION JOINTS WITH HOT POURED ELASTIC TYPE JOINT SEAL CONFORMING TO AASHTO DESIGNATION M173-60.
 4. FOR SIDEWALKS LARGER OR DIFFERENTLY CONFIGURED THAN SHOWN, PLACE EXPANSION AND CONTRACTION JOINTS AS ENGINEER DIRECTS.
 5. EXPANSION AND CONTRACTION JOINTS IN THE SIDEWALK SHALL LINE UP WITH EXPANSION AND CONTRACTION JOINTS IN THE CURB.

APPROACH DETAILS
(1 OF 4)

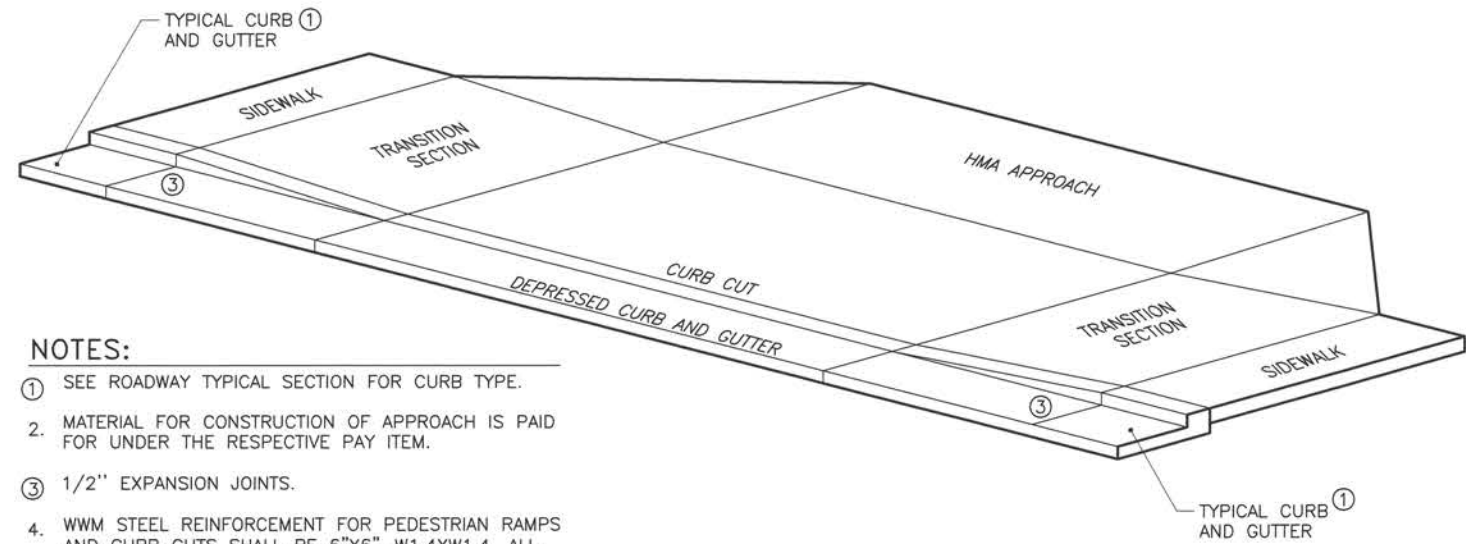


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\0008const11147.01\FB-Seg_1B-G15 Thu, Jun/07/18 10:55am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	G16	G21

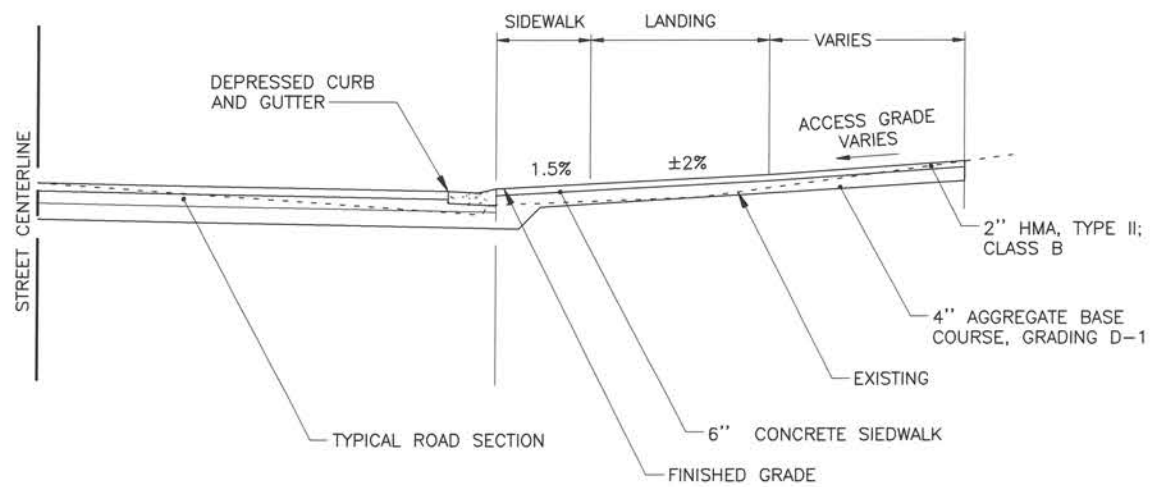


APPROACH PLAN TYPE 2 PLAN DETAIL
NTS



APPROACH PLAN TYPE 2 DETAIL
NTS

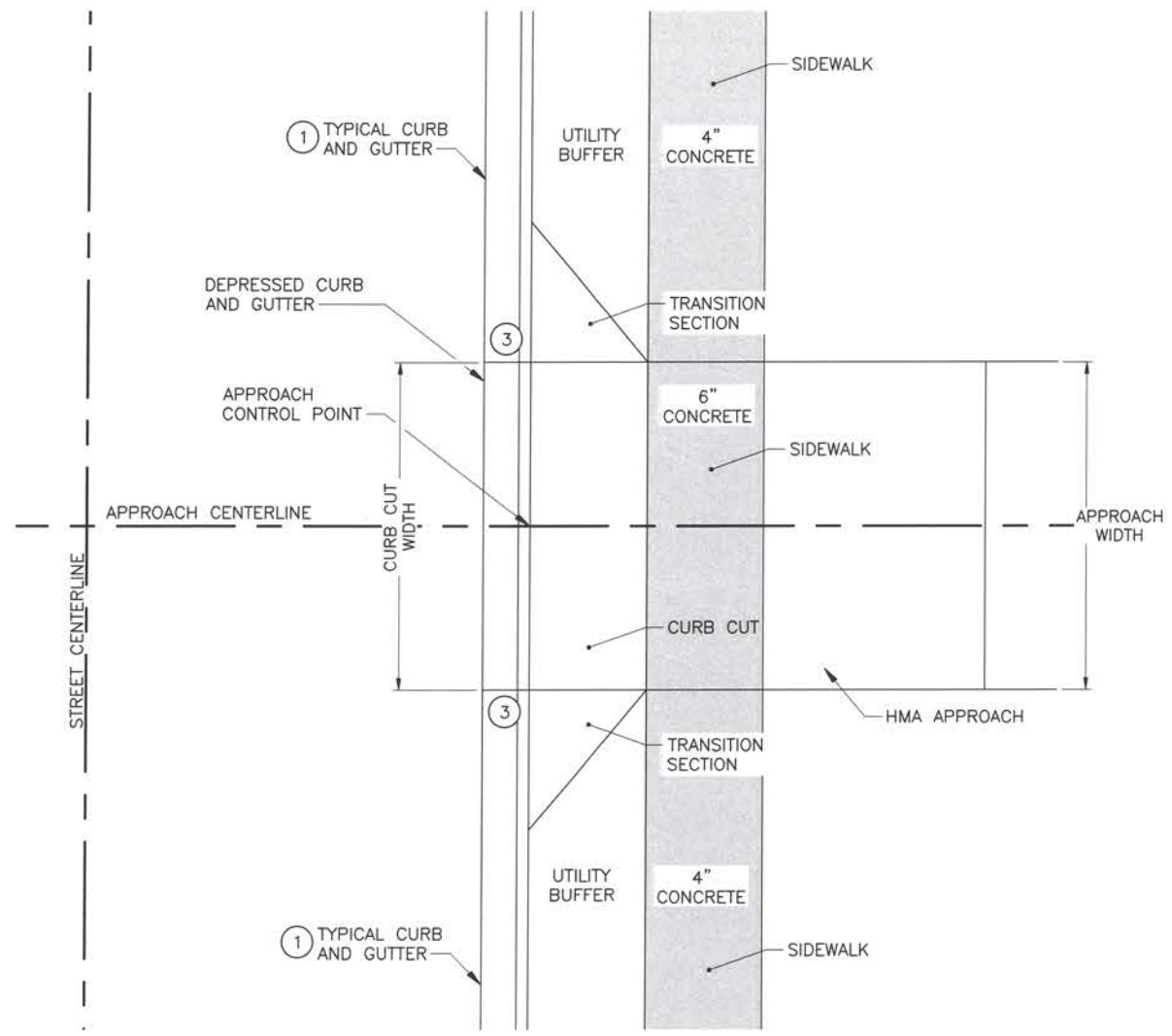
- NOTES:
- SEE ROADWAY TYPICAL SECTION FOR CURB TYPE.
 - MATERIAL FOR CONSTRUCTION OF APPROACH IS PAID FOR UNDER THE RESPECTIVE PAY ITEM.
 - 1/2" EXPANSION JOINTS.
 - WWM STEEL REINFORCEMENT FOR PEDESTRIAN RAMPS AND CURB CUTS SHALL BE 6"x6"-W1.4XW1.4. ALL STEEL SHALL BE SET ON SPACERS AND PULLED UP AS REQUIRED TO POSITION STEEL 1 1/2" UP FROM BOTTOM OF SIDEWALK.
 - FOR SIDEWALK REINFORCEMENT, POSITION STEEL 1 1/2" UP FROM BOTTOM OF SIDEWALK.
 - SEE SHEET G15 FOR EXPANSION SIDEWALK & CURB AND GUTTER JOINT DETAIL.



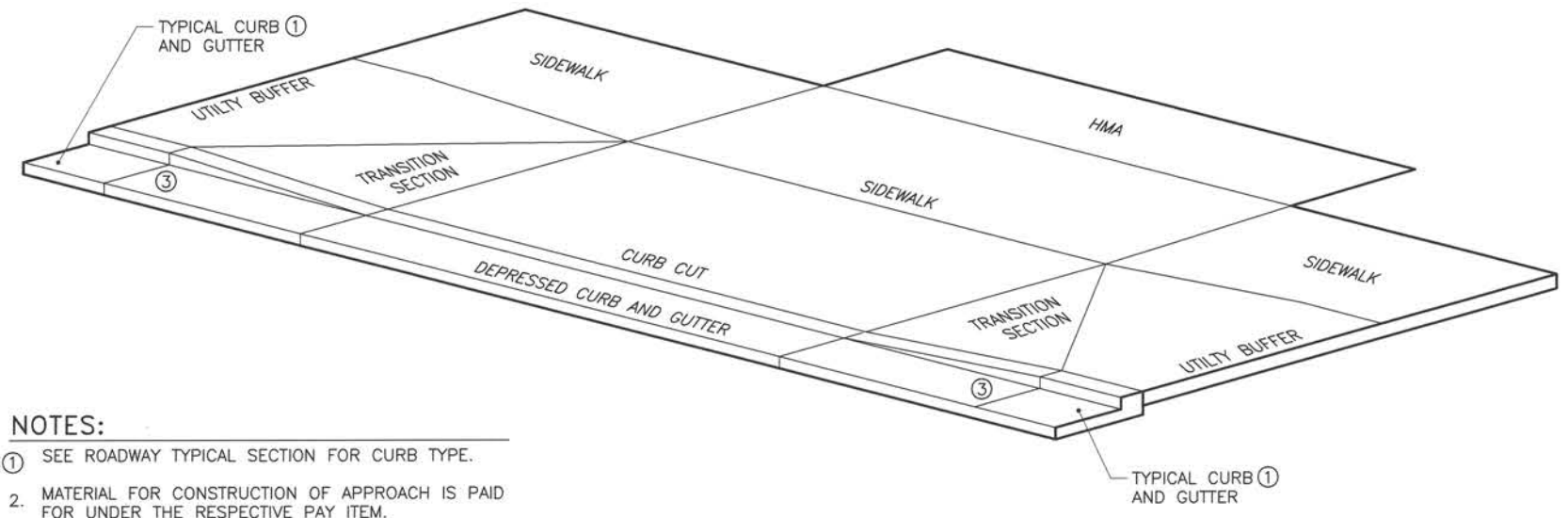
APPROACH PLAN TYPE 2 SECTION DETAIL
NTS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	G17	G21

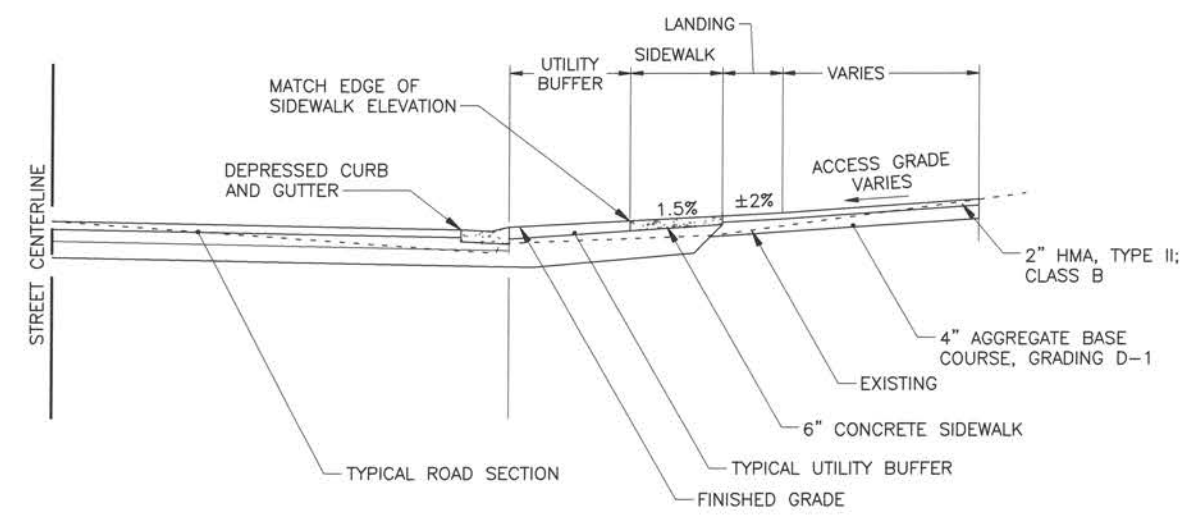


APPROACH PLAN TYPE 3 PLAN DETAIL
NTS



APPROACH PLAN TYPE 3 DETAIL
NTS

- NOTES:**
- SEE ROADWAY TYPICAL SECTION FOR CURB TYPE.
 - MATERIAL FOR CONSTRUCTION OF APPROACH IS PAID FOR UNDER THE RESPECTIVE PAY ITEM.
 - 1/2" EXPANSION JOINTS.
 - WWM STEEL REINFORCEMENT FOR PEDESTRIAN RAMPS AND CURB CUTS SHALL BE 6"x6"-W1.4XW1.4. ALL STEEL SHALL BE SET ON SPACERS AND PULLED UP AS REQUIRED TO POSITION STEEL 1 1/2" UP FROM BOTTOM OF SIDEWALK.
 - FOR SIDEWALK REINFORCEMENT, POSITION STEEL 1 1/2" UP FROM BOTTOM OF SIDEWALK.
 - SEE SHEET G15 FOR EXPANSION SIDEWALK & CURB AND GUTTER JOINT DETAIL.



APPROACH PLAN TYPE 3 SECTION DETAIL
NTS

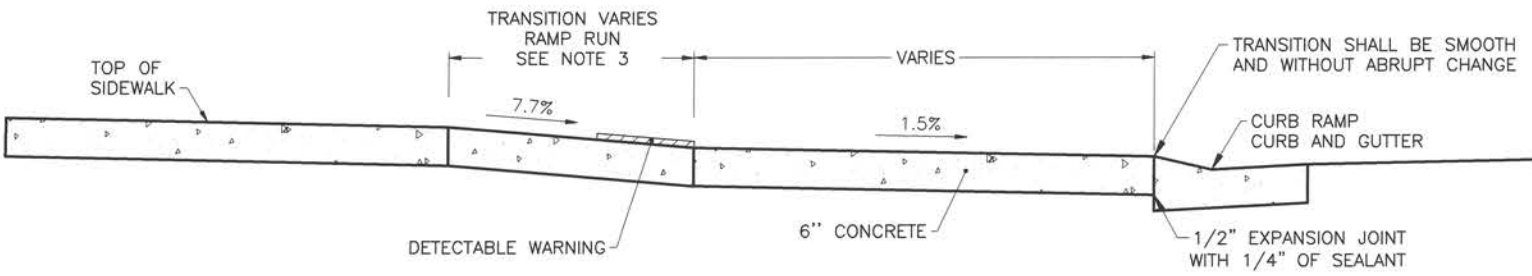
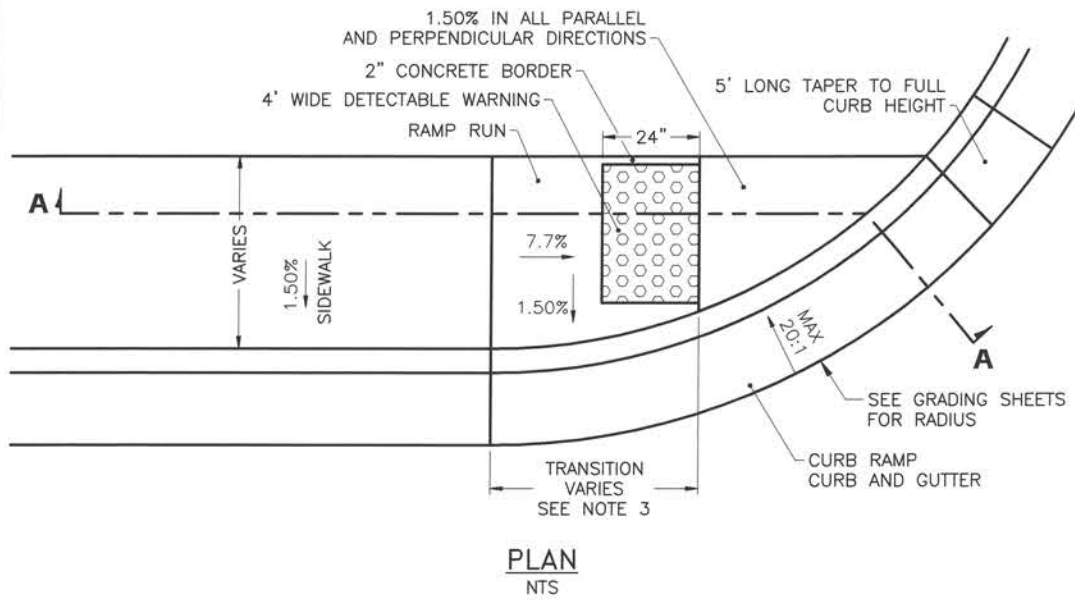


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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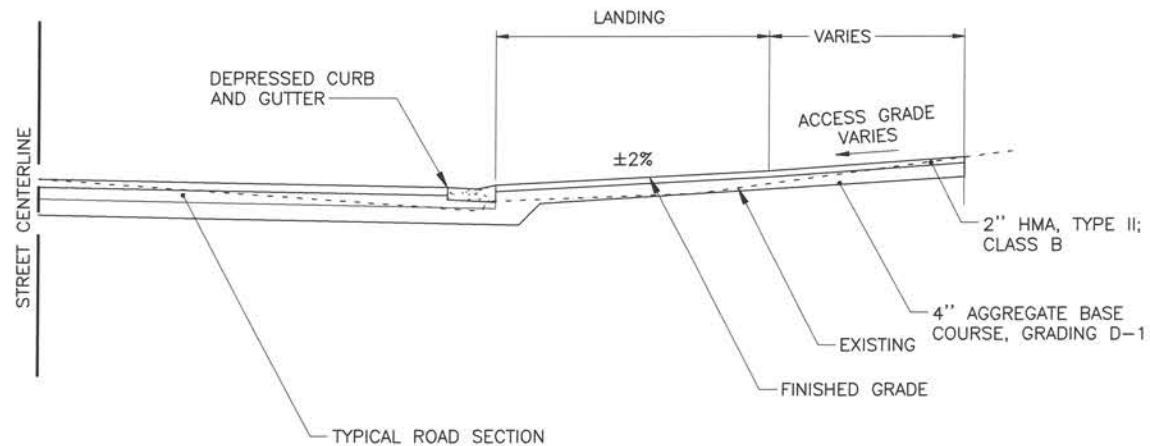
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 P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1B\B-C\CD008const11147.01FB-Seg_1B-G18 Thu, Jun/07/18 10:56am

UNDIRECTIONSAL CURB RAMP NOTES:

1. CONSTRUCT 6 INCH THICK RAMP AND LANDING OF CONCRETE.
2. CONCRETE SHALL RECEIVE A COARSE BROOMED FINISH RUNNING PERPENDICULAR TO THE CURB ON RAMP RUNS AND UPPER LANDINGS AND PARALLEL TO THE DIRECTION OF TRAVEL ON LOWER LANDINGS.
3. TRANSITION FROM STANDARD CURB AND GUTTER WHERE SIDEWALK SLOPE MAKES IT NECESSARY TO LENGTHEN A RAMP RUN TO AVOID EXCEEDING THE ALLOWABLE RAMP SLOPE. IT SHOULD NOT BE MADE LONGER THAN 15 FEET FOR A 6" CURB HEIGHT, OR, IN GENERAL, 30 TIMES THE CURB HEIGHT. THE SLOPES RESULTING FROM THOSE RUN LENGTHS MUST BE ACCEPTED BY THE ENGINEER.
4. INSTALL FEDERAL YELLOW CAST IRON DETECTABLE WARNINGS IN THE RAMP RUN.
5. SEE CURB RAMP SUMMARY FOR INSTALLATION LOCATIONS.
6. CONSTRUCT RAMP SLOPES AT A NOMINAL 7.7% GRADE, OR FLATTER. RAMP SLOPES MAY BE INCREASED TO A MAXIMUM OF 8.3% WHEN SITE CONDITIONS WARRANT IT. RAMP LENGTHS SHOULD BE INCREASED TO KEEP GRADES UNDER THE 8.3% MAXIMUM, BUT ARE NOT REQUIRED TO EXCEED 15.0 FEET.
7. CONSTRUCT LANDING AND SIDEWALK CROSS SLOPES AT A NOMINAL 1.5% (1% MIN., 2% MAX) DO NOT CONSTRUCT LANDING AND SIDEWALK CROSS SLOPES STEEPER THAN 2%.
8. WWM STEEL REINFORCEMENT FOR PEDESTRIAN RAMPS AND CURB CUTS SHALL BE 6"x6"-W2.9 WWM. FOR NORMAL SIDEWALK REINFORCEMENT SHALL BE 6"x6"-W1.4XW1.4. ALL STEEL SHALL BE SET ON SPACERS AND PULLED UP AS REQUIRED TO POSITION STEEL 1 1/2" UP FROM BOTTOM OF SIDEWALK.
9. FOR SIDEWALK REINFORCEMENT, POSITION STEEL 1 1/2" UP FROM BOTTOM OF SIDEWALK.
10. ALL CURB RAMP LAYOUTS AND DIMENSIONS IN THIS PLAN SET ARE APPROXIMATE AND NEED TO BE FIELD FIT AND SHALL MEET 2006 ADA STANDARDS FOR MAXIMUM SLOPES. FINAL LAYOUT TO BE APPROVED BY THE ENGINEER PRIOR TO CONCRETE POUR.
11. SEE SHEET G15 FOR EXPANSION SIDEWALK AND CURB AND GUTTER JOINT DETAIL.

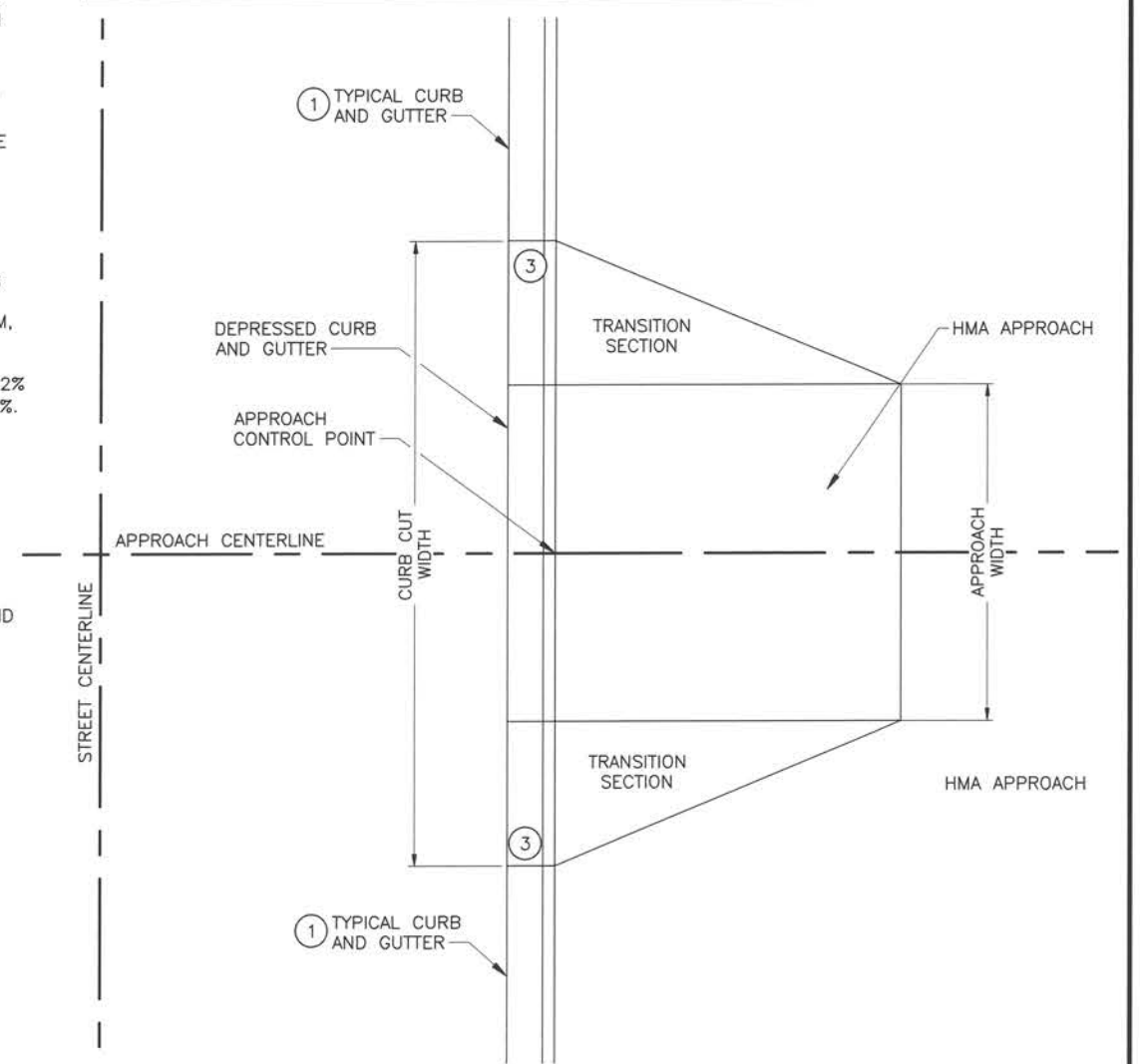


SECTION A-A
NTS
UNDIRECTIONSAL CURB RAMP DETAILS

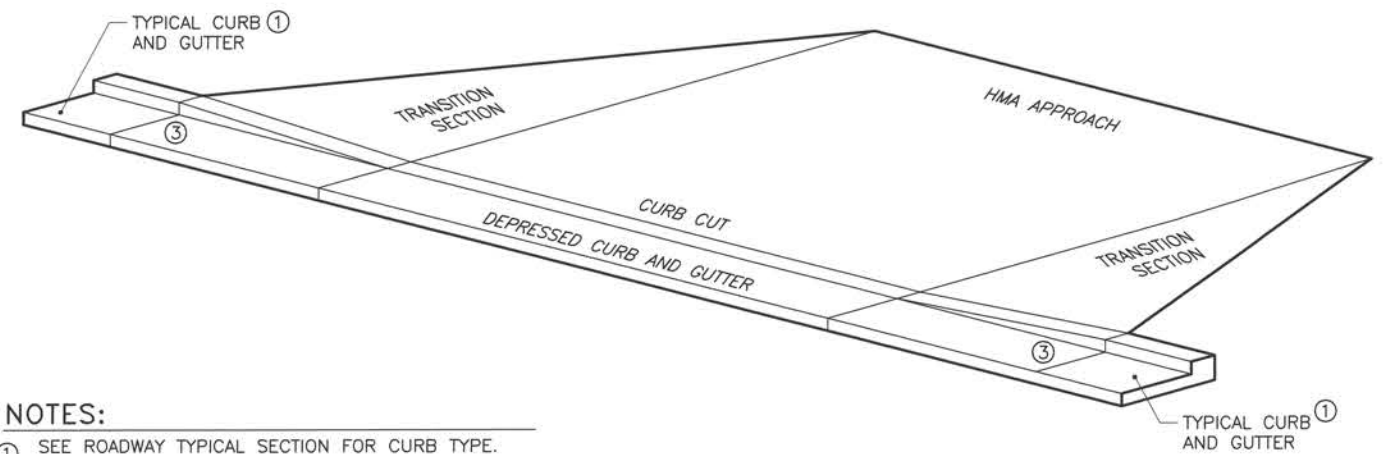


APPROACH PLAN TYPE 4 SECTION DETAIL
NTS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	G18	G21



APPROACH PLAN TYPE 4 PLAN DETAIL
NTS



NOTES:

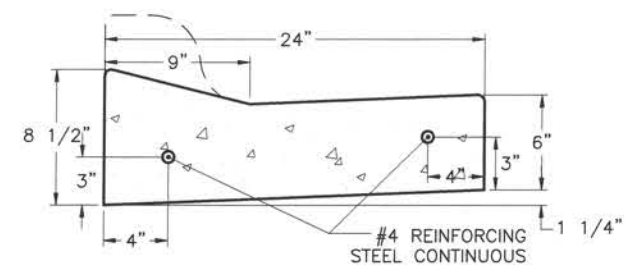
1. SEE ROADWAY TYPICAL SECTION FOR CURB TYPE.
2. MATERIAL FOR CONSTRUCTION OF APPROACH IS PAID FOR UNDER THE RESPECTIVE PAY ITEM.
3. 1/2" EXPANSION JOINTS.
4. SEE SHEET G15 FOR EXPANSION SIDEWALK & CURB AND GUTTER JOINT DETAIL.

APPROACH PLAN TYPE 4 DETAIL
NTS

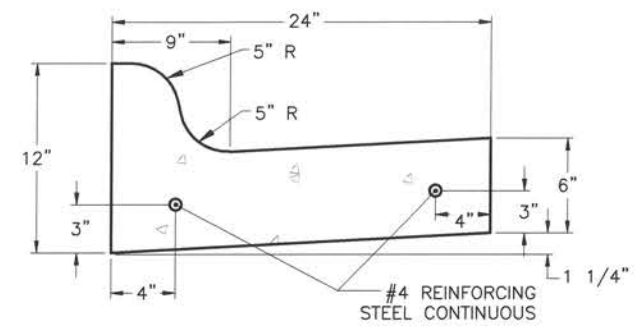
APPROACH DETAILS
(4 OF 4)



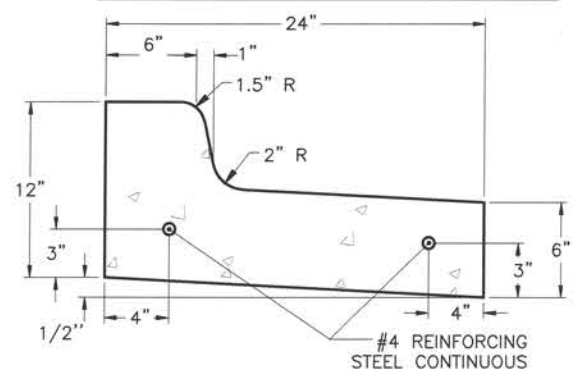
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	G19	G21



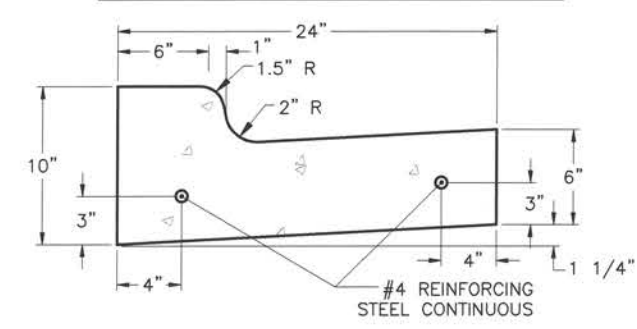
DEPRESSED CURB AND GUTTER



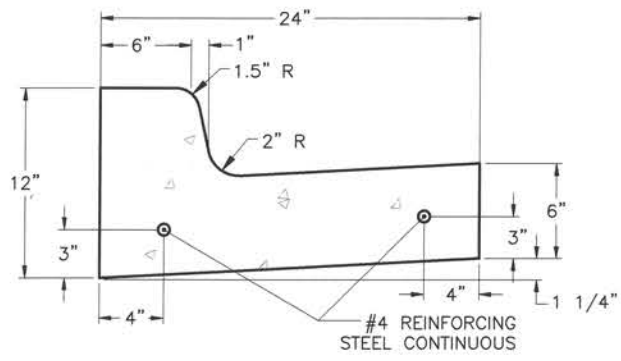
MOUNTABLE CURB AND GUTTER



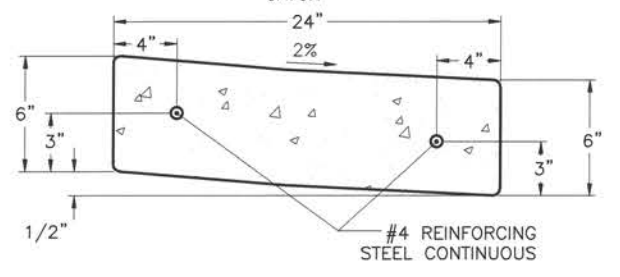
STANDARD CURB AND GUTTER SPILL



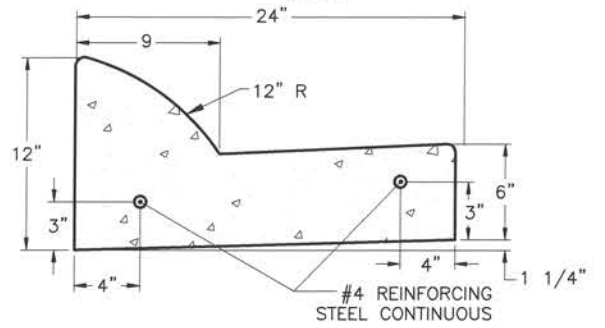
STANDARD CURB AND GUTTER FOR PARALLEL RAMPS UPPER LANDING CATCH



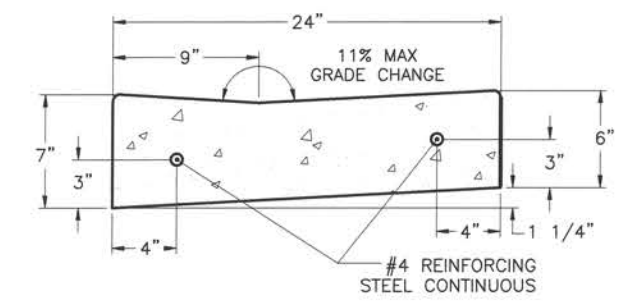
STANDARD CURB AND GUTTER CATCH



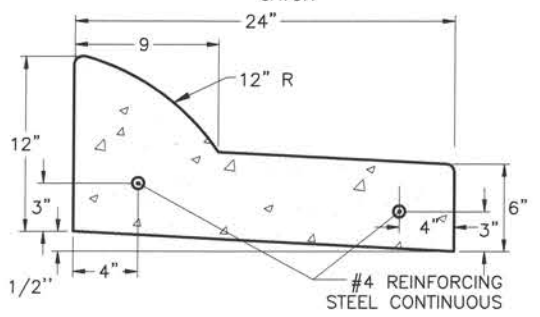
CURB RAMP CURB AND GUTTER SPILL



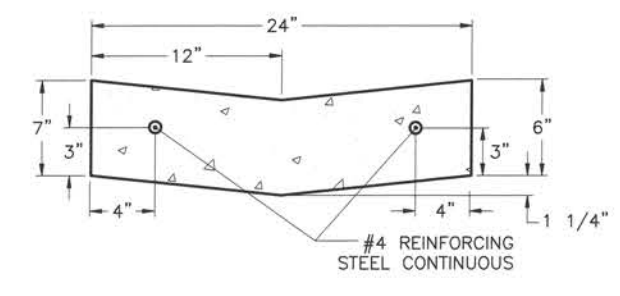
EXPRESSWAY CURB AND GUTTER CATCH



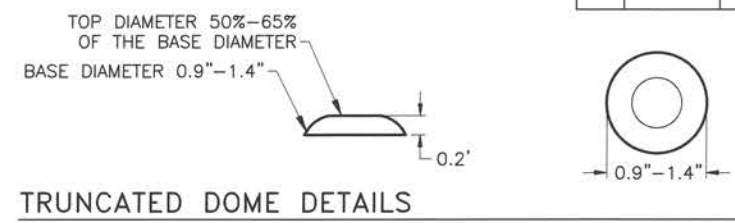
CURB RAMP CURB AND GUTTER CATCH



EXPRESSWAY CURB AND GUTTER SPILL

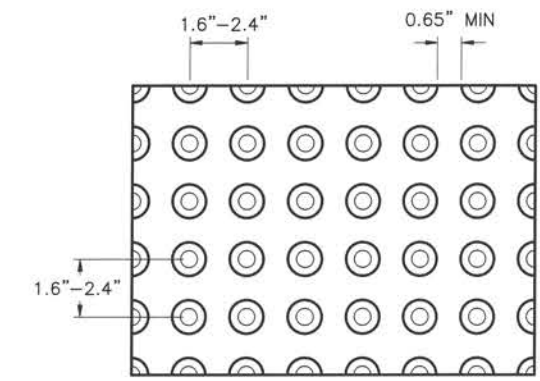


GUTTER

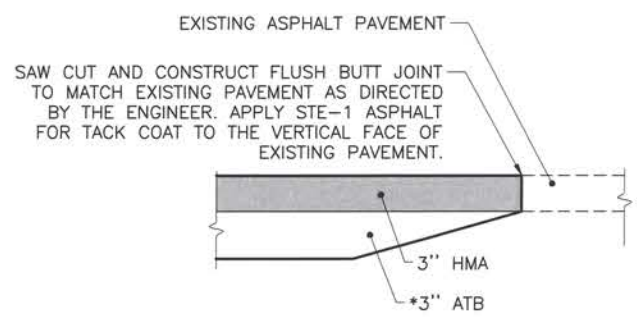


TRUNCATED DOME DETAILS

= TRUNCATED DOME SURFACE (SEE NOTE 7)

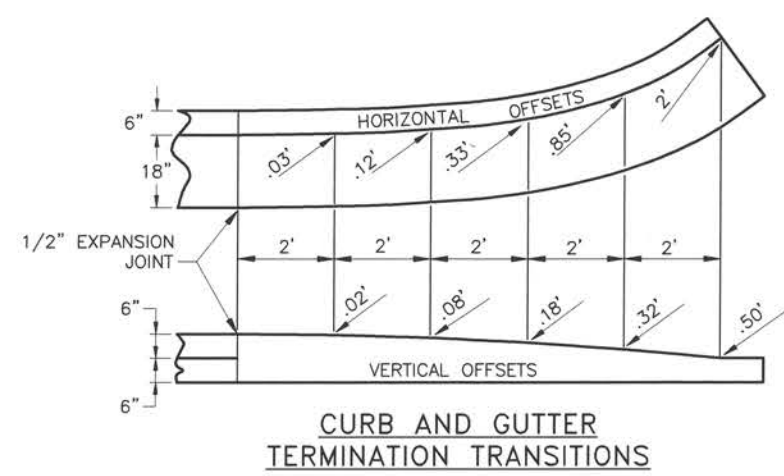


TRUNCATED PATTERN DETAIL



MATCH EXISTING PAVEMENT DETAIL

BOP, EOP, GEIST RD/ JOHANSEN EXPY, INDIANA AVE, DEAD END ALLEY, SANDVIK ST, HIGH SCHOOL ACCESS RD, WOLF RUN, CAMERON ST, THOMAS ST, AND APPROACHES.



CURB AND GUTTER TERMINATION TRANSITIONS

GENERAL NOTES:

- USE THE TYPE OF CURB AND GUTTER SPECIFIED ON THE PLANS.
- CONSTRUCT RAMP RUNS AND LANDINGS OF CONCRETE REGARDLESS OF WHETHER THE SIDEWALK IS ASPHALT OR CONCRETE.
- CONSTRUCT RAMP SLOPES AT A 7.7% NOMINAL GRADE, OR FLATTER. RAMP SLOPES MAY BE INCREASED TO A MAXIMUM OF 8.3% WHEN SITE CONDITIONS WARRANT IT. RAMP LENGTHS SHOULD BE INCREASED TO KEEP GRADES UNDER THE 8.3% MAXIMUM, BUT ARE NOT REQUIRED TO EXCEED 15.0 FEET. THE RESULTING RAMP GRADE AT A 15.0 FOOT RAMP LENGTH IS ACCEPTABLE EVEN IF IT EXCEEDS 8.3%.
- CONSTRUCT FLARE SLOPES AT 8.3% (MEASURED PARALLEL TO THE CURB LINE) OR FLATTER. SIDEWALK CROSS SLOPES AT 1.5% NOMINAL (1.0% MIN. AND 2.0% MAX) AND CURB RAMP CURB AND GUTTER PAN SLOPES AT 4.7% NOMINAL. CONSTRUCT GRADE BREAKS PERPENDICULAR TO RAMP RUNS.
- DO NOT CONSTRUCT FLARE SLOPES STEEPER THAN 10.0%, SIDEWALK CROSS SLOPES STEEPER THAN 2.0% AND CURB RAMP CURB AND GUTTER PAN SLOPES STEEPER THAN 5.0%. THESE ARE THE STEEPEST SLOPES ALLOWED UNDER THE 2006 ADA STANDARDS FOR TRANSPORTATION FACILITIES.
- PROVIDE A COARSE BROOMED FINISH ON RAMP RUNS PERPENDICULAR TO THE RAMP SLOPE.
- INSTALL 24" WIDE DETECTABLE WARNING TILES FOR THE FULL WIDTH OF THE RAMP. PROVIDE TILES WITH TRUNCATED DOMES MEETING SECTION 705.1 OF THE 2006 ADA STANDARDS FOR TRANSPORTATION FACILITIES. ALIGN TRUNCATED DOME PATTERN IN THE PREDOMINANT DIRECTION OF WHEELCHAIR TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
- STANDARD CURB AND GUTTER, EXPRESSWAY CURB AND GUTTER, DEPRESSED CURB AND GUTTER, GUTTER, CURB RAMP CURB AND GUTTER, AND CURB AND GUTTER TERMINATION TRANSITIONS, AND TRANSITION CURB AND GUTTER OFFSETS SHALL ALL BE MEASURED AND PAID FOR UNDER ITEM 609(2).
- CURB AND GUTTER REINFORCING BARS TO BE SPICED SHALL BE LAPPED AT LEAST 20 BAR DIAMETERS AND DOUBLE TIED. THE INNER AND OUTER BAR SPICES SHALL BE OFFSET FROM EACH OTHER BY AT LEAST SIX INCHES.
- ALL DETECTABLE WARNINGS TO BE FEDERAL YELLOW AND CAST IRON. PROJECT ENGINEER TO APPROVE COLOR PRIOR TO PLACEMENT.
- ALL CURB RAMP LAYOUTS AND DIMENSIONS IN THIS PLAN SET ARE APPROXIMATE AND NEED TO BE FIELD FIT AND SHALL MEET 2006 ADA STANDARDS FOR MAXIMUM SLOPES. FINAL LAYOUT TO BE APPROVED BY THE ENGINEER PRIOR TO CONCRETE POUR.

CURB AND GUTTER DETAILS



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200 P:\2011\1114701TR(C)Segment Improvement Packages\Segment 1B\B-C\0008.ms1114701TR-Seg_1B-G19 Thu, Jun/07/18 10:56am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	G20	G21

202(10) SINGLE MAIL BOX INSTALLATION						
ALIGNMENT	EXISTING LOCATION		PROPOSED LOCATION		QUANTITY (EACH)	REMARKS
	STATION	OFFSET (FT)	STATION	OFFSET (FT)		
"01"	112+50.00	58'-80' RT	107+71.61	139.22' RT	1	
PAY ITEM TOTALS					1.00	

202(12) DOUBLE MAIL BOX INSTALLATION						
ALIGNMENT	EXISTING LOCATION		PROPOSED LOCATION		QUANTITY (EACH)	REMARKS
	STATION	OFFSET (FT)	STATION	OFFSET (FT)		
"01"	112+50.00	58'-80' RT	107+71.65	142.22' RT	1	
"01"	112+50.00	58'-80' RT	107+71.69	145.22' RT	1	
PAY ITEM TOTALS					2.00	

608(2) ASPHALT SIDEWALK					
ALIGNMENT	BEGIN STATION	END STATION	OFFSET	VOLUME (TONS)	REMARKS
"01"	96+92.65	100+90.00	LT	18.06	
"01"	97+74.29	99+46.87	RT	6.65	
"01"	100+41.00	100+72.43	RT	1.33	
"01"	102+80.52	103+05.13	LT	1.52	
PAY ITEM TOTALS				27.56	

608(6) CURB RAMP				
ALIGNMENT	STATION	OFFSET	QUANTITY (EACH)	REMARKS
"01"	97+68.27	RT	1	UNIDIRECTIONAL
"01"	99+52.79	RT	1	UNIDIRECTIONAL
"01"	100+35.09	RT	1	UNIDIRECTIONAL
"01"	104+34.52	LT	1	PERPENDICULAR
"01"	104+46.53	LT	1	PERPENDICULAR
"01"	107+59.38	RT	1	UNIDIRECTIONAL
"01"	108+28.81	RT	1	UNIDIRECTIONAL
"01"	111+81.45	RT	1	PARALLEL
"01"	111+78.28	LT	1	PARALLEL
"01"	111+93.07	LT	1	PARALLEL
"01"	112+16.71	RT	1	PARALLEL
"01"	112+48.83	LT	1	PARALLEL
"01"	112+53.71	RT	1	PARALLEL
"01"	112+67.36	RT	1	PARALLEL
"01"	112+70.48	LT	1	PARALLEL
"01"	116+91.50	RT	1	RAMP AT ARRC CROSSING. SEE SHEET E1 FOR DETAILS
"01"	117+04.00	LT	1	RAMP AT ARRC CROSSING. SEE SHEET E1 FOR DETAILS
"01"	117+26.00	RT	1	RAMP AT ARRC CROSSING. SEE SHEET E1 FOR DETAILS
"01"	117+39.00	LT	1	RAMP AT ARRC CROSSING. SEE SHEET E1 FOR DETAILS
"01"	119+42.54	RT	1	UNIDIRECTIONAL
"01"	120+23.76	RT	1	UNIDIRECTIONAL
"01"	123+22.91	RT	1	UNIDIRECTIONAL
PAY ITEM TOTALS			22	

608(1A) CONCRETE SIDEWALK, 4 INCHES THICK					
ALIGNMENT	BEGIN STATION	END STATION	OFFSET	QUANTITY (SQUARE YARD)	REMARKS
"01"	100+72.43	102+83.32	RT	141.56	
"01"	104+30.23	111+67.39	LT	676.14	
"01"	105+61.29	107+57.49	RT	136.60	
"01"	108+30.70	111+71.39	RT	223.84	
"01"	111+89.14	112+12.23	RT	16.66	
"01"	112+41.79	112+43.71	LT	8.52	
"01"	112+78.10	115+46.88	RT	180.65	
"01"	112+81.99	116+63.00	LT	248.42	
"01"	115+99.00	116+93.00	LT	62.64	
"01"	115+88.88	116+59.00	RT	46.80	
"01"	117+37.00	119+40.62	RT	135.72	
"01"	117+50.00	123+36.00	LT	487.92	
"01"	120+25.69	123+19.89	RT	197.62	
"HS"	10+00.00	11+95.10	RT	108.00	
PAY ITEM TOTALS				2,671.09	

608(1B) CONCRETE SIDEWALK, 6 INCHES THICK					
ALIGNMENT	BEGIN STATION	END STATION	OFFSET	QUANTITY (SQUARE YARD)	REMARKS
"01"	97+56.00	97+74.29	RT	5.60	
"01"	99+46.87	99+67.65	RT	7.39	
"01"	100+21.64	100+41.00	RT	6.58	
"01"	104+30.23	104+39.53	LT	7.69	
"01"	104+40.62	104+53.53	LT	7.60	
"01"	107+57.49	107+71.07	RT	5.59	
"01"	108+17.12	108+30.70	RT	5.59	
"01"	111+67.39	111+95.10	LT	36.12	
"01"	111+71.39	111+89.14	RT	11.53	
"01"	112+12.23	112+20.50	RT	12.15	
"01"	112+43.71	112+81.99	LT	39.86	
"01"	112+50.03	112+78.10	RT	27.11	
"01"	115+46.88	115+88.88	RT	28.13	
"01"	115+63.00	115+99.00	LT	24.09	
"01"	115+59.00	117+04.58	RT	33.90	RAMP AT ARRC CROSSING
"01"	115+93.00	117+15.81	LT	19.48	RAMP AT ARRC CROSSING
"01"	117+14.82	117+37.00	RT	18.86	RAMP AT ARRC CROSSING
"01"	117+25.83	117+50.00	LT	19.65	RAMP AT ARRC CROSSING
"01"	119+40.62	119+54.47	RT	5.60	
"01"	120+11.84	120+25.69	RT	5.60	
"01"	123+19.89	123+30.67	RT	5.87	
PAY ITEM TOTALS				333.99	

NOTES:
1. ALL STATIONS ARE APPROXIMATE FOR SIDEWALK AND CURB RAMPS. CURB RAMPS NEED TO BE FIELD FIT AND THEY SHALL MEET 2006 ADA STANDARDS FOR MAXIMUM SLOPES. FINAL LAYOUT TO BE APPROVED BY THE ENGINEER, PRIOR TO CONCRETE POUR.

SUMMARY TABLE
(1 OF 2)



PLANS DEVELOPED BY: PDC, INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)774-3200
P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\0008const11147.01\FB-Seq.1B-G20 Thu, Jun 07/18 10:56am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	G21	G21

609(2) CURB AND GUTTER, TYPE I

ALIGNMENT	BEGIN STATION	END STATION	OFFSET	QUANTITY (LINEAR FOOT)	SHAPE	REMARKS
"01"	97+10.79	103+05.32	LT	595.09	STANDARD	
"01"	97+45.32	99+80.61	RT	301.18	STANDARD	
"01"	99+84.34	100+06.25	RT	39.00	STANDARD	ALONG WOLF RUN
"01"	100+05.73	100+06.13	RT	89.00	STANDARD	ALONG WOLF RUN
"01"	100+07.61	102+69.95	RT	290.87	STANDARD	
"01"	100+37.75	102+91.75	LT/RT	513.14	EXPRESSWAY	MEDIAN
"01"	104+27.73	111+99.30	LT	815.33	STANDARD	
"01"	104+76.17	107+72.57	RT	305.30	STANDARD	
"01"	104+69.75	111+75.75	LT/RT	1,423.47	EXPRESSWAY	MEDIAN
"01"	108+15.62	112+21.59	RT	428.67	STANDARD	
"01"	112+41.54	116+99.00	LT	477.61	STANDARD	
"01"	112+49.53	116+85.99	RT	455.09	STANDARD	
"01"	112+79.25	116+98.25	LT/RT	850.90	EXPRESSWAY	MEDIAN
"01"	112+94.85	114+54.44	RT	159.59	VALLEY	BUS PULLOUT IS SPILL CURB
"01"	117+31.00	119+56.00	RT	226.75	STANDARD	
"01"	117+31.75	123+46.60	LT/RT	444.89	EXPRESSWAY	MEDIAN
"01"	117+44.00	123+36.00	LT	590.92	STANDARD	
"01"	120+10.31	123+34.51	RT	339.79	STANDARD	
"01"	120+39.25	123+24.72	LT/RT	580.50	EXPRESSWAY	MEDIAN
"WR"	13+16.00	15+25.00	RT	187.95	STANDARD	
"WR"	13+16.00	14+84.80	LT	186.57	STANDARD	
"HS"	10+00.00	11+83.70	RT	181.51	STANDARD	
"HS"	11+01.79	11+89.61	LT	87.82	STANDARD	
PAY ITEM TOTALS				9,570.94		

642(6) REPLACE EXISTING WITH PRIMARY MONUMENT

ALIGNMENT	EXISTING STATION	EXISTING OFFSET (FT)	PROPOSED STATION	PROPOSED OFFSET (FT)	QUANTITY (EA)	REMARKS
"01"	104+79.27	59.62 LT	104+79.43	100.00 LT	1	
"01"	116+20.38	45.28 LT	116+22.69	60.00 LT	1	
PAY ITEM TOTALS					2	

NOTES:

- ADDITIONAL MONUMENTATION WILL BE ADDED UNDER A DIFFERENT CONTRACT.

SUMMARY TABLE
(2 OF 2)



ABBREVIATIONS

ABBREVIATIONS APPLY TO H AND T SHEETS ONLY.

AAWF	ACTIVE ADVANCE WARNING FLASHER
ADT	AVERAGE DAILY TRAFFIC
AH	AHEAD
ARRC	ALASKA RAILROAD CORPORATION
ASDS	ALASKA SIGN DESIGN GUIDE
ATM	ALASKA TRAFFIC MANUAL
AVC	AUTOMATED VEHICLE COUNTER
BMP	BEST MANAGEMENT PRACTICE
C/A	CONTROL ACCESS
CF	CUBIC FOOT
CGP	CONSTRUCTION GENERAL PERMIT
CKT	ELECTRICAL CIRCUIT
CRT	CONTROLLED RELEASE TERMINAL
DIA	DIAMETER
DIR	DIRECTION
DOT&PF	DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
EA	EACH
EB	EASTBOUND
EGC	EQUIPMENT GROUND CONDUCTOR
H	HORIZONTAL
HDG	HOT DIPPED GALVANIZING
HGT	HEIGHT
GVEA	GOLDEN VALLEY ELECTRIC ASSOCIATION
I/C	INTERCONNECT
IN OR "	INCH
JBOX, J-BOX	JUNCTION BOX
LBS	POUNDS
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LF	LINEAR FOOT
L.O.C.	LIP OF CURB
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
MTG	MOUNTING
NB	NORTHBOUND
NE	NORTHEAST
NO.	NUMBER
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
NW	NORTHWEST
PTZ	PAN, TILT, ZOOM CAMERA
PHB	PEDESTRIAN HYBRID BEACON
PST	PERFORATED SQUARE TUBE
RP	REFERENCE POINT
SB	SOUTHBOUND
SE	SOUTHEAST
SQ	SQUARE
SF	SQUARE FOOT
SMFO	SINGLE MODE FIBER OPTIC
SW	SOUTHWEST
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
SY	SQUARE YARD
TS	TUBE STEEL
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
V	VERTICAL
WB	WESTBOUND
W/	WITH
W/O	WITHOUT

TRAFFIC LEGEND

LEGEND APPLIES TO H AND T SHEETS ONLY.

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		
JUNCTION BOX, TYPE II		
JUNCTION BOX, TYPE III		
JUNCTION BOX, ABOVE GRADE		
SIGNAL FACE, VEHICULAR		
SIGNAL FACE, BACKPLATE		
SIGNAL FACE, LEFT TURN, BACKPLATE		
SIGNAL FACE, PEDESTRIAN		
LOOP DETECTOR		
VIDEO DETECTOR		
RADAR DETECTOR		
OPTICOM DETECTOR		
PAN, TILT, ZOOM CAMERA		
PEDESTRIAN PUSH BUTTON		
SIGNAL POST W/O MAST ARM		
SIGNAL POLE W/MAST ARM		
INTERCONNECT VAULT		
INTERCONNECT MANHOLE		
TRAFFIC CONTROLLER		
LOAD CENTER		
POST MOUNTED TRANSFORMER AND DISCONNECT SWITCH		
LUMINAIRE		
RIGID METAL CONDUIT		
TRAFFIC SIGNAL INTERCONNECT		
BORING/ENCASED CONDUITS		

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H1	H54

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
H1	TRAFFIC LEGEND, NOTES AND SHEET INDEX
H2-H11	SIGNING AND STRIPING PLANS
H12-H13	SIGN SUMMARIES
H14	SALVAGE SIGN SUMMARY
H15-H16	SIGN DETAILS
H17-H23	ILLUMINATION AND INTERCONNECT PLANS
H24-H25	ELECTROLIER SUMMARIES
H26	LUMINAIRE JUNCTION BOX SUMMARY
H27	ELECTROLIER DEMOLITION SUMMARY
H28	VAULT SCHEDULE
H29-H32	UNIVERSITY AND GEIST SIGNAL PLAN, WIRING DIAGRAM, SCHEDULES
H33-H36	UNIVERSITY AND SANDVIK PEDESTRIAN HYBRID BEACON SIGNAL PLAN, WIRING DIAGRAM, AND SCHEDULES
H37	LOAD CENTER SUMMARY
H38-H39	LOAD CENTER DETAILS
H40	RAILROAD CROSSING DUCTBANK DETAILS
H41	JUNCTION BOX DETAILS
H42	CONTROLLER CABINET LAYOUT
H43	PAN, TILT, ZOOM CAMERA DETAILS
H44	MISCELLANEOUS SIGNAL DETAILS
H45	SIGNAL MOUNTED SIGN DETAILS
H46-H54	ILLUMINATION, SIGNAL AND INTERCONNECT DETAILS
T1-T2	TRAFFIC CONTROL

TRAFFIC MARKINGS SUMMARY

DESCRIPTION	QUANTITY	REMARKS
4"W	8,178 LF	
4"WS	5,293 LF	INCLUDES SKIPS
4"WD-1	1,414 LF	INCLUDES SKIPS
4"Y	822 LF	
4"YS	280 LF	INCLUDES SKIPS
4"DY	592 LF	
8"W	4,128 LF	
8"WD-1	465 LF	INCLUDES SKIPS
24"W	2,810 SF	INCLUDES CROSSWALKS AND STOP BARS
WHITE CHEVRONS	465 SF	
YELLOW DIAGONALS	98 SF	
TURN ARROW SYMBOLS	41 EA	
RAILROAD CROSSING MARKINGS	8 EA	

PAINTED MARKINGS SUMMARY

DESCRIPTION	QUANTITY	REMARKS
4"W	209 LF	
4"WS	598 LF	INCLUDES SKIPS
4"WD-1	206 LF	INCLUDES SKIPS
4"DY	533 LF	
8"W	85 LF	
24"W	36 SF	INCLUDES CROSSWALKS AND STOP BARS
YELLOW DIAGONALS	576 SF	
TURN ARROW SYMBOLS	3 EA	

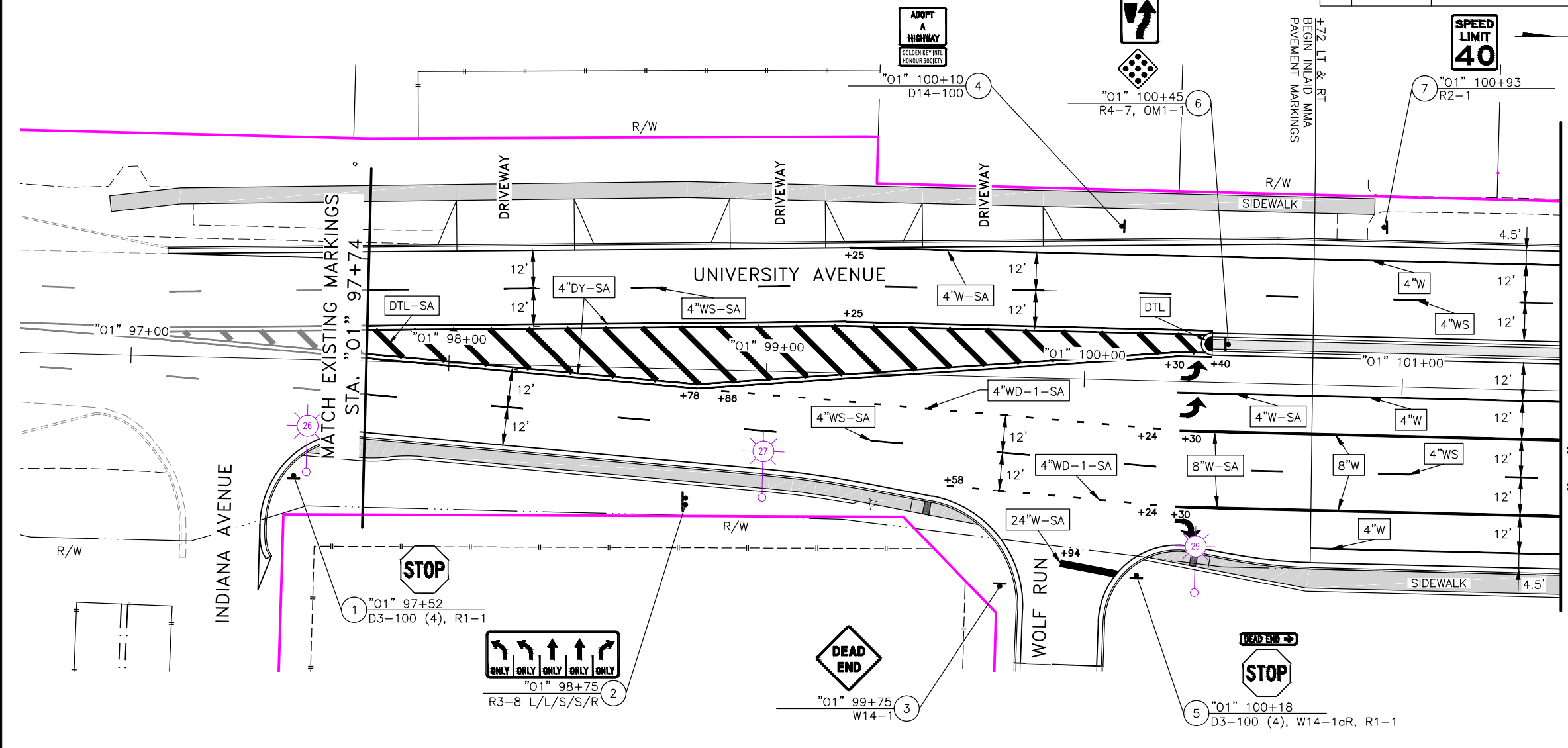
TRAFFIC LEGEND, NOTES AND SHEET INDEX



6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC, 3909 Arctic Blvd., Suite 400, Anchorage, Alaska 99503 (907) 346-2373, CERT. OF AUTH. NO. AELC 1102
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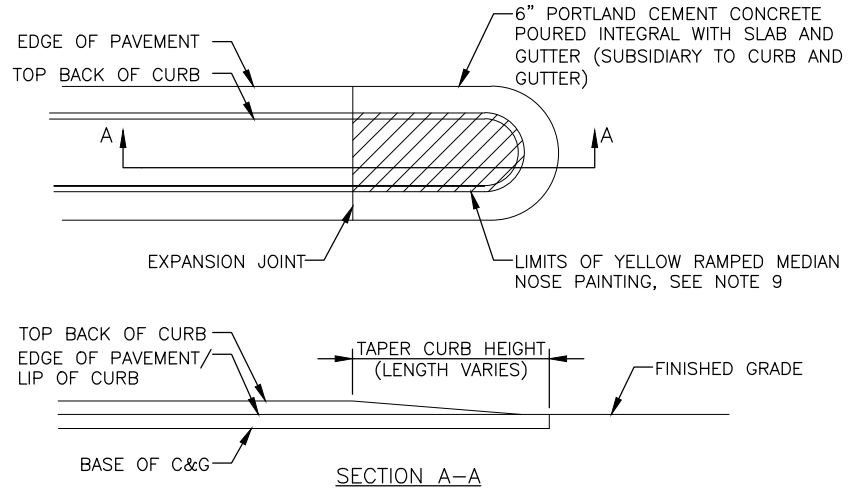
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	ADDED CROSSWALK DETAIL AND UPDATED NOTES	ALASKA	0617012/NFHWY00270	2018	H2	H54



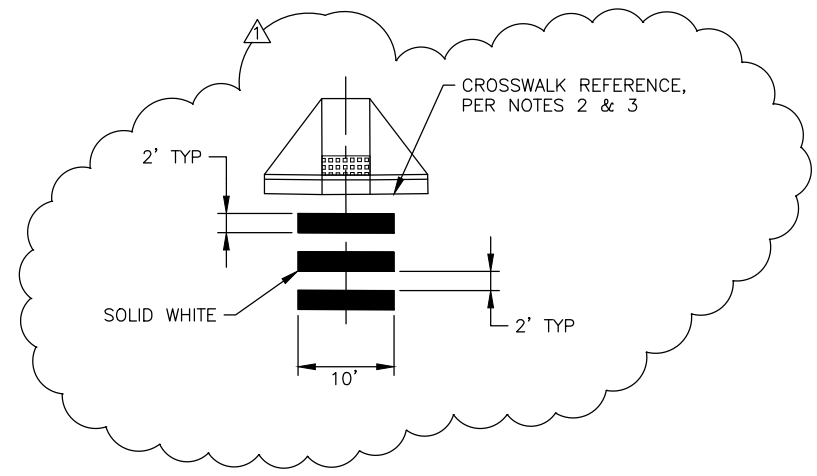
- TRAFFIC MARKING NOTES:**
- ALL PROPOSED PAVEMENT MARKINGS SHALL BE INLAID METHYL METHACRYLATE(MMA) UNLESS THE MARKING CALLOUT IS APPENDED WITH "-SA". MARKINGS APPENDED WITH "-SA" SHALL BE SURFACED APPLIED PAINT.
 - BEGIN PAVEMENT MARKINGS BY INSTALLING THE INTERSECTION CROSSWALKS FIRST. LAYOUT THE CROSSWALKS PER THE CALLOUTS IN THE PLANS. CROSSWALK REFERENCE CALLOUT IS AT INTERSECTION OF CROSSWALK MARKING AND EDGE OF PAVEMENT OR LIP OF GUTTER WHEN PRESENT.
 - PEDESTRIAN CROSSWALK PAVEMENT MARKINGS WITHIN RIGHT TURN BYPASS LANES SHALL BE 10 FEET WIDE AND 2 FEET LONG WITH 2-FOOT WIDE SPACE. CENTER THE 2-FOOT SPACE ON THE WHEEL PATH. WHEN CROSSWALK REFERENCE CALLOUT NOT PROVIDED, CENTER MARKINGS ON THE CURB RAMP LANDING AND CURB OPENING.
 - TRANSITION NEW PAVEMENT MARKINGS TO MATCH EXISTING MARKINGS AT A 100:1 TAPER.
 - REMOVE ALL EXISTING PAVEMENT MARKINGS NOT COINCIDING WITH THE NEW MARKINGS. THIS WORK IS SUBSIDIARY TO 670 PAY ITEMS.
 - DIMENSIONS REFER TO THE CENTER OF STRIPE, STRIPE GROUP, EDGE OF PAVEMENT OR LIP OF GUTTER WHEN PRESENT.
 - INSTALL THE "APPROACH TO OBSTRUCTIONS" MARKINGS IN ACCORDANCE WITH STANDARD DRAWING T-20.03 OR AS SHOWN ON THESE PLANS.
 - INSTALL TURN ARROWS WHERE SHOWN AND ACCORDING TO STD. DWG. T-21.03. DO NOT INSTALL "ONLY" MARKINGS UNLESS SHOWN ON THE STRIPING PLAN.
 - PAINT THE TOP AND FACE OF ALL RAMPED MEDIAN NOSES AND THE CURB AND GUTTER ISLAND NOSES WITH 20 MILS OF SURFACE APPLIED YELLOW METHYL METHACRYLATE MARKINGS. THIS WORK IS SUBSIDIARY TO 670 PAY ITEMS.
 - STRIPING CONFIGURATIONS IN THIS PLAN SET ARE APPROXIMATE. THE CONTRACTOR SHALL PERFORM PRELIMINARY SPOTTING (RABBIT TRACKING) OF STRIPING AT LEAST 48 HOURS PRIOR TO APPLICATION OF MARKINGS. THE ENGINEER WILL THEN APPROVE THE LAYOUT OR MAKE MODIFICATIONS AS REQUIRED.

TRAFFIC MARKING KEY

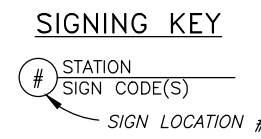
4"W	4" WHITE LINE
4"WS	4" WHITE SKIP LINE (10' STRIPE/30' SKIP PATTERN)
4"WD-1	4" WHITE DOTTED LINE (2' STRIPE/6' SKIP PATTERN)
4"WD-2	4" WHITE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
4"Y	4" YELLOW LINE
4"YS	4" YELLOW SKIP LINE (10' STRIPE/30' SKIP PATTERN)
4"DY	4" DOUBLE YELLOW LINE
8"W	8" WHITE LINE
8"WD-1	8" WHITE WIDE DOTTED LINE (2' STRIPE/4' SKIP PATTERN)
8"WD-2	8" WHITE WIDE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
24"W	24" WHITE LINE
STD	SEE STANDARD DRAWING
DTL	SEE DETAILS



RAMPED MEDIAN NOSE DETAIL
N.T.S.



CROSSWALK STRIPING MARKING
N.T.S.



SIGNING AND STRIPING PLANS 1 OF 10

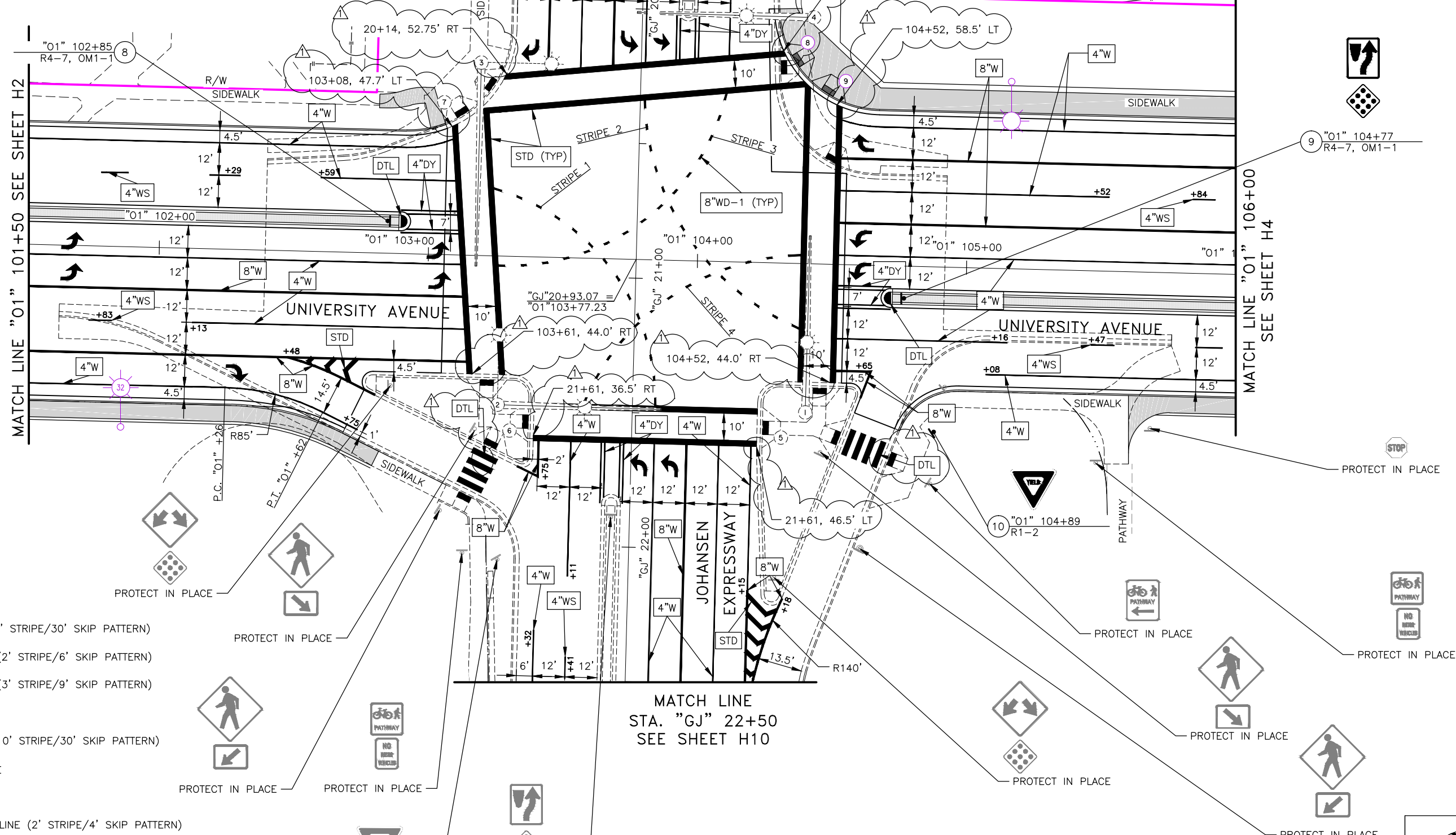


PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOTPF\University Avenue Traffic Design_S1-NORTH\Production\06173_N_H2-H12_Sign&Strip-H2 Fri, Jun/08/18 06:23pm

SEE SHEET H9
MATCH LINE
STA. "GJ" 19+50

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	ADDED STATION/OFFSET FOR CROSSWALKS	ALASKA	0617012/NFHWY00270	2018	H3	H54

8"WD-1 LAYOUT							
STRIPE	BEGIN		END		RADIUS	RADIUS POINT	
	STA	OFFSET	STA	OFFSET		STA	OFFSET
1	"01"103+24	25.1' LT	"01"103+86	54.3' RT	82'	"01"103+03	54.6' RT
2	"01"103+79	59.2' LT	"01"104+38	24.2' RT	95'	"01"104+74	63.9' LT
3	"01"103+26	3.6' RT	"01"104+09	62.5' LT	83'	"01"103+28	79.5' LT
4	"01"103+59	54.3' RT	"01"104+38	3.2' LT	89.5'	"01"104+43	86.4' RT



TRAFFIC MARKING KEY

- 4" WHITE LINE
- 4" WHITE SKIP LINE (10' STRIPE/30' SKIP PATTERN)
- 4" WHITE DOTTED LINE (2' STRIPE/6' SKIP PATTERN)
- 4" WHITE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
- 4" YELLOW LINE
- 4" YELLOW SKIP LINE (10' STRIPE/30' SKIP PATTERN)
- 4" DOUBLE YELLOW LINE
- 8" WHITE LINE
- 8" WHITE WIDE DOTTED LINE (2' STRIPE/4' SKIP PATTERN)
- 8" WHITE WIDE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
- 24" WHITE LINE
- SEE STANDARD DRAWING
- SEE DETAILS

SIGNING KEY

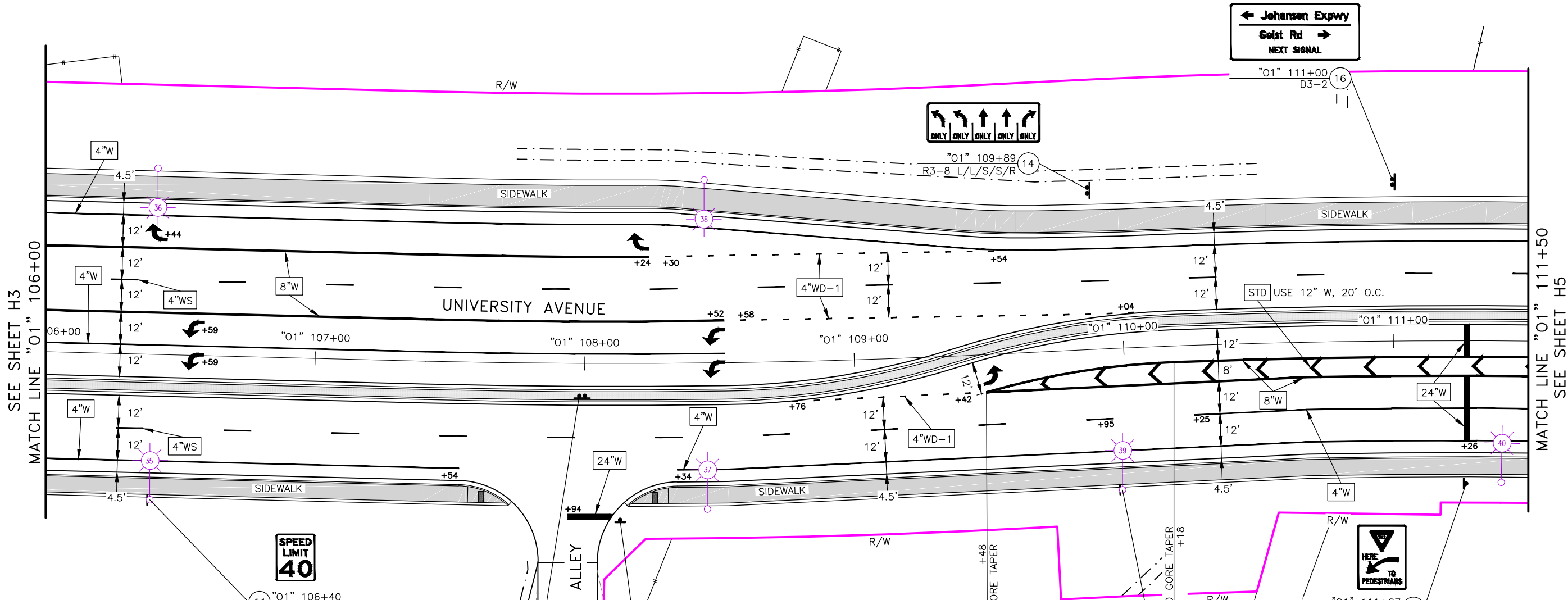
- STATION SIGN CODE(S)
- SIGN LOCATION #

SIGNING AND STRIPING
PLANS 2 OF 10



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\1-NORTH\Production\06173_N_H2-H12_Sign&Strip-H3 Fri, Jun/08/18 06:23pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H4	H54



SEE SHEET H3
MATCH LINE "01" 106+00

MATCH LINE "01" 111+50
SEE SHEET H5

← Johansen Expwy
Geist Rd →
NEXT SIGNAL



SPEED LIMIT
40

ONE WAY



TRAFFIC MARKING KEY

- 4"W 4" WHITE LINE
- 4"WS 4" WHITE SKIP LINE (10' STRIPE/30' SKIP PATTERN)
- 4"WD-1 4" WHITE DOTTED LINE (2' STRIPE/6' SKIP PATTERN)
- 4"WD-2 4" WHITE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
- 4"Y 4" YELLOW LINE
- 4"YS 4" YELLOW SKIP LINE (10' STRIPE/30' SKIP PATTERN)
- 4"DY 4" DOUBLE YELLOW LINE
- 8"W 8" WHITE LINE
- 8"WD-1 8" WHITE WIDE DOTTED LINE (2' STRIPE/4' SKIP PATTERN)
- 8"WD-2 8" WHITE WIDE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
- 24"W 24" WHITE LINE
- STD SEE STANDARD DRAWING
- DTL SEE DETAILS

SIGNING KEY

- # STATION SIGN CODE(S)
- SIGN LOCATION #

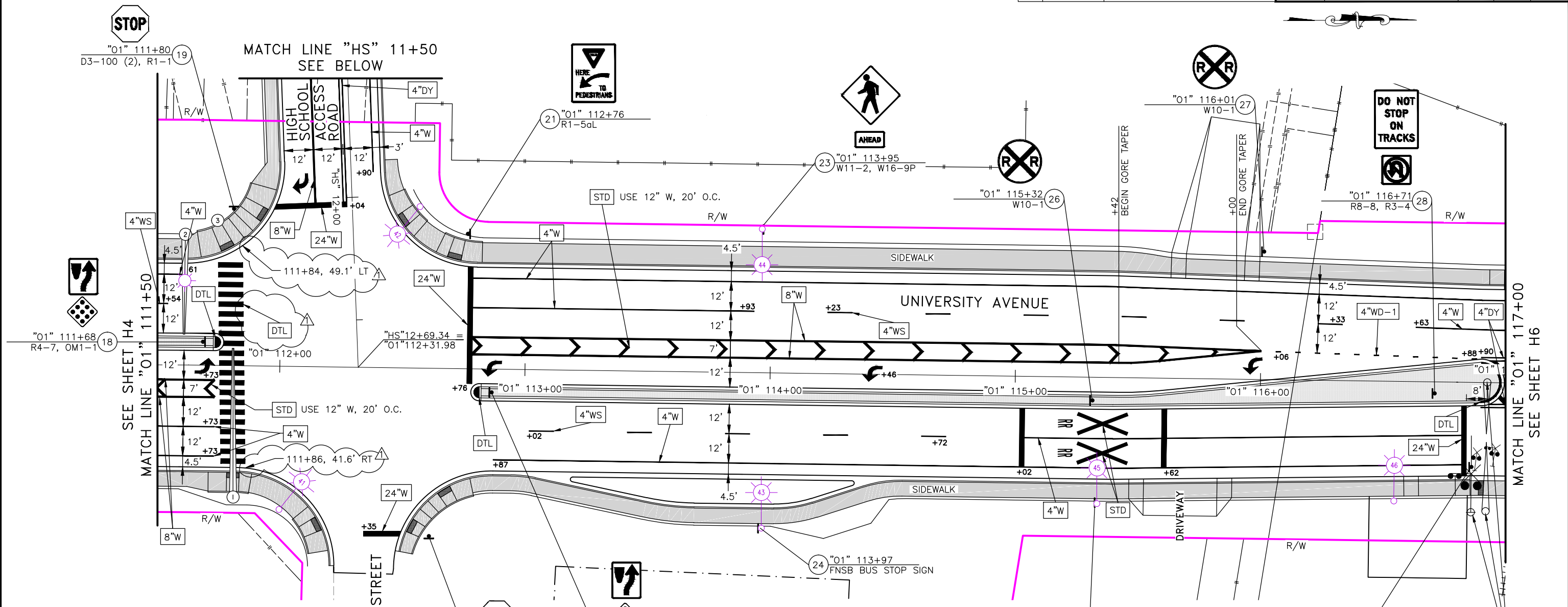
SIGNING AND STRIPING
PLANS 3 OF 10



6/8/2018

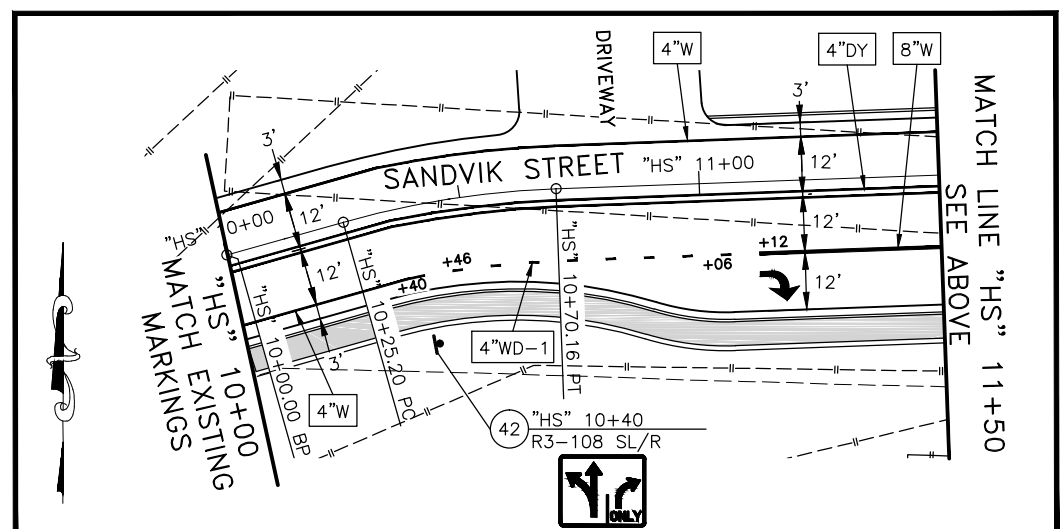
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\ST-NORTH\Production\06173_N_H2-H12_Sign&Strip-H4_Fri_Jun/08/18_06:23pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	ADDED STATION/OFFSET FOR CROSSWALKS	ALASKA	0617012/NFHWY00270	2018	H5	H54



TRAFFIC MARKING KEY

4"W	4" WHITE LINE
4"WS	4" WHITE SKIP LINE (10' STRIPE/30' SKIP PATTERN)
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24"W	24" WHITE LINE
STD	SEE STANDARD DRAWING
DTL	SEE DETAILS



SIGNING KEY

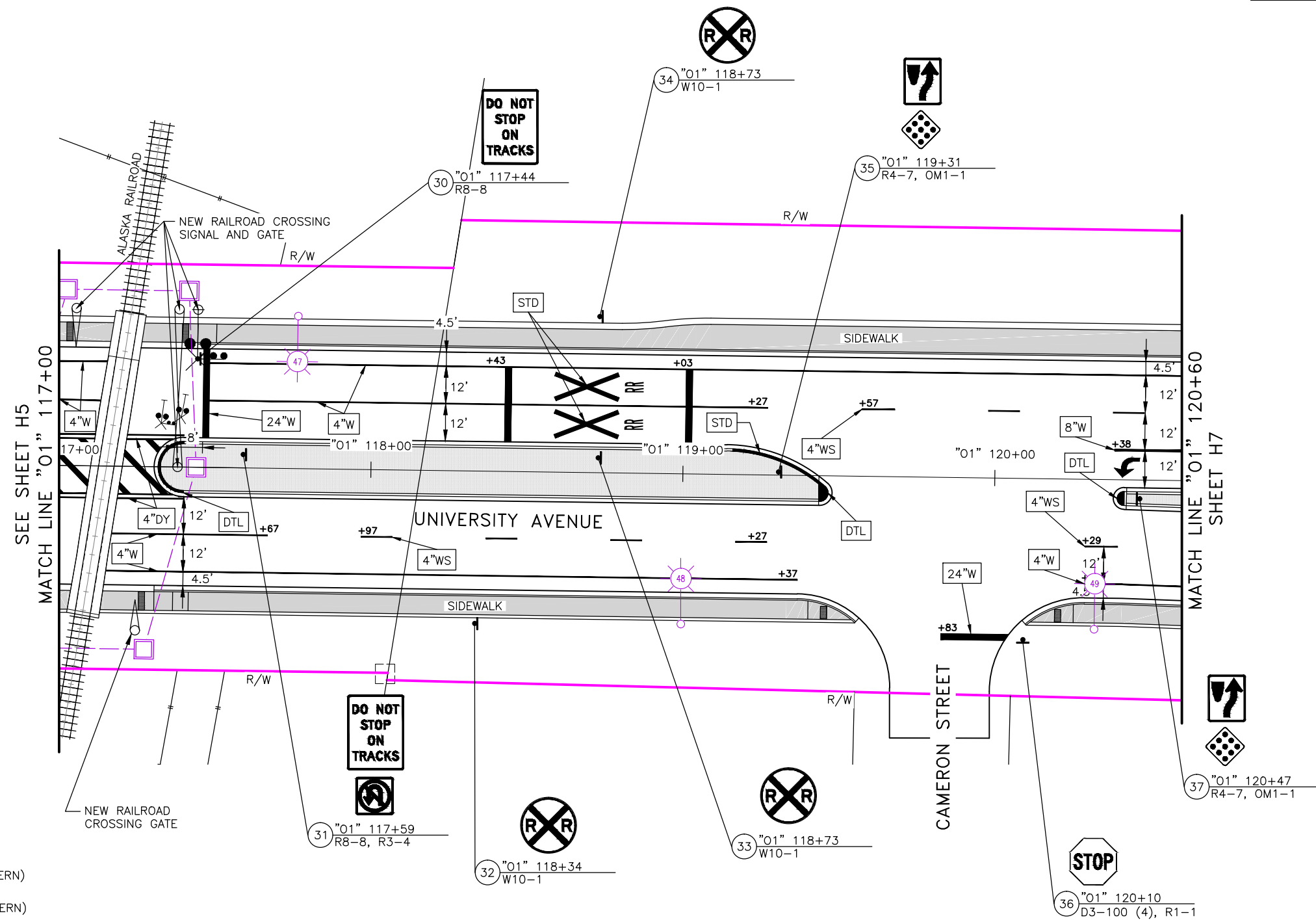
- # STATION SIGN CODE(S)
- SIGN LOCATION #

SIGNING AND STRIPING
PLANS 4 OF 10



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC, 3909 Arctic Blvd, Suite 400, Anchorage, Alaska 99503 (907) 346-2373, CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOT\F\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H2-H12_Sign&Strip-H5 Fri, Jun/08/18 06:23pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H6	H54



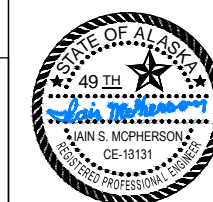
TRAFFIC MARKING KEY

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- STD SEE STANDARD DRAWING
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SIGNING KEY

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- SIGN LOCATION #

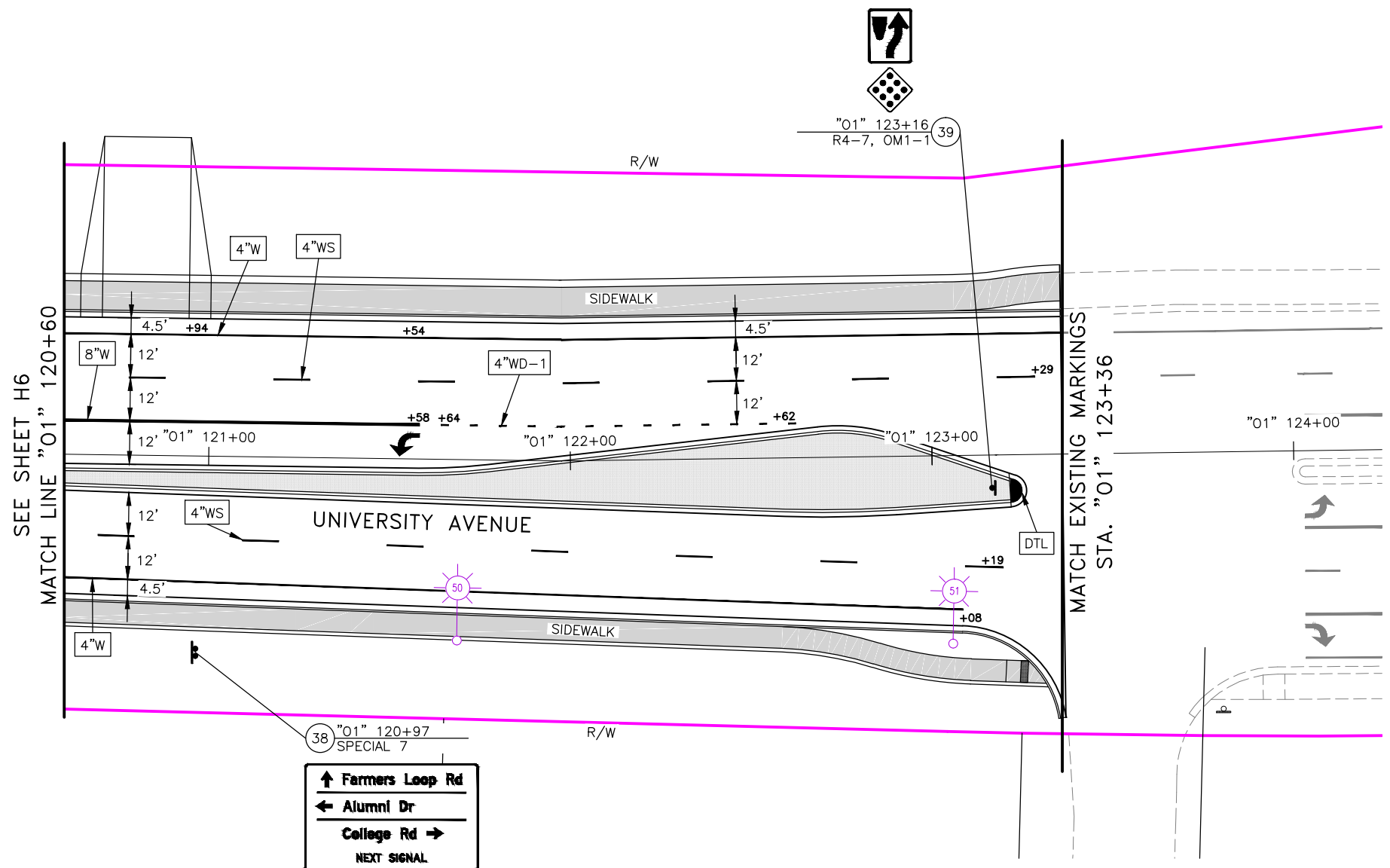
SIGNING AND STRIPING
PLANS 5 OF 10



6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC, 3909 Arctic Blvd, Suite 400, Anchorage, Alaska 99503 (907) 346-2373, CERT. OF AUTH. NO. AELC 1102
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H7	H54

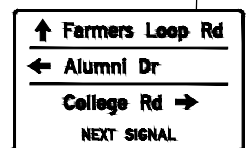


TRAFFIC MARKING KEY

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- STD SEE STANDARD DRAWING
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SIGNING KEY

- # STATION SIGN CODE(S)
- # SIGN LOCATION #



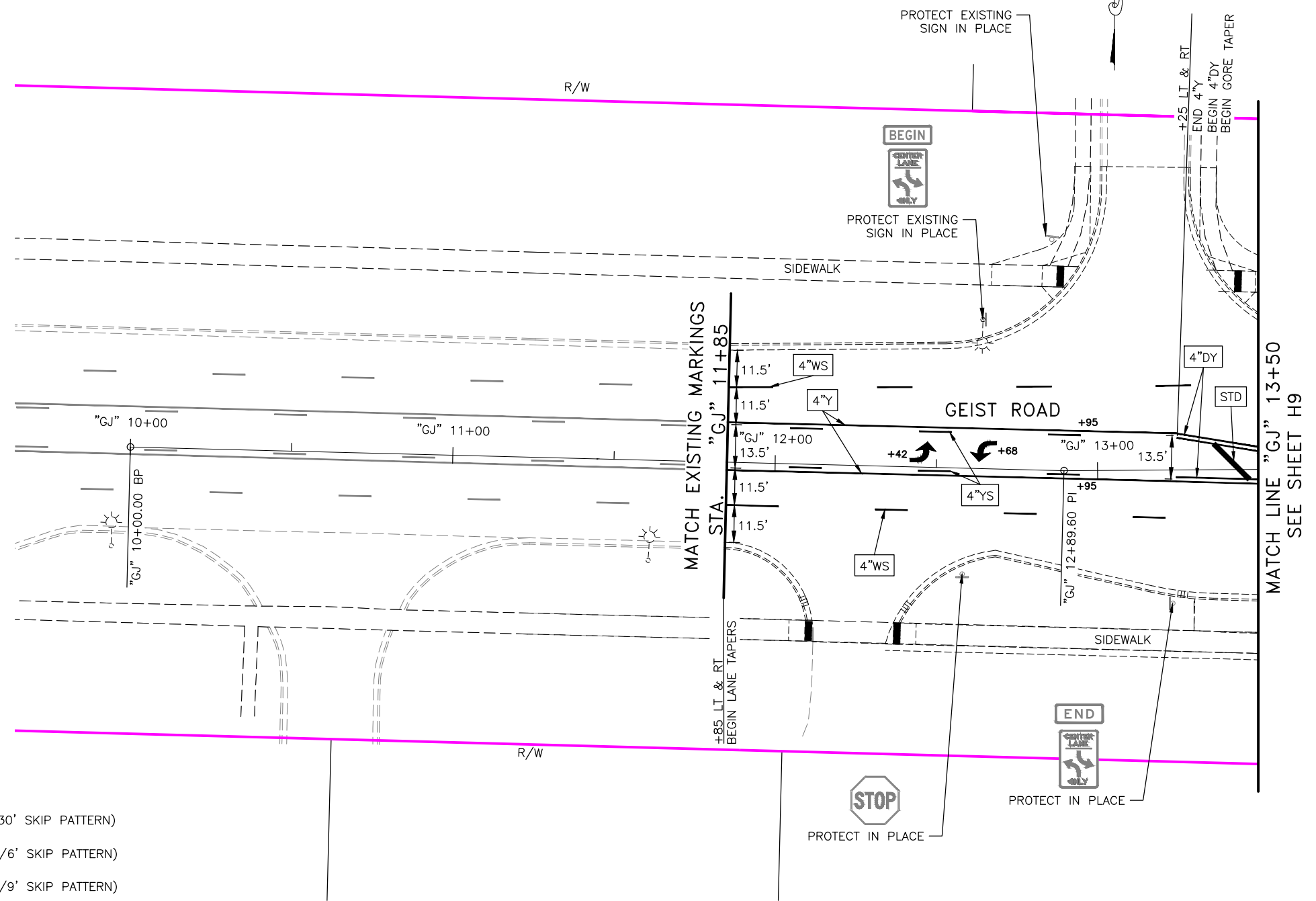
SIGNING AND STRIPING
PLANS 6 OF 10



6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H8	H54



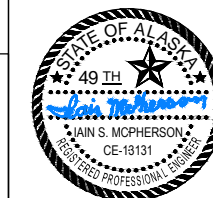
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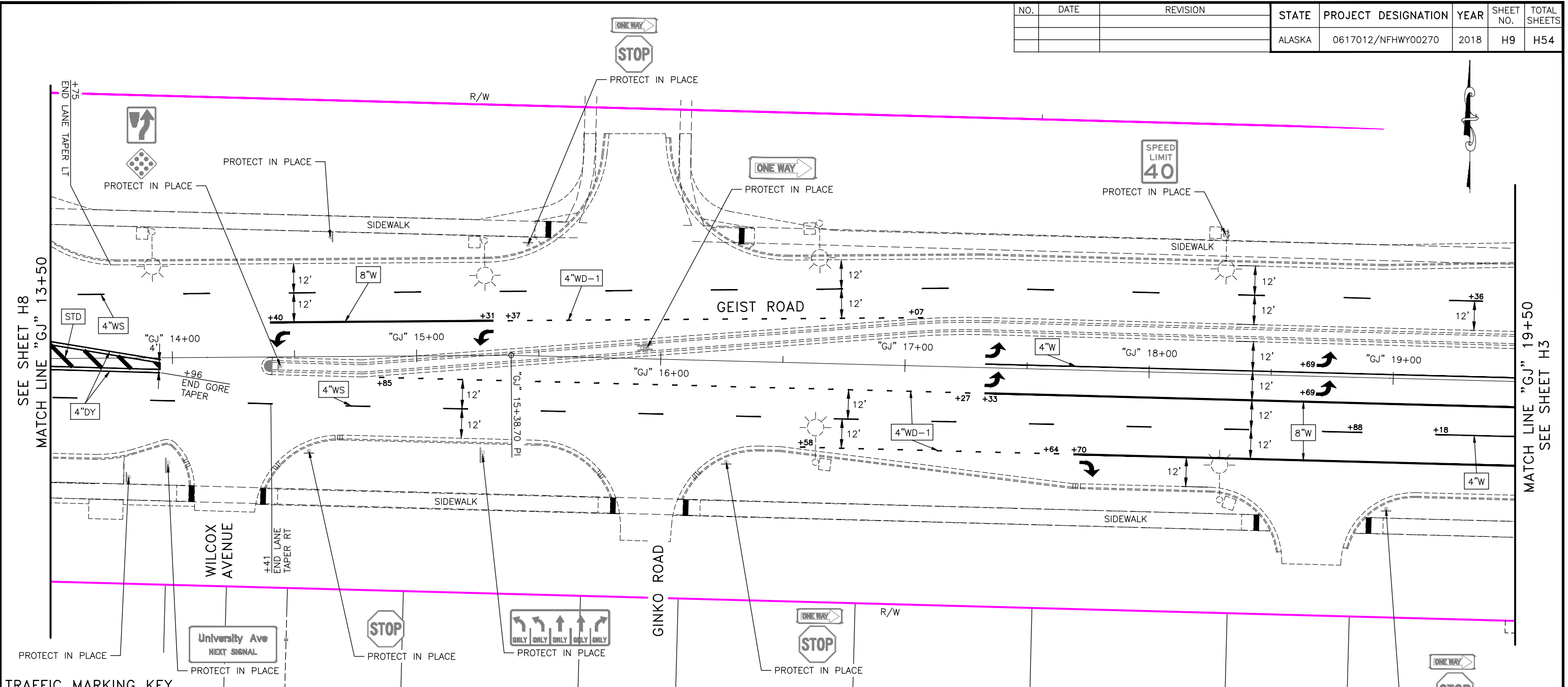
SIGNING AND STRIPING
PLANS 7 OF 10



6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\ST-NORTH\Production\06173_N_H2-H12_Sign&Strip-H8 Fri, Jun/08/18 06:23pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H9	H54



TRAFFIC MARKING KEY

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24"W	24" WHITE LINE
STD	SEE STANDARD DRAWING
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SIGNING KEY

#	STATION
#	SIGN CODE(S)
—	SIGN LOCATION #

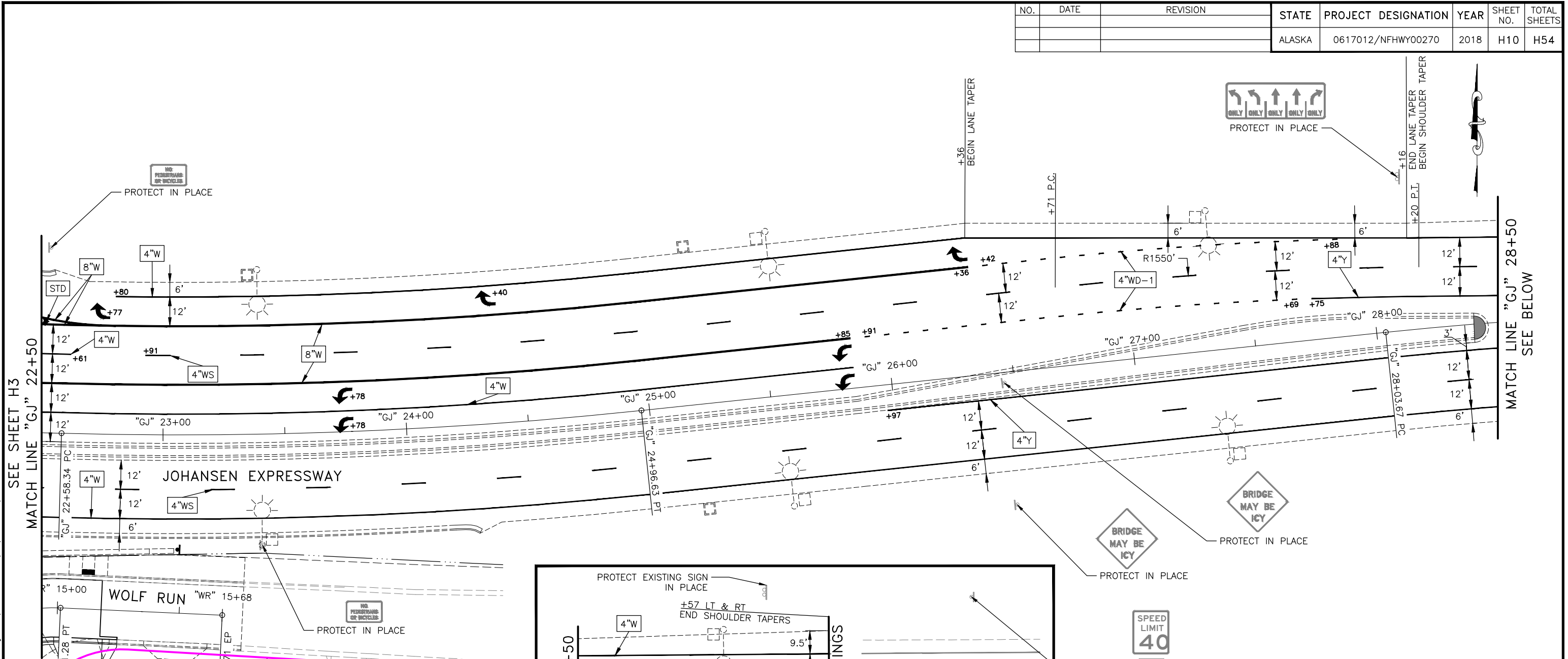
SIGNING AND STRIPING
PLANS 8 OF 10



6/8/2018

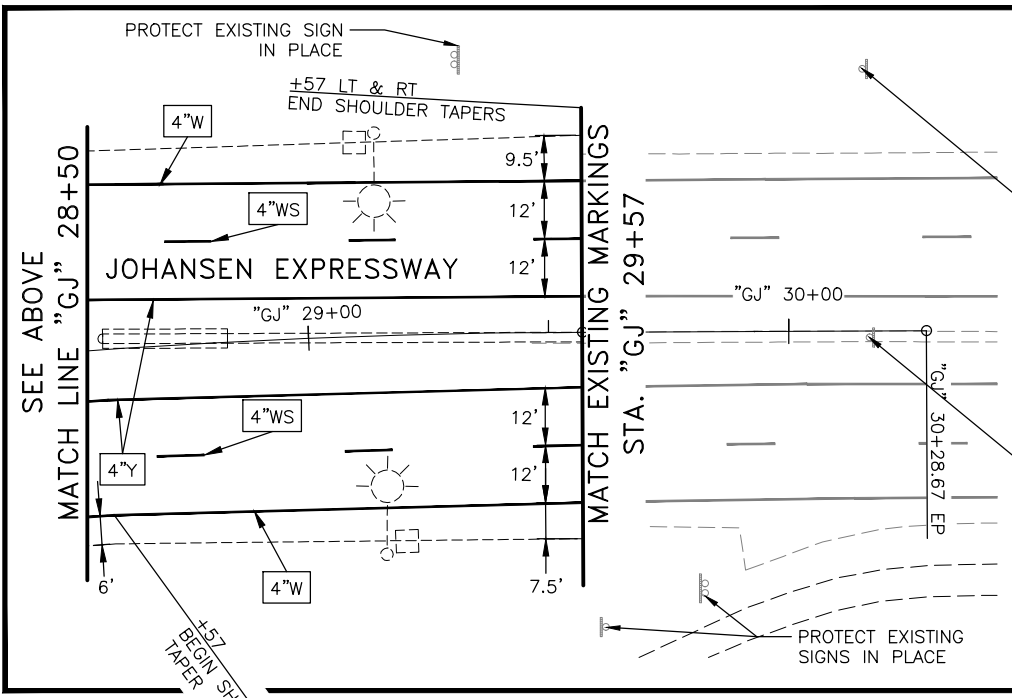
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC, 3909 Arctic Blvd, Suite 400, Anchorage, Alaska 99503 (907) 346-2373, CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOTPF\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H2-H12_Sign&Strip-H9 Fri, Jun/08/18 06:24pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H10	H54



TRAFFIC MARKING KEY

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SIGNING KEY

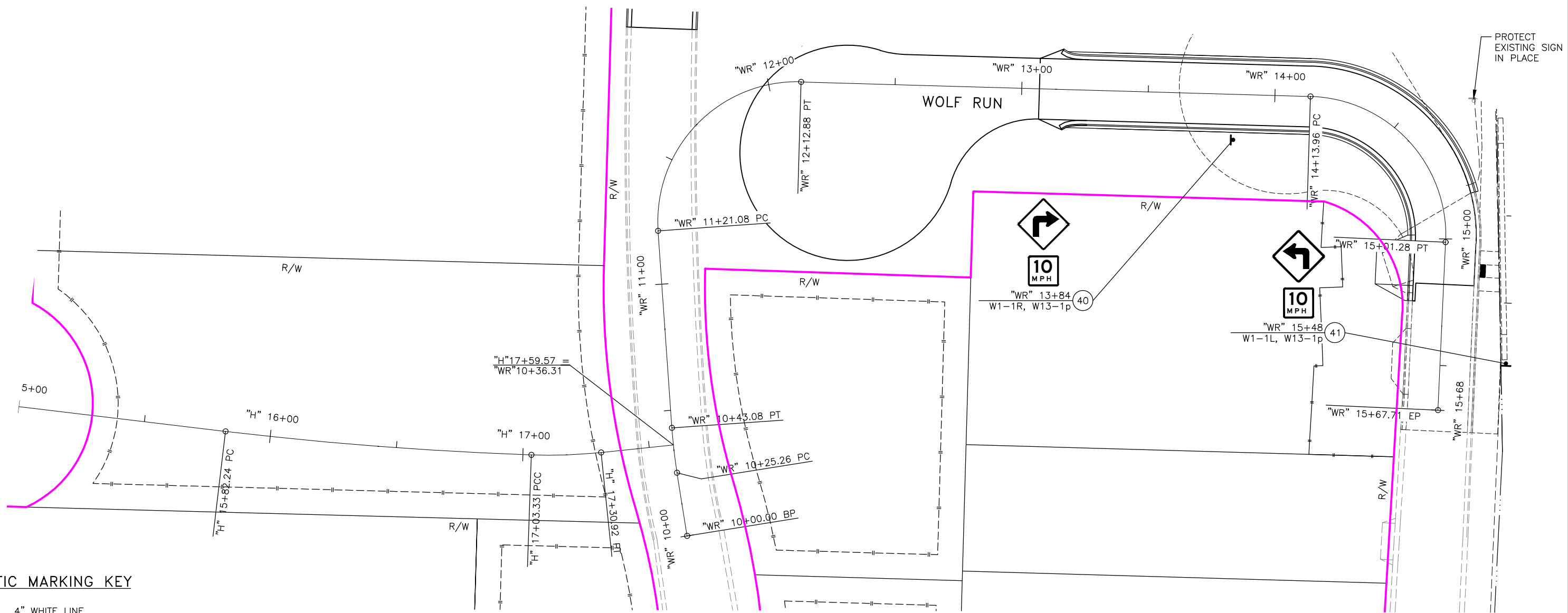
- # STATION SIGN CODE(S)
- SIGN LOCATION #

SIGNING AND STRIPING PLANS 9 OF 10



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	H11	H54



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SIGNING KEY

- # STATION
- SIGN CODE(S)
- SIGN LOCATION #

SIGNING AND STRIPING
PLANS 10 OF 10



6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
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PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\SI-NORTH\Production\06173_N_H13-H15_Sign_Smry-H12.Fri, Jun/08/18 06:24pm

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE (INCHES)		BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.			H	V	BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
1	"01"97+52		X	D3-100(2)	University Ave	36	8	X		4.00		E/W	PST	2.5	1	SEE INSTALLATION DETAIL ON SHEET H15
				D3-100(2)	Indiana Ave	42	12	X		7.00		N/S				
				R1-1	STOP	30	30	X		6.25		E				
2	"01"98+75		X	R3-8 L/L/S/S/R	(LEFT) ARROW ONLY, (LEFT) ARROW ONLY, (THRU) ARROW ONLY, (THRU) ARROW ONLY, (RIGHT) ARROW ONLY	84	30		X	17.50		S	TS	3	2	SEE NOTE 20. CAUTION! WATERLINE ADJACENT TO SIGN FOUNDATION. LOCATE WATERLINE PRIOR TO INSTALLING SIGN POST FOUNDATIONS. ADJUST SIGN LOCATION AT THE ENGINEER'S DIRECTION.
3	"01"99+75		X	W14-1	DEAD END	30	30	X		6.25		W	PST	2.5	1	
4	"01"100+10	X		D14-100	ADOPT A HIGHWAY	30	24	X		5.00		N	PST	2.5	1	
					SPONSOR NAME PLATE	30	12	X		2.50		N				
5	"01"100+18		X	D3-100(2)	University Ave	36	8	X		4.00		E/W	PST	2.5	1	SEE INSTALLATION DETAIL ON SHEET H15
				D3-100(2)	Wolf Run	42	12	X		7.00		N/S				
				W14-1aR	DEAD END (RIGHT) ARROW	36	8	X		4.00		S				
				R1-1	STOP	30	36	X		7.50		E				
6	"01"100+45	X		R4-7	KEEP RIGHT	24	30			5.00		S	PST	2.5	1	
				OM1-1	OBJECT MARKER	18	18			2.25		S				
7	"01"100+93	X		R2-1	40 MPH SPEED LIMIT	30	36	X		7.50		N	PST	2.5	1	
8	"01"102+85	X		R4-7	KEEP RIGHT	24	30			5.00		N	PST	2.5	1	
				OM1-1	OBJECT MARKER	18	18			2.25		N				
9	"01"104+77		X	R4-7	KEEP RIGHT	24	30			5.00		S	PST	2.5	1	
				OM1-1	OBJECT MARKER	18	18			2.25		S				
10	"01"104+89		X	R1-2	YIELD	36	36	X		9.00		SE	PST	2.5	1	
11	"01"106+40		X	R2-1	40 MPH SPEED LIMIT	30	36	X		7.50		S				MOUNT ON LIGHT POLE
12	"01"107+99		X	R6-1R	ONE WAY (RIGHT) ARROW	54	18		X	6.75		E	TS	3.0	2	SEE NOTE 20
13	"01"108+13		X	D3-100(2)	University Ave	36	8	X		4.00		E/W	PST	2.5	1	USE B SERIES LETTERS FOR DEAD END ALLEY. SEE INSTALLATION DETAIL ON SHEET H15
				D3-100(2)	Dead End Alley	48	12	X		8.00		N/S				
				W14-1aR	DEAD END (RIGHT) ARROW	36	8	X		4.00		S				
				R6-1R	ONE WAY (RIGHT) ARROW	36	12	X		3.00		E				
				R1-1	STOP	30	30	X		6.25		E				
14	"01"109+89	X		R3-8 L/L/S/S/R	(LEFT) ARROW ONLY, (LEFT) ARROW ONLY, (THRU) ARROW ONLY, (THRU) ARROW ONLY, (RIGHT) ARROW ONLY	84	30		X	17.50		N	TS	3	2	SEE NOTE 20
15	"01"109+96		X	W11-2	PEDESTRIAN SYMBOL	36	36	X		9.00		S				MOUNT ON LIGHT POLE
				W16-9P	AHEAD	24	12			2.00		S				
16	"01"111+00	X		D3-2	JOHANSEN EXPWY (LEFT) ARROW, GEIST RD (RIGHT) ARROW, NEXT SIGNAL	96	42		X	28.00		N	TS	3	2	SEE NOTE 20
17	"01"111+27		X	R1-5aL	YIELD HERE TO PEDESTRIANS (DOWN-LEFT) ARROW	36	48			12.00		S	PST	2.5	1	
18	"01"111+68	X		R4-7	KEEP RIGHT	24	30			5.00		N	PST	2.5	1	
				OM1-1	OBJECT MARKER	18	18			2.25		N				

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	UPDATED UPPER AND LOWER CASE ON SIGNS	ALASKA	0617012/NFHWY00270	2018	H12	H54

SIGNING NOTES:

- REMOVE AND DISPOSE OF ALL EXISTING SIGNS AND SIGN POST FOUNDATIONS WITHIN THE PROJECT LIMITS, EXCEPT SIGNS DESIGNATED FOR REINSTALLATION, SALVAGE, OR OTHERWISE NOTED.
- OFFSET DISTANCES FOR STOP SIGN ASSEMBLIES AND SIGNS MOUNTED ON LIGHT POLES OR POSTS IN THE MEDIAN ARE FROM DESIGN CENTERLINE TO CENTER OF POST. ALL OTHER OFFSET DISTANCES ARE FROM DESIGN CENTERLINE TO NEAR EDGE OF SIGN.
- MOUNT SIGNS PER STANDARD DRAWING S-05.01. SIGNS THAT PROJECT OVER OR WITHIN 2 FEET OF THE SIDEWALK AND PATHWAYS SHALL BE MOUNTED TO A HEIGHT OF 8 FEET.
- DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
- INSTALL PST POSTS WITH SLEEVE TYPE CONCRETE FOUNDATIONS PER STANDARD DRAWING S-30.04. ATTACH THE SIGN POST USING GALVANIZED 3/8" DIA. BOLT, NUT, SPLIT LOCK WASHER AND TWO FLAT WASHERS.
- INSTALL "TUBE POST SIGN BRACING" AS SHOWN ON STANDARD DRAWING S-01.01 ON ALL SIGNS MOUNTED ON A SINGLE PST POST AND HAVING A HORIZONTAL DIMENSION OF 30 INCHES OR GREATER, EXCEPT D3-100 SERIES SIGNS. INSTALL GALVANIZED SPLIT LOCK WASHERS ON ALL 3/8" BOLTS. STAINLESS STEEL FASTENER HARDWARE MAY BE USED INSTEAD OF GALVANIZED. 1/4" X 1 1/2" ALUMINUM ALLOY 6061-T6 BAR MAY ALSO BE USED TO FABRICATE SIGN BRACES.
- ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" DIA. BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO POSTS WITH ALUMINUM DRIVE RIVETS. WIND WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
- ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" ON SHEET H15.
- SIGNS INSTALLED ON LIGHT POLES MAY REQUIRE TEMPORARY INSTALLATION ON 2-1/2" PST POST UNTIL LIGHT POLES ARE IN PLACE. THIS WORK IS SUBSIDIARY TO PAY ITEM 615(1).
- SEE TRAFFIC SIGNAL SHEETS H29-H36 FOR ADDITIONAL TRAFFIC SIGNS, MOUNTING LOCATIONS, AND MOUNTING DETAILS.
- STOP (R1-1) AND YIELD (R1-2) SIGN LOCATIONS, ESPECIALLY THOSE LOCATED AT LARGE RADIUS INTERSECTIONS, MAY NEED ADJUSTMENT IN THE FIELD. THE ENGINEER WILL APPROVE FINAL LOCATIONS.
- WHERE TWO DIFFERENT D3-100 SERIES SIGNS ARE TO BE LOCATED ON THE SAME POST, INSTALL THE CROSS-STREET PANEL IN THE LOWER POSITION. SEE SHEET H15 FOR DETAIL.
- D3-100(2) INDICATES TWO SEPARATE SINGLE SIDED SIGN PANELS; AND D3-100 INDICATES ONE SINGLE SIDED SIGN PANEL. PROVIDE SIGN BRACING AS INDICATED ON SHEET H15 AND STANDARD DRAWING S-01.01.
- MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
- ALL SIGNS NOTED FOR REMOVAL AND REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF THEY ARE DAMAGED DURING THE RELOCATION EFFORT.
- USE SERIES C LETTERS FOR D3-100 SERIES SIGNS UNLESS OTHERWISE NOTED. USE 4.5-INCH FOR DIMENSION "E" FOR 12-INCH D3-100 SIGNS. THE LETTERING INDICATING THE TYPE OF STREET (SUCH AS St, Ave, OR Rd) SHALL BE UPPER CASE AND LOWER CASE. USE A 3" HORIZONTAL SPACING BETWEEN WORDS ON D3-100 SIGNS UNLESS OTHERWISE NOTED. THIS MODIFIES THE ASDS.
- LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGN POSTS. NOT ALL UTILITIES MAY BE SHOWN ON THE SIGNING AND STRIPING PLANS. SEE OTHER PROJECT PLAN SHEETS AND AS-BUILT DRAWINGS FOR ADDITIONAL INFORMATION.
- CLEARING AS DIRECTED BY THE ENGINEER MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF SIGNS. THIS WORK IS SUBSIDIARY TO PAY ITEM 615(1).
- PROVIDE WEATHER TIGHT CAPS ON ALL TUBE POSTS, EXCEPT PERFORATED STEEL TUBES.
- PROVIDE FRANGIBLE COUPLING SYSTEMS IN ACCORDANCE WITH STANDARD DRAWING S-31.01.
- HINGED JOINTS WITH FRANGIBLE FUSE PLATE ARE REQUIRED ON ALL MULTIPLE POST SIGNS WITH FRANGIBLE COUPLING SYSTEMS. THE HINGE LOCATION ON ALL POSTS SHALL BE THE SAME DISTANCE BELOW THE SIGNS, INSTEAD OF THE 6 INCH MINIMUM SHOWN ON STANDARD DRAWING S-31.01. SEE MANUFACTURER'S SPECIFICATION FOR HINGE LOCATION BELOW SIGN.
- UNLESS OTHERWISE NOTED, RELOCATE EXISTING (SALVAGED) SIGNS TO LOCATIONS IDENTIFIED IN THE SIGNING SUMMARY USING NEW POSTS. FOUNDATIONS, BRACING/FRAMING, MOUNTING BRACKETS, AND FASTENERS. THIS WORK SHALL BE SUBSIDIARY TO PAY ITEM 615(1) STANDARD SIGN.
- ADJUST SIGN LOCATION AT THE DIRECTION OF THE ENGINEER SO THAT SIGN DOES NOT OBSTRUCT DRIVERS VIEW OF RAILROAD SIGNAL FLASHING LIGHTS

POST TYPE CODING:

TS = SQUARE STRUCTURAL STEEL TUBING
PST = PERFORATED STEEL TUBING

SIGN SUMMARIES
1 OF 2



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	UPDATED UPPER AND LOWER CASE ON SIGNS	ALASKA	0617012/NFHWHY00270	2018	H13	H54

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)		BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	TYPE	POST SIZE (INCHES)		NO.	REMARKS
		LT.	RT.			BRACED	FRAMED	SIZE	NO.								
19	"01"111+80	X		D3-100(2)	University AVE	36 X 8	X		4.00		E/W	PST	2.5	1	SEE INSTALLATION DETAIL ON SHEET H15		
				R1-1	STOP	30 X 30	X	6.25		W							
20	"01"112+62		X	D3-100(2)	University AVE	36 X 8	X		4.00		E/W	PST	2.5	1	SEE INSTALLATION DETAIL ON SHEET H15		
				D3-100(2)	Sandvik St	42 X 12	X	7.00		N/S							
				R1-1	STOP	30 X 30	X	6.25		E							
21	"01"112+76	X		R1-5aL	YIELD HERE TO PEDESTRIANS (DOWN-LEFT) ARROW	36 X 48			12.00		N	PST	2.5	1			
22	"01"112+87		X	R4-7	KEEP RIGHT	24 X 30			5.00		S	PST	2.5	1			
				OM1-1	OBJECT MARKER	18 X 18		2.25		S							
23	"01"113+95	X		W11-2	PEDESTRIAN SYMBOL	36 X 36	X		9.00		N				MOUNT LIGHT POLE		
				W16-9P	AHEAD	24 X 12		2.00		N							
24	"01"113+97		X	R7-107A	FNSB BUS STOP SIGN						S				MOUNT EXISTING SIGN ON LIGHT POLE. SEE NOTE 22		
25	"01"115+32		X	W10-1	RXR	36 DIA	X		9.00		S				MOUNT ON LIGHT POLE		
26	"01"115+32		X	W10-1	RXR	36 DIA	X		9.00		S	PST	2.5	1			
27	"01"116+01	X		W10-1	RXR	24 DIA			4.00		S	PST	2.5	1			
28	"01"116+71		X	R8-8	DO NOT STOP ON TRACKS	36 X 48	X		12.00		S	PST	2.5	1			
				R3-4	NO U-TURN	24 X 24		4.00		S							
29	"01"116+87		X	R8-8	DO NOT STOP ON TRACKS	36 X 48	X		12.00		S				INSTALL ON RR GATE POLE		
30	"01"117+44	X		R8-8	DO NOT STOP ON TRACKS	36 X 48	X		12.00		S				INSTALL ON RR GATE POLE		
31	"01"117+59	X		R3-4	NO U-TURN	24 X 24			4.00		N	PST	2.5	1	SIGNS SHALL NOT OBSTRUCT RR SIGNAL FLASHING LIGHTS		
				R8-8	DO NOT STOP ON TRACKS	36 X 48	X	12.00		N							
32	"01"118+34		X	W10-1	RXR	24 DIA			4.00		N	PST	2.5	1			
33	"01"118+73	X		W10-1	RXR	36 DIA	X		9.00		N	PST	2.5	1			
34	"01"118+73	X		W10-1	RXR	36 DIA	X		9.00		N	PST	2.5	1	SEE NOTE 23		
35	"01"119+31	X		R4-7	KEEP RIGHT	24 X 30			5.00		N	PST	2.5	1			
				OM1-1	OBJECT MARKER	18 X 18		2.25		N							
36	"01"120+10		X	D3-100(2)	University Ave	36 X 8	X		4.00		E/W	PST	2.5	1	SEE INSTALLATION DETAIL ON SHEET H15		
				D3-100(2)	Cameron St	42 X 12	X	7.00		N/S							
				R1-1	STOP	30 X 30	X	6.25		E							
37	"01"120+47		X	R4-7	KEEP RIGHT	24 X 30			5.00		S	PST	2.5	1			
				OM1-1	OBJECT MARKER	18 X 18		2.25		S							
38	"01"120+97		X	SPECIAL 7	(THRU) ARROW FARMERS LOOP RD, (LEFT) ARROW ALUMNI DR, COLLEGE RD (RIGHT) ARROW, NEXT SIGNAL	96 X 60	X		40.00		S	TS	3	2	SEE DETAIL ON SHEET H16		

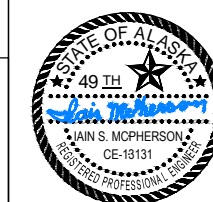
SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)		BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	TYPE	POST SIZE (INCHES)		NO.	REMARKS
		LT.	RT.			BRACED	FRAMED	SIZE	NO.								
39	"01"123+16		X	R4-7	KEEP RIGHT	24 X 30			5.00		N	PST	2.5	1			
				OM1-1	OBJECT MARKER	18 X 18		2.25		N							
40	"WR" 13+84		X	W1-1R	RIGHT TURN	30 X 30	X		6.25		S	PST	2.5	1			
				W13-1p	10 MPH SPEED PLAQUE	24 X 24		4.00		S							
41	"WR" 15+48	X		W1-1L	LEFT TURN	30 X 30	X		6.25		E	PST	2.5	1			
				W13-1p	10 MPH SPEED PLAQUE	24 X 24		4.00		E							
42	"HS" 10+40		X	R3-108 SL/R	(LEFT/THRU) ARROW, (RIGHT) ARROW ONLY	30 X 36	X		7.50		W	PST	2.5	1			
										SUBTOTAL = 465.00							
										SIGNAL SIGN SUBTOTAL = 64.00							
										TOTAL SIGN AREA = 529.00							

NOTE:

1. SEE SHEET H12 FOR NOTES AND POST TYPE CODING.

SIGN SUMMARIES
2 OF 2



6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H14	H54

SALVAGE SIGN SUMMARY					
ALIGNMENT	STATION	CL REF	ASDS CODE	LEGEND	REMARKS
01	97+62	34.6' RT	D3-1	INDIANA AVE	
			R1-1	STOP	
01	98+02	39.5' RT	D3-1C	GEIST RD ARROW (LEFT) JOHANSEN EXPY ARROW (RIGHT)	
01	98+23	32.0' RT	D11-1	BIKE (SYMBOL) ROUTE	MOUNTED ON LIGHT POLE
01	99+70	61.7' RT	W14-1	DEAD END	
01	99+99	47.2' LT	D14-100	ADOPT A HIGHWAY GOLDEN KEY INT'L HONOUR SOCIETY	
01	100+29	36.9' RT	D3-1	WOLF RUN	
			R1-1	STOP	
01	100+43	47.3' LT	R2-1	40 MPH SPEED LIMIT	
01	102+46	64.4' RT	OM2-2V	OBJECT MARKER	INSTALLED DURING PHASE A
01	102+56	67.0' RT	OM2-2V	OBJECT MARKER	INSTALLED DURING PHASE A
01	102+65	71.4 RT	OM2-2V	OBJECT MARKER	INSTALLED DURING PHASE A
01	102+73	78.1' RT	OM2-2V	OBJECT MARKER	INSTALLED DURING PHASE A
01	102+73	47.1' LT	D11-1	BIKE (SYMBOL) ROUTE	
01	102+79	87.0' RT	OM2-2V	OBJECT MARKER	INSTALLED DURING PHASE A
01	102+89	96.3' RT	OM2-2V	OBJECT MARKER	INSTALLED DURING PHASE A
01	104+76	47.0' LT	R3-8	LANE USE	
01	105+24	49.2' RT	R107-7A	BUS STOP (SYMBOL)	STORE SIGN UNTIL IT CAN BE RELOCATED TO NEW LOCATION
01	107+14	36.5' RT	R2-1	40 MPH SPEED LIMIT	MOUNTED ON LIGHT POLE
01	107+43	46.4' LT	R3-8	LANE USE	
01	108+06	50.9' RT	D3-1	DEAD END ALLEY	
			R1-1	STOP	
01	108+28	47.3' LT	R2-1	40 MPH SPEED LIMIT	
01	108+90	49.5' LT	D3-1C	JOHANSEN EXPY ARROW (LEFT) GEIST RD ARROW (RIGHT)	
01	111+94	31.0' LT	R1-1	STOP	
			D3-1	UNIVERSITY AVE	
			D3-1	SANDVIK ST	
01	112+54	47.4' RT	R1-1	STOP	
01	113+58	52.3' RT	R107-7A	BUS STOP (SYMBOL)	STORE SIGN UNTIL IT CAN BE RELOCATED TO NEW LOCATION
01	114+75	39.0' RT	W10-1	RXR	MOUNTED ON LIGHT POLE
01	115+64	31.3' LT	R1-1	STOP	
01	116+49	39.1' RT	D11-1	BIKE (SYMBOL) ROUTE	MOUNTED ON LIGHT POLE
			D11-1bP	USE SIDEWALK	
01	116+88	35.9' RT	AKRRC SPECIAL	EMERGENCY NOTIFICATION SIGN	SIGN PROPERTY OF AKRRC, SEE NOTE 3
01	117+40	23.4 LT	AKRRC SPECIAL	EMERGENCY NOTIFICATION SIGN	SIGN PROPERTY OF AKRRC, SEE NOTE 3
01	120+15	53.4' RT	D3-1	CAMERON ST	
			D3-1	UNIVERSITY AVE	
			R1-1	STOP	
01	120+97	56.6' RT	D3-1C	FARMERS LOOP RD ARROW (THRU) UNIV OF ALASKA ARROW (LEFT) COLLEGE RD ARROW (RIGHT)	
01	121+91	52.7' LT	W10-1	RXR	
			W10-1	RXR	
01	121+95	7.4' RT	R4-7	KEEP RIGHT	
			OM1-1	OBJECT MARKER 1	
			OM2-1V	OBJECT MARKER 2	
HS	10+30	39.6' RT	R7-1	NO PARKING	MOUNTED ON LIGHT POLE

SALVAGE SIGN SUMMARY					
ALIGNMENT	STATION	CL REF	ASDS CODE	LEGEND	REMARKS
HS	10+56	15.0' LT	R7-1	NO PARKING	
HS	10+61	15.7' LT	R1-1	STOP	
HS	10+74	44.2' RT	R7-1	NO PARKING	
HS	11+02	13.3' LT	R7-1	NO PARKING	
HS	11+44	46.7' RT	R7-1	NO PARKING	
HS	11+79	48.0' RT	R7-1	NO PARKING	MOUNTED ON LIGHT POLE
WR	11+00	14.0' LT	R2-1	20 MPH SPEED LIMIT	

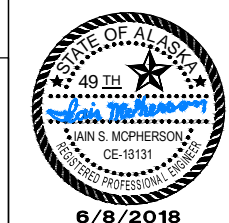
SIGN SALVAGE AND DISPOSAL NOTES:

- DELIVER SALVAGED SIGN PANELS, NOT IDENTIFIED FOR REUSE IN THE SIGNING SUMMARY, TO THE DOT&PF FAIRBANKS MAINTENANCE YARD LOCATED AT 2301 PEGER ROAD.

CONTACT DANIEL SCHACHER (907) 451-5276 TO ARRANGE FOR DELIVERY.
- SALVAGED SIGNS WILL BE PAID PER EACH SIGN PANEL DELIVERED IN ACCEPTABLE CONDITION.
- SALVAGED SIGNS BELONGING TO THE ALASKA RAILROAD CORPORATION SHALL BE DELIVERED TO AN AUTHORIZED AKRRC REPRESENTATIVE. CONTACT RACHEL MADDY AT (907) 265-2237 TO ARRANGE FOR DELIVERY.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
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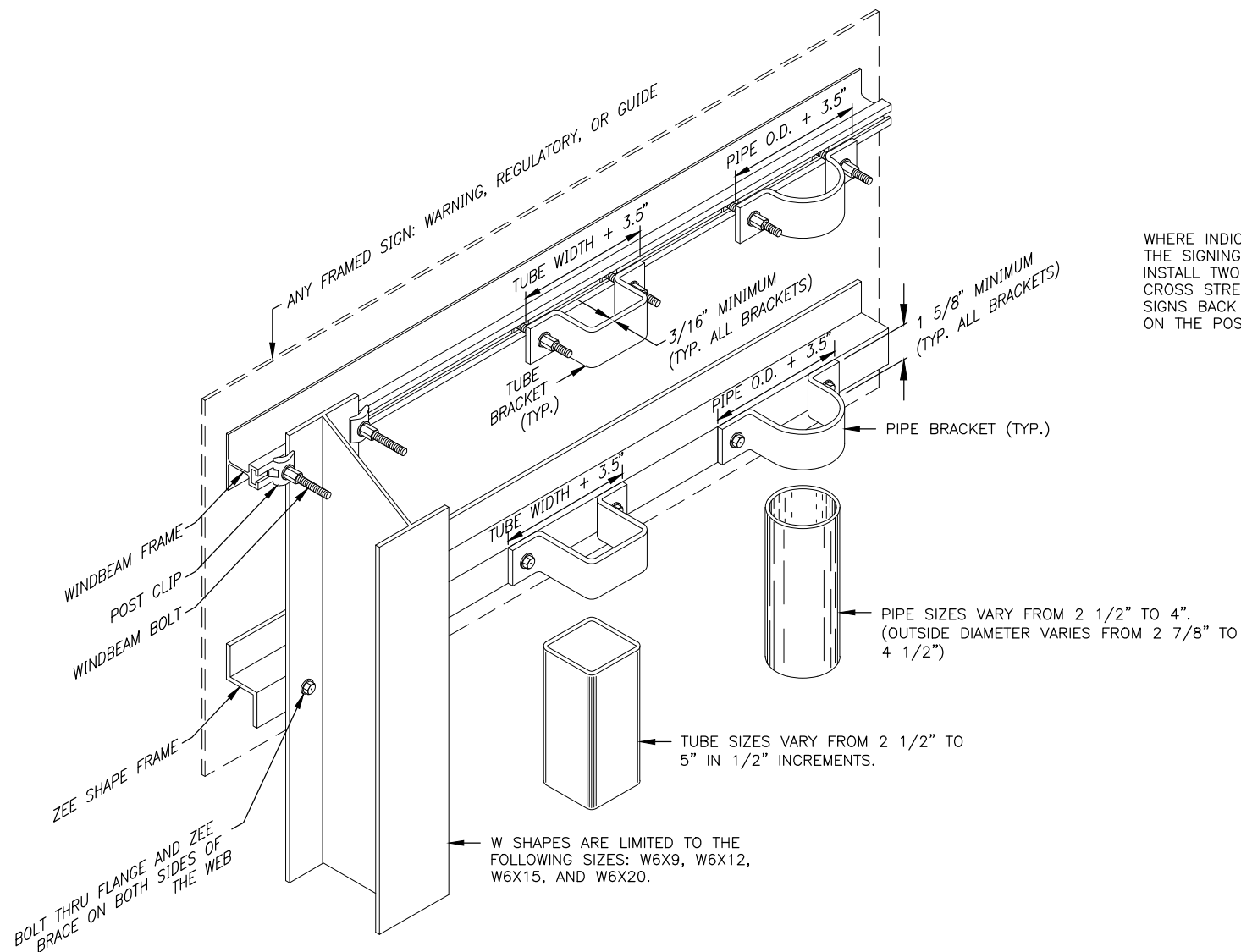
SALVAGE SIGN
SUMMARY



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	REPLACED ADOT'S DETAIL TSM421 DETAIL, AND ADDED DETAIL TMS400	ALASKA	0617012/NFHWHY00270	2018	H15	H54

FASTENER SPECIFICATION TABLE		
FASTENERS	STEEL	STAINLESS STEEL
BOLTS	ASTM A 307	ASTM F 593
NUTS	ASTM A 563	ASTM F 594
WASHERS	ASTM F 844	ASTM A 480

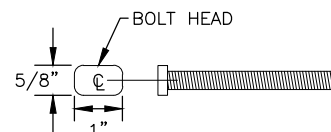
THESE SPECIFICATIONS APPLY TO ALL SIGN FASTENER HARDWARE ON THE PROJECT.



NOTES:

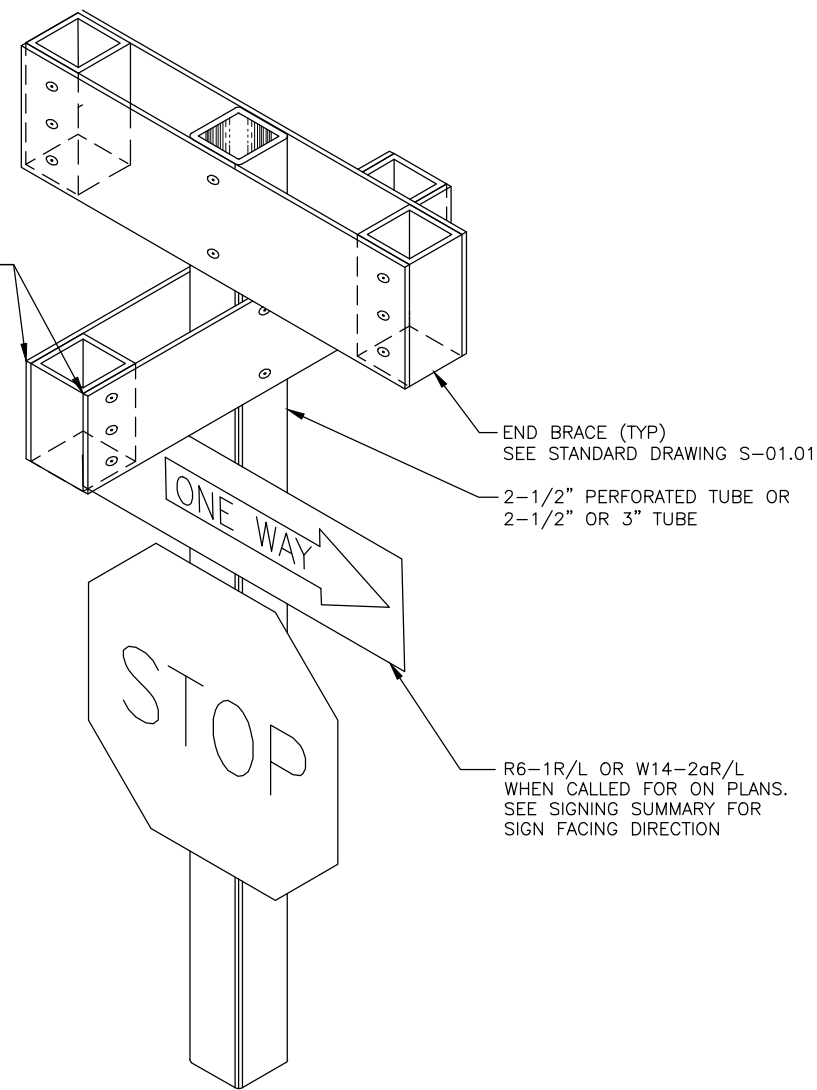
- ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W-SHAPE POSTS, A U-SHAPED BRACKET ON PIPES OR A BRACKET WITH SQUARE CORNERS ON TUBES.
- THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
- THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
- ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR ZEE SHAPE FRAMING AND RIVETS.

FRAMED SIGN ATTACHMENT BRACKETS
NTS



3/8" DIA. WINDBEAM BOLT
NTS

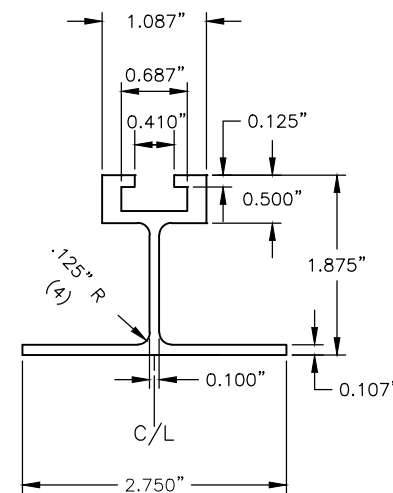
WHERE INDICATED IN THE SIGNING SUMMARY, INSTALL TWO D3-100 CROSS STREET NAME SIGNS BACK TO BACK ON THE POST.



STREET NAME SIGN NOTES:

- VERTICALLY SEPARATE R1-1 (STOP) SIGN AND ALL OTHER SIGN ASSEMBLIES MOUNTED ON THE SAME POST BY 2 1/2 INCHES.
- WHERE CALLED FOR INSTALL W14-2aL AND W14-2aR SIGN BACK TO BACK USING END BRACING PER STANDARD DRAWING S-01.01. MOUNT BELOW THE CROSS STREET NAME SIGNS.
- WHERE A SINGLE SIGN THAT IS NOT MOUNTED BACK TO BACK IS CALLED FOR IN THE SIGNING SUMMARY, INSTALL USING FLAT GALVANIZED STEEL BRACE(S) IN ACCORDANCE WITH STANDARD DRAWING S-01.01.

STREET NAME SIGN
NTS



NOTES:

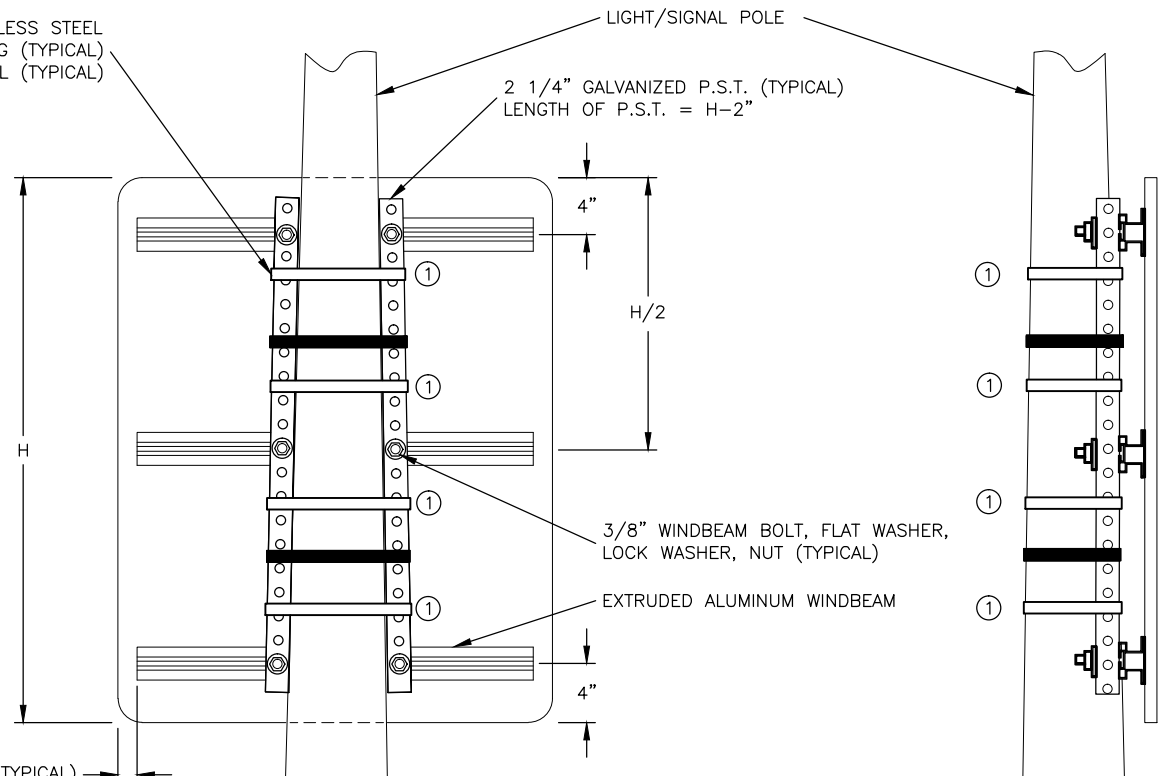
- ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
- ATTACH SIGNS TO WINDBEAM WITH 3/6" RIVETS AT 4" STAGGERED SPACING.

EXTRUDED ALUMINUM WINDBEAM
NTS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	REPLACED ADOT'S TSM408A DETAIL	ALASKA	0617012/NFHWY00270	2018	H16	H54

BANDING: 3/4" X 0.030" STAINLESS STEEL DOUBLE BANDING (TYPICAL)
 BUCKLES: 3/4" STAINLESS STEEL (TYPICAL)



IF $H > 48"$
3 WINDBEAMS REQUIRED

IF $15" < H \leq 48"$
2 WINDBEAMS REQUIRED

IF $H \leq 15"$
1 WINDBEAM REQUIRED

USE 2 BANDS $H < 48"$
USE 4 BANDS $H \geq 48"$

① BAND LOCATIONS:
SPACE BANDS $H/5$
WHEN 4 ARE REQUIRED

1" MIN. TO 2" MAX. (TYPICAL)

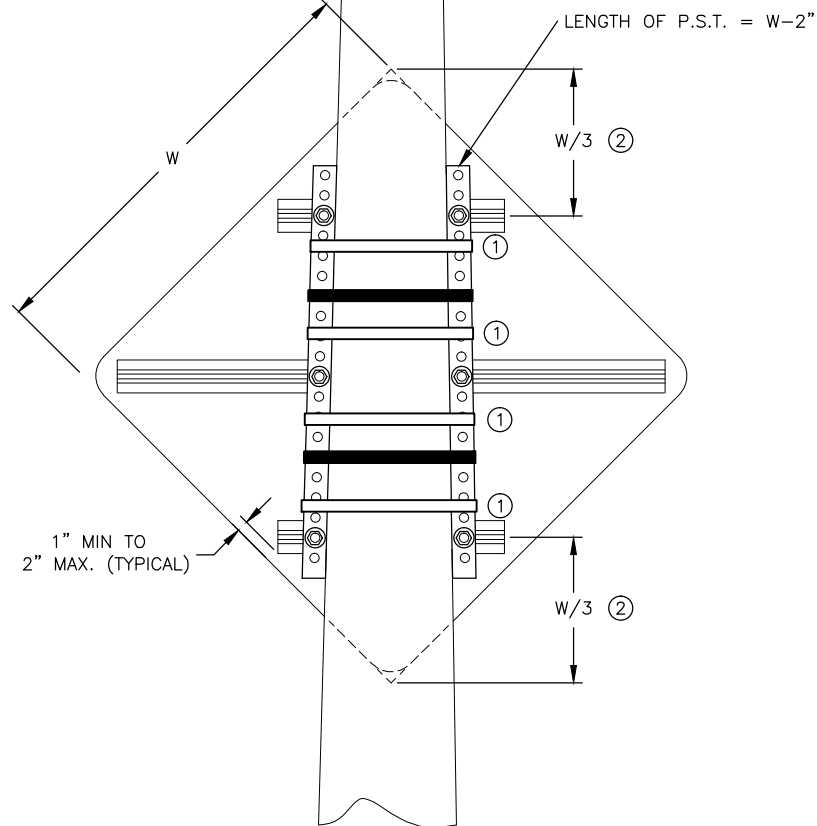
IF $W \geq 36"$
3 WINDBEAMS REQUIRED

IF $W < 36"$
2 WINDBEAMS REQUIRED

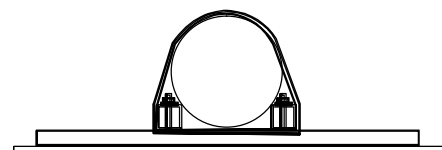
USE 2 BANDS $W < 48"$
USE 4 BANDS $W \geq 48"$

① BAND LOCATIONS:
SPACE BANDS $W/5$
WHEN 4 ARE REQUIRED

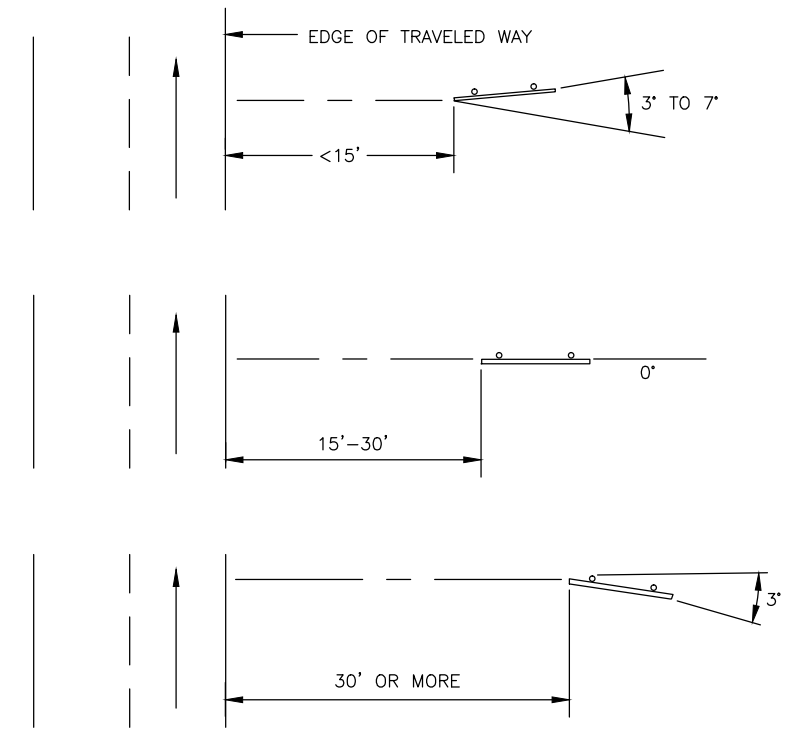
② WINDBEAM LOCATIONS:
SPACE WINDBEAMS TO MATCH 1" SPACING OF HOLES IN PERFORATED STEEL TUBES. ADJUST APPROXIMATE DIMENSIONS FROM TOP AND BOTTOM OF SIGN AS NECESSARY.



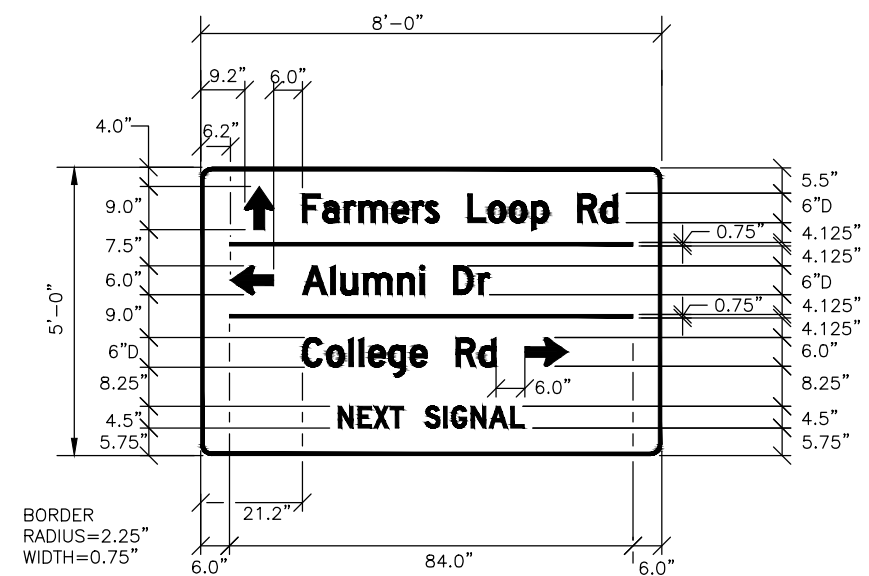
1" MIN TO 2" MAX. (TYPICAL)



NOTE:
ATTACH SIGN TO WINDBEAMS WITH 3/16" RIVETS AT 4" STAGGERED SPACING.



SIGN INSTALLATION ANGLES
NTS



SPECIAL SIGN 7 DETAIL
NTS GREEN BACKGROUND
WHITE LEGEND

SIGN DETAILS
2 OF 2

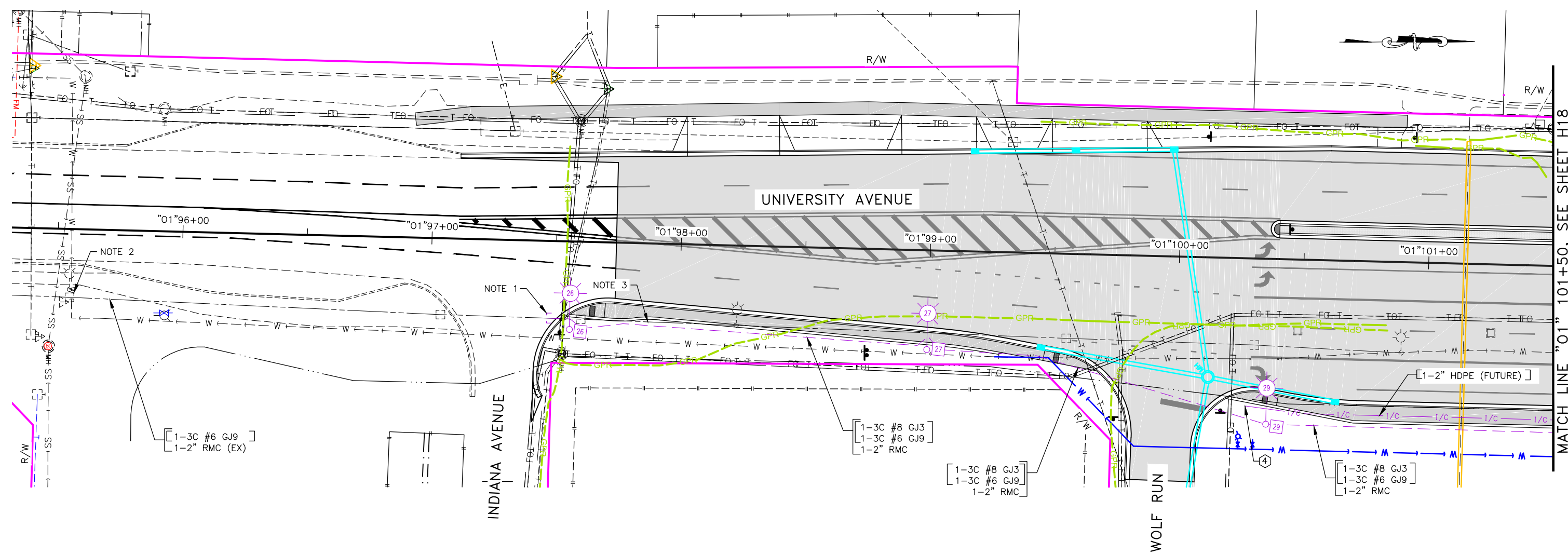


PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC, 3909 Arctic Blvd, Suite 400, Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H17	H54

NOTES:

1. LOCATE AND INTERCEPT EXISTING 2" RMC STREET LIGHT CIRCUIT NEAR THIS LOCATION AND ROUTE TO JUNCTION BOX 26. INTERCEPT CONDUIT AT A LOCATION THAT WILL NOT IMPACT EXISTING FACILITIES TO REMAIN. REMOVE EXISTING CONDUCTOR FROM CONDUIT TO BE REUSED.
2. TIE NEW CIRCUIT INTO EXISTING ALUMINUM 3C#6 AT FUSED CONNECTOR IN BASE OF EXISTING HPS ELECTROLIER.
3. REMOVE EXISTING CONDUIT WHERE REMOVAL DOES NOT IMPACT EXISTING FACILITIES TO REMAIN.
4. CAP CONDUIT STUB AND PROVIDE FLEXIBLE DELINEATOR AFTER BACKFILLING FOR LOCATING CONDUIT IN FUTURE PHASE.



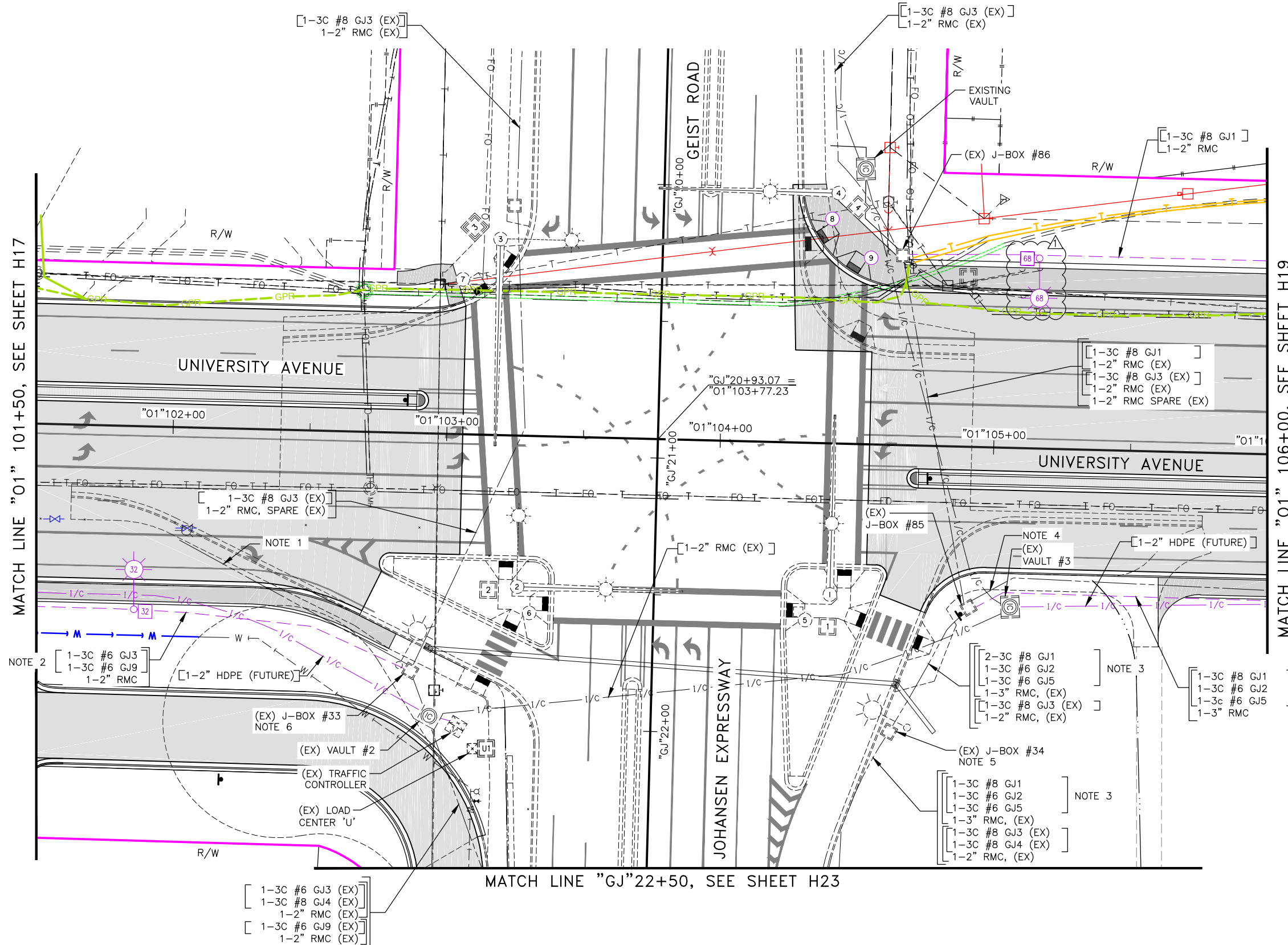
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1152
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MATCH LINE "01" 101+50, SEE SHEET H18

ILLUMINATION AND
 INTERCONNECT PLANS
 1 OF 7

 6/8/2018	 6/8/2018
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	CHANGE J-BOX TO TYPE 1A AND ADD #68 TO LUMINAIRE	ALASKA	0617012/NFHWY00270	2018	H18	H54



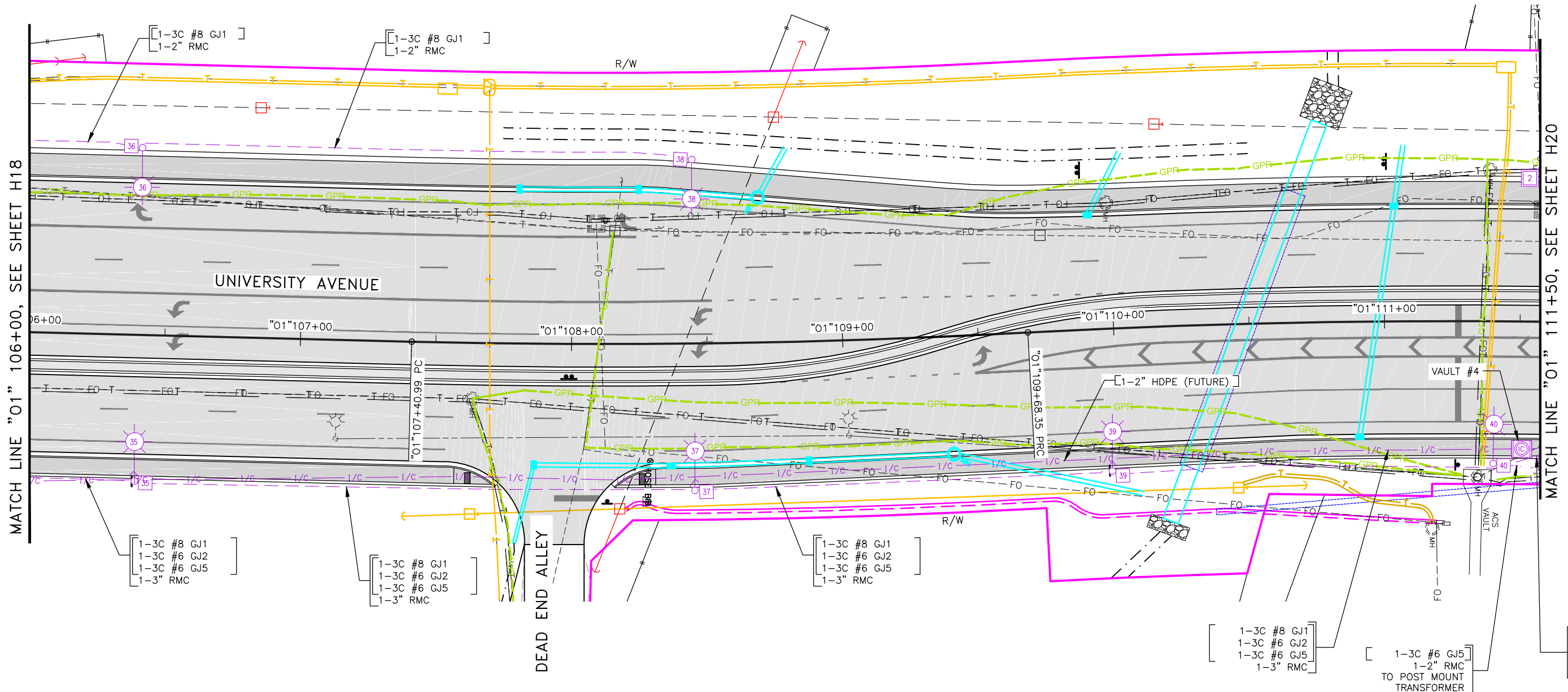
- NOTES:**
1. DEMOLISH 2" RMC TEMPORARY CIRCUIT GJ9 TO EXISTING HPS STREET LIGHTS FROM SEGMENT 1A WORK. CUT THE 3C#6 CABLE AND LEAVE 3 FT SLACK AT EXISTING J-BOX #33, FOR SPLICED EXTENSION IN NEW WORK.
 2. PROVIDE WATERPROOF SPLICE TO RECONNECT NEW GJ9 CABLE TO THE EXISTING GJ9 CIRCUIT AT J-BOX #33.
 3. REMOVE EXISTING 3C#8 CABLE (GJ8) AND #8 GROUND WIRE, EAST OF EXISTING J-BOX #85, AS REQUIRED TO PULL NEW CONDUCTORS IN EXISTING CONDUIT.
 4. DEMOLISH 2" RMC TEMPORARY CIRCUIT GJ8 TO EXISTING HPS STREET LIGHTS FROM SEGMENT 1A WORK.
 5. PROVIDE 3-WAY JUNCTION FOR CIRCUIT GJ1, WITH WATERPROOF SPLICE AT EXISTING J-BOX 34.
 6. PROVIDE 3-WAY JUNCTION FOR CIRCUIT GJ3, WITH WATERPROOF SPLICE AT EXISTING J-BOX 33.

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ILLUMINATION AND
 INTERCONNECT PLANS
 2 OF 7

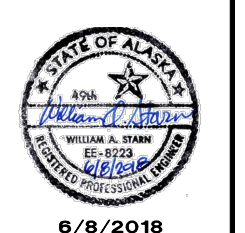
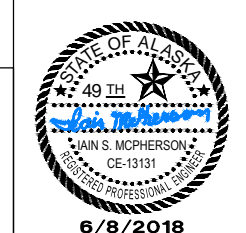
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	H19	H54

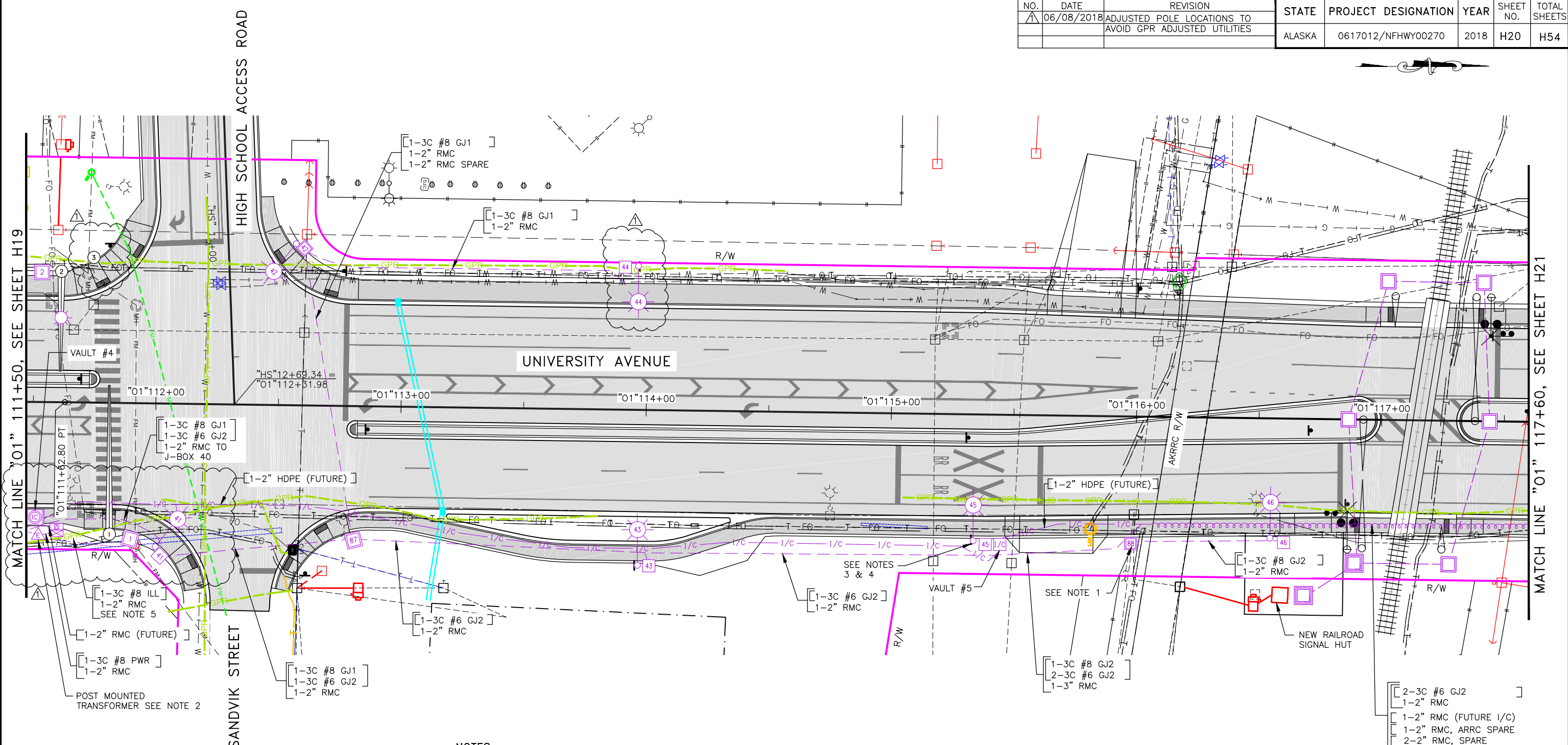


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ILLUMINATION AND
 INTERCONNECT PLANS
 3 OF 7



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	06/08/2018	ADJUSTED POLE LOCATIONS TO AVOID GPR ADJUSTED UTILITIES	ALASKA	0617012/NFHWY00270	2018	H20	H54



NOTES:

1. PROVIDE JUNCTION BOX FOR LIGHTING CIRCUITS ENTERING RAILROAD R/W. SEE SHEET H40 FOR DETAILS.
2. SEE POST-MOUNT TRANSFORMER DETAIL ON SHEET H38.
3. PROVIDE 2-2" RMC CONDUITS FROM J-BOX INTO POLE BASE.
4. PROVIDE 4-WAY SPLICE FOR LIGHTING CIRCUIT IN POLE BASE.
5. SEE UNIVERSITY AND SANDVIK PHB WIRING DIAGRAM SHEET H34 FOR INTERSECTION ILLUMINATION CONTINUATION.

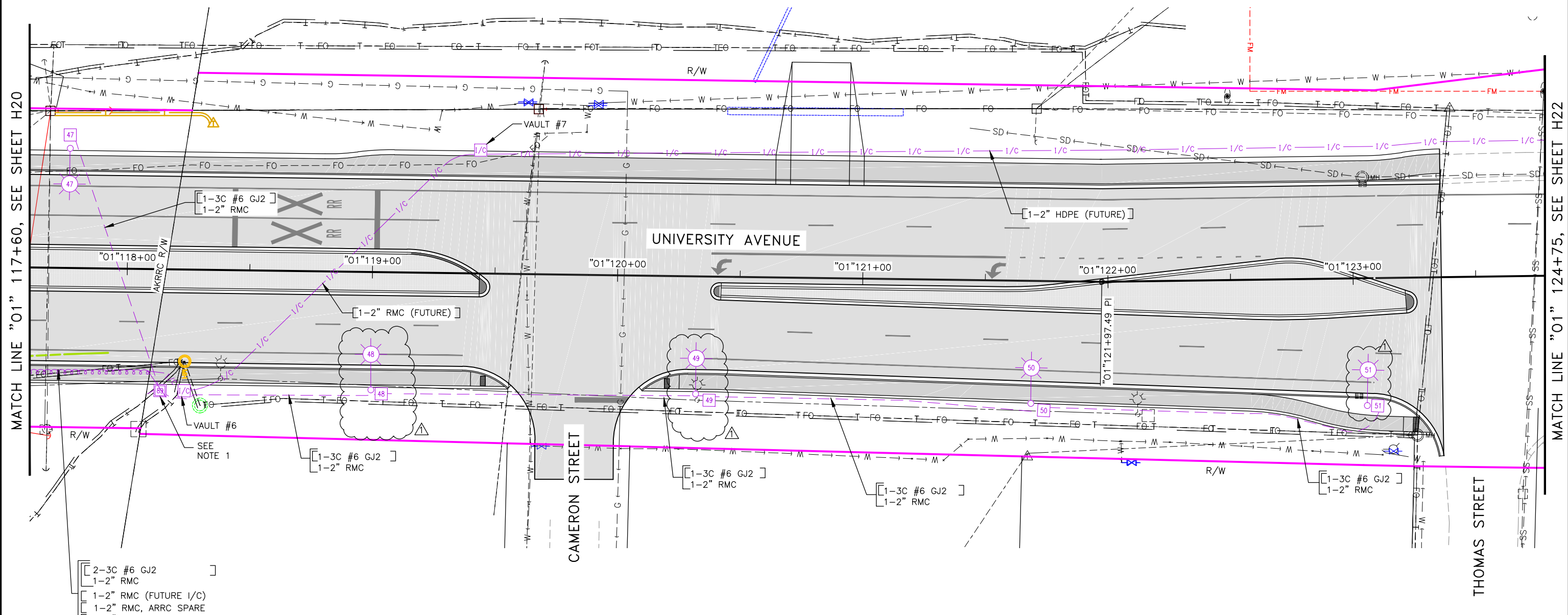
- [2-3C #6 GJ2]
- [1-2" RMC]
- [1-2" RMC (FUTURE 1/C)]
- [1-2" RMC, ARRC SPARE]
- [2-2" RMC, SPARE]
- SEE SHEET H40 FOR RAILROAD CROSSING DETAILS

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ILLUMINATION AND INTERCONNECT PLANS
 4 OF 7

<p>6/8/2018</p>	<p>6/8/2018</p>
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	06/08/2018	ADJUSTED POLE AND JUNCTION BOX LOCATIONS	ALASKA	0617012/NFHWWY00270	2018	H21	H54



MATCH LINE "01" 117+60, SEE SHEET H20

MATCH LINE "01" 124+75, SEE SHEET H22

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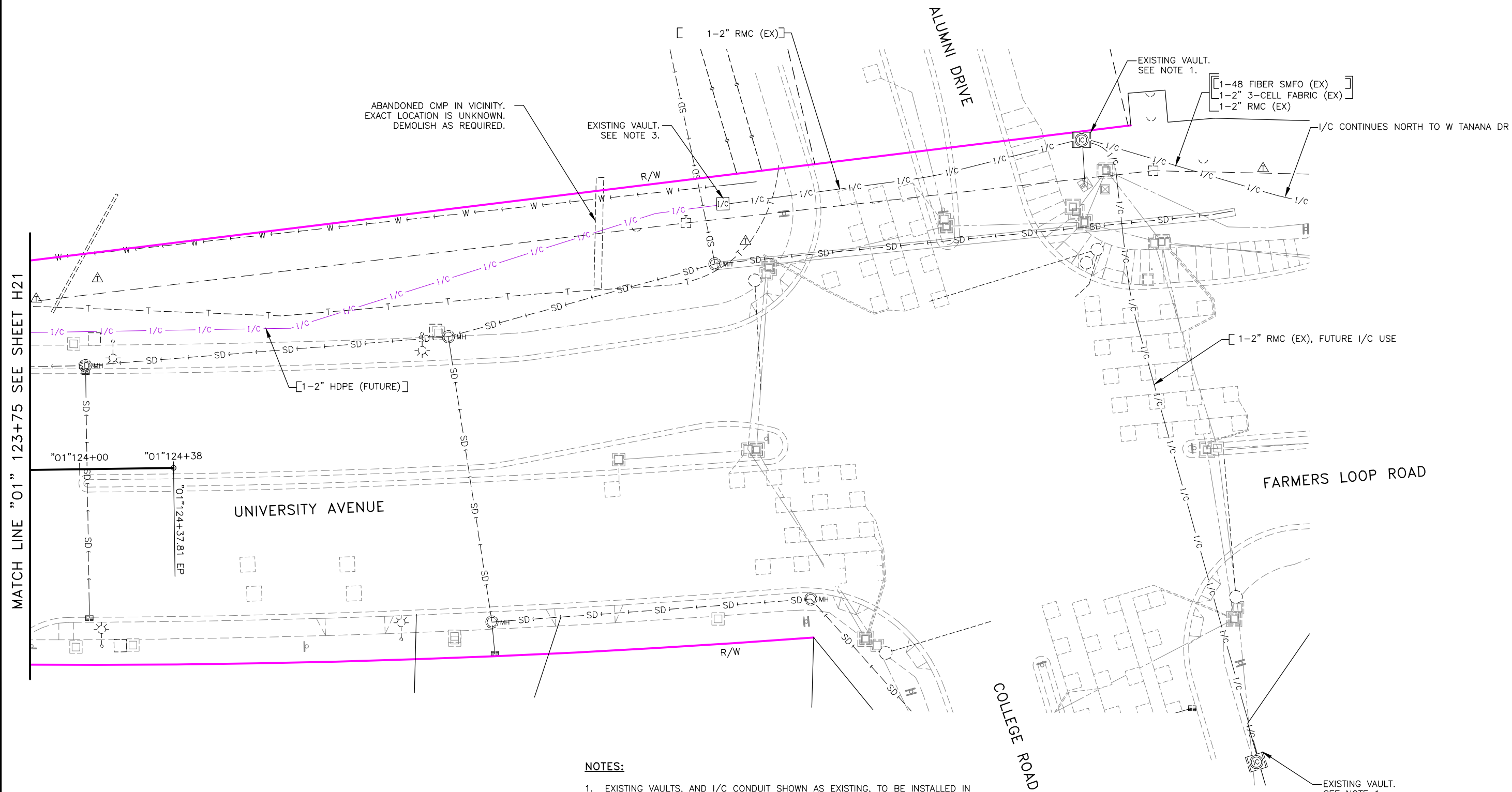
- [2-3C #6 GJ2]
 - [1-2" RMC]
 - [1-2" RMC (FUTURE I/C)]
 - [1-2" RMC, ARRC SPARE]
 - [1-2" RMC, SPARE]
- SEE SHEET H40 FOR RAILROAD CROSSING DETAILS

- NOTES:**
1. PROVIDE JUNCTION BOX FOR LIGHTING CIRCUITS ENTERING RAILROAD R/W. SEE SHEET H40 FOR DETAILS.

ILLUMINATION AND INTERCONNECT PLANS
5 OF 7

<p>6/8/2018</p>	<p>6/8/2018</p>
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	H22	H54



- NOTES:**
- EXISTING VAULTS, AND I/C CONDUIT SHOWN AS EXISTING, TO BE INSTALLED IN CONJUNCTION WITH ALASKA DOT&PF PROJECT 0002 (344)/Z607740000, FARMERS LOOP ROAD RESURFACING.
 - SIGNAL AND PEDESTRIAN POLES; TRANSFORMER; AND TRAFFIC CONTROLLER LOCATED IN NW QUADRANT WILL BE INSTALLED DURING CONSTRUCTION OF FAIRBANKS AREA SIGNAL UPGRADES-STAGE I PROJECT 002383/NFHWHY00146.
 - TERMINATE INTERCONNECT CONDUIT IN EXISTING JUNCTION BOX INSTALLED BY ALASKA DOT&PF PROJECT 0002 (344)/Z607740000, FARMERS LOOP ROAD RESURFACING.
 - CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

ILLUMINATION AND INTERCONNECT PLANS
6 OF 7

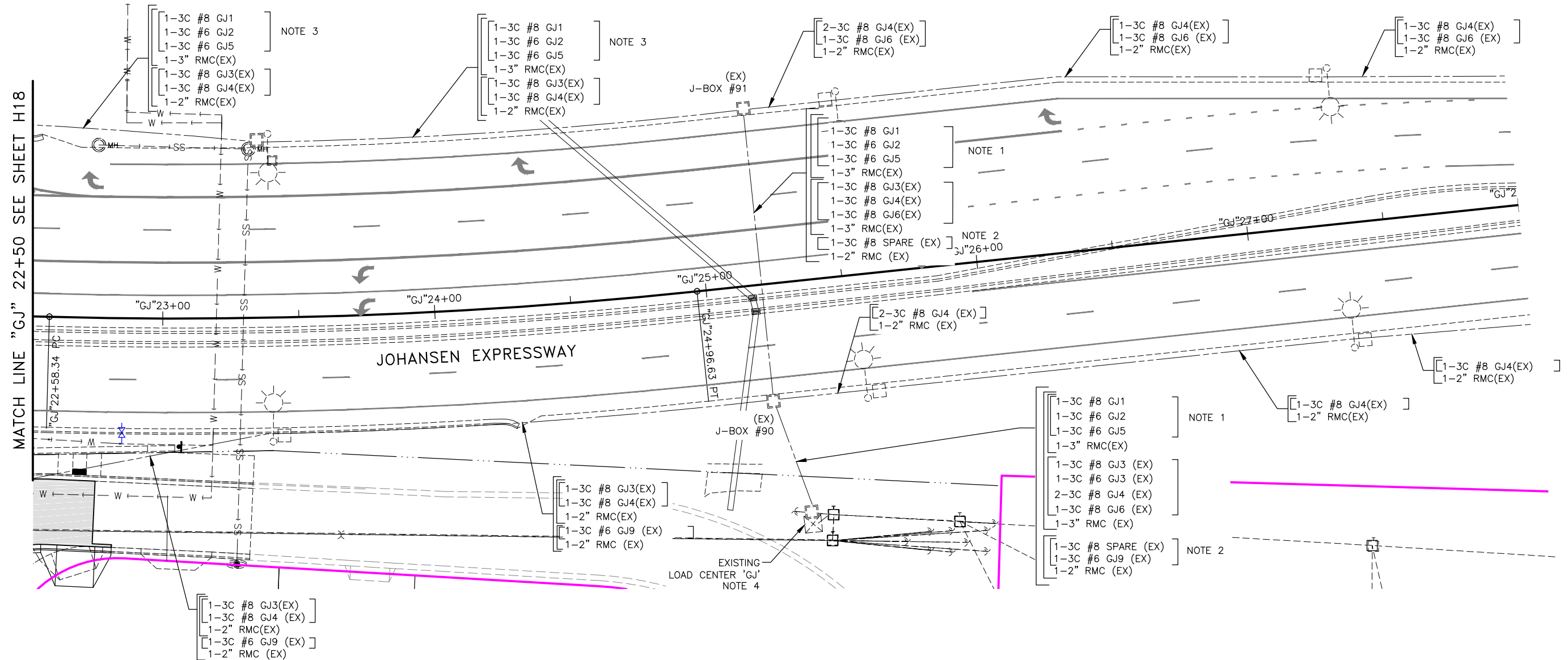
<p>6/8/2018</p>	<p>6/8/2018</p>
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H23	H54

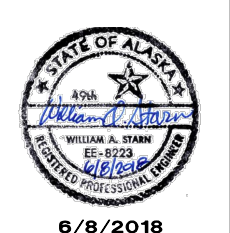
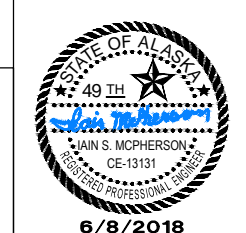
NOTES:

- PULL NEW CONDUCTORS IN EXISTING CONDUIT.
- DISCONNECT, TAG, COIL AND CAP LEADS OF EXISTING 3C#8 (GJ8) CABLE AS FOLLOWS:
 - DISCONNECT FROM GJ8 CIRCUIT BREAKER AT LOAD CENTER.
 - CUT AND DEADEND CABLE AT EXISTING J-BOX #91 ON NORTH SIDE OF JOHANSEN EXPRESSWAY.
 - IDENTIFY ABANDONED CABLE AT EACH END AND AT INTERMEDIATE J-BOX #90, TO INDICATE "SPARE" AND OPPOSITE END LOCATION.
- REMOVE EXISTING 3C#8 CABLE (GJ8) AND #8 GROUND WIRE, WEST OF EXISTING J-BOX #91, AS REQUIRED TO PULL NEW CONDUCTORS IN EXISTING CONDUIT.
- SEE LOAD CENTER SHEETS FOR MODIFICATIONS TO EXISTING LOAD CENTER "GJ".



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ILLUMINATION AND
 INTERCONNECT PLANS
 7 OF 7



ELECTROLIER SUMMARY

LUMINAIRE No.	ALIGN.	STATION	OFFSET	POLE TYPE	BASE TYPE	LUMINAIRE			ADJUSTABLE OUTPUT (NOTE 10)	CIRCUIT	MOUNT HEIGHT	MAST ARM LENGTH	REMARKS
						TYPE	VOLTAGE	WATTAGE					
26	"01"	97+56	35 RT	STP	DPP	B	480V	268W		GJ3	40'	12'	
27	"01"	98+99	40 RT	STP	DPP	B	480V	268W		GJ3	40'	12'	
29	"01"	100+36	66 RT	STP	CIDH	C	480V	330W		GJ3	45'	18'	
32	"01"	101+87	67 RT	STP	CIDH	C	480V	330W	90%	GJ3	45'	18'	
35	"01"	106+40	54 RT	STP	CIDH	B	480V	268W	90%	GJ1	40'	12'	
36	"01"	106+40	69 LT	STP	CIDH	B	480V	268W	90%	GJ1	40'	12'	
37	"01"	108+45	54 RT	STP	CIDH	B	480V	268W	90%	GJ1	40'	12'	
38	"01"	108+45	68 LT	STP	CIDH	B	480V	268W	90%	GJ1	40'	12'	
39	"01"	109+97	53 RT	STP	CIDH	B	480V	268W	90%	GJ1	40'	12'	
40	"01"	111+40	53 RT	STP	DPP	A	480V	268W	70%	GJ1	33'	6'	PHB CROSSWALK, SOUTH APPROACH
41	"01"	112+00	59 RT	STP	CIDH	B	480V	268W	70%	GJ1	33'	22'	ORIENT 40' RT OF ORTHOGONAL TO "01".
42	"01"	112+56	66 LT	STP	CIDH	B	480V	268W	70%	GJ1	33'	22'	ORIENT 38' RT OF ORTHOGONAL TO "01". NOTE 16.
43	"01"	113+96	63 RT	STP	CIDH	B	480V	268W	70%	GJ2	40'	12'	
44	"01"	113+96	58.6 LT	STP	DPP	B	480V	268W	70%	GJ2	32'	16'	
45	"01"	115+34	52 RT	STP	CIDH	B	480V	268W	90%	GJ2	40'	12'	NOTE 16.
46	"01"	116+55	49 RT	STP	CIDH	B	480V	268W	90%	GJ2	40'	12'	RR CROSSING, SOUTH APPROACH.
47	"01"	117+76	54 LT	STP	CIDH	B	480V	268W	90%	GJ2	40'	12'	RR CROSSING, NORTH APPROACH.
48	"01"	119+00	48 RT	STP	CIDH	B	480V	268W		GJ2	40'	12'	
49	"01"	120+32.4	48 RT	STP	CIDH	B	480V	268W		GJ2	40'	12'	
50	"01"	121+69.2	50 RT	STP	CIDH	B	480V	268W		GJ2	40'	12'	
51	"01"	123+05	52 RT	STP	CIDH	B	480V	268W	90%	GJ2	40'	12'	
68	"01"	105+15	69 LT	STP	CIDH	E	480V	204W	90%	GJ1	40'	12'	

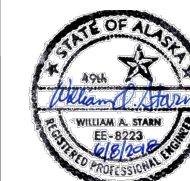
ELECTROLIER SUMMARY NOTES:

- LUMINAIRES FOR CONTINUOUS STREET LIGHTING SHALL BE SUITABLE FOR 480V SUPPLY, AND COMPLY WITH SPECIAL PROVISIONS OF SECTION 740-2.18. LUMINAIRES SHALL PROVIDE THE AVERAGE INITIAL LUMINANCE, ILLUMINANCE, AND UNIFORMITIES SPECIFIED IN THE PERFORMANCE CRITERIA SCHEDULES. PROVIDE LIGHTING CALCULATIONS USING THE MANUFACTURER'S CURRENT PUBLISHED PHOTOMETRIC DATA IN ACCORDANCE WITH SPECIAL PROVISIONS OF SECTION 740-2.18 FOR LED ROADWAY LUMINAIRES.
- PRIOR TO INSTALLATION, CONTRACTOR SHALL REQUEST LOCATES FOR EXISTING UNDERGROUND UTILITIES, AND RECEIVE WRITTEN CONFIRMATION THAT ALL FACILITIES HAVE BEEN IDENTIFIED.
- POLE LOCATIONS SHALL BE STAKED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ADJUST POLE LOCATIONS AS DIRECTED BY THE ENGINEER. MINOR RELOCATIONS OF FOUNDATIONS, CONDUIT, AND JUNCTION BOXES SHALL BE CONSIDERED SUBSIDIARY TO THE SECTION 660(3) PAY ITEM.
- JUNCTION BOXES AND CONDUIT RUNS SHOWN IN PLANS FOR THE LIGHTING SYSTEM ARE CONSIDERED SUBSIDIARY TO THE 660(3) HIGHWAY LIGHTING SYSTEM PAY ITEM.
- PROVIDE NEW LUMINAIRES ON EXISTING LIGHTING STANDARDS WHERE INDICATED IN THE PLANS. RE-USE EXISTING CONDUCTORS WITHIN POLE UNLESS OTHERWISE NOTED.
- DESIGN MOUNTING HEIGHT AS SCHEDULED SHALL BE MEASURED FROM THE FINISHED ROAD SURFACE TO THE LUMINAIRE. ALL LUMINAIRES SHALL BE CUTOFF TYPE MOUNTED HORIZONTAL WITH ZERO TILT UNLESS OTHERWISE NOTED.
- PROVIDE LIGHTING STANDARDS AND CONCRETE POLE FOUNDATIONS IN ACCORDANCE WITH STANDARD DRAWINGS L-03.10 AND L-30.10. REFER TO DETAILS IN THESE PLANS WHERE DRIVEN PIPE PILE FOUNDATIONS ARE SCHEDULED.
- ORIENT POLE WITH LUMINAIRE MAST ARMS AS INDICATED ON THE PLANS, TYPICALLY PERPENDICULAR TO THE ROADWAY CENTERLINE, UNLESS A SPECIFIC ORIENTATION IS OTHERWISE NOTED.
- ALL LUMINAIRES SHALL BE FURNISHED WITH A 0-10V DIMMING DRIVER, 7-PIN NEMA TWIST-LOCK RECEPTACLE AND WIRELESS CONTROL NODE.
- PROVIDE LUMINAIRES WITH FIELD ADJUSTABLE OUTPUT, SET FOR 100% INITIAL OUTPUT UNLESS OTHERWISE NOTED.
- PROVIDE LUMINAIRES WITH ADJUSTABLE ARM FITTING AND SUITABLE POLE TOP TENON ADAPTER WHERE SCHEDULED WITHOUT MAST ARM.
- UNLESS OTHERWISE NOTED, ALL ELECTROLIERS SHALL BE MOUNTED USING FRANGIBLE COUPLINGS.
- ELECTROLIERS ARE NUMBERED IN SEQUENCE WITH OTHER WORK SCHEDULED IN FUTURE SEGMENT 1 CONSTRUCTION PHASES.
- UNLESS OTHERWISE INDICATED ON THE PLANS, PROVIDE ONE 2" RMC CONDUIT BETWEEN EACH ELECTROLIER FOUNDATION POLE BASE AND ITS ADJACENT SERVICING JUNCTION BOX.
- WHERE CABLE JUNCTIONS IN LIGHTING CIRCUITS ARE INDICATED ON PLANS AT AN ELECTROLIER JUNCTION BOX, PROVIDE THE CIRCUIT SPLICE IN THE ADJACENT ELECTROLIER POLE BASE USING APPROVED CONNECTORS, UNLESS OTHERWISE NOTED.
- POLE INSTALLATION SHALL BE COORDINATED WITH ELECTRIC UTILITY ON-SITE ASSISTANCE.

ABBREVIATIONS:

(EX) EXISTING
 CIDH CAST IN DRILLED HOLE
 DPP DRIVEN PIPE PILE
 STP STEEL TAPERED POLE

ELECTROLIER SUMMARY
1 OF 2



6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H25	H54

STREET LIGHTING CRITERIA	
ROADWAY CHARACTERISTICS	
ROADWAY LIGHTING STANDARD:	IESNA RP-8-2014
CALCULATION ZONE:	ENTIRE ROADWAY
STREET CLASSIFICATION:	MAJOR
PEDESTRIAN AREA CLASSIFICATION:	MEDIUM
PAVEMENT CLASSIFICATION:	R3
TRAFFIC FLOW:	2-WAY
LANE WIDTH:	12 FT.
NO. OF LANES, LEFT / RIGHT:	VARIABLES
MEDIAN:	VARIABLES
LUMINAIRE DEPRECIATION	
LED - TOTAL LIGHT LOSS FACTOR (LLF):	0.85
ROADWAY LUMINANCE CRITERIA	
AVERAGE MAINTAINED (Lavg):	0.9 CD/SQ M
MINIMUM MAINTAINED (Lmin):	0.3 CD/SQ M
Lavg/Lmin RATIO (MAXIMUM):	<= 3.0:1
Lmax/Lmin RATIO (MAXIMUM):	<= 5.0:1
Lvmax/Lavg VEILING LUMINANCE RATIO (MAXIMUM):	<= 0.3:1
INTERSECTION ILLUMINANCE CRITERIA	
UNIVERSITY AVE/SANDVIK STREET, ILLUMINANCE: MEDIUM PEDESTRIAN CONFLICT	Eavg >= 2.0 FC Eavg/Emin <= 3.0
UNIVERSITY AVE/LOCAL STREETS, ILLUMINANCE: LOW PEDESTRIAN CONFLICT	Eavg >= 1.3 FC Eavg/Emin <= 3.0
PEDESTRIAN CROSSWALK ILLUMINANCE CRITERIA	
CONFLICT AREA LIMITS:	CROSSWALKS / CURB RAMPS
PEDESTRIAN HYBRID BEACON AT UNIVERSITY AVENUE / SANDVIK STREET	Emin,v >= 2.0 FC METERED AT 5FT HEIGHT AT 1.64 FT SPACING IN DIRECTION OF APPROACHING TRAFFIC, CENTERED IN CROSSWALK

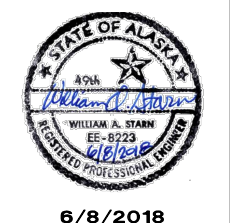
LUMINAIRE SCHEDULE										
TYPE	MANUFACTURER & MODEL NO.	LIGHT SOURCE	IES TYPE OPTICS	INITIAL LUMENS	COLOR TEMP (CCT)	DRIVER CURRENT	VOLTAGE & VA/ WATTS	POWER FACTOR	MOUNTING	REMARKS
A	AMERICAN ELECTRIC LIGHTING ATB2-80BLEDE10-R3-P7	LED (x80)	TYPE III	30,300	3000K	1000 MA	480V 268W, 298VA	>0.9	HORIZ. TENON	NOTES 1, 2, 3
B	AMERICAN ELECTRIC LIGHTING ATB2-80BLEDE10-R4-P7	LED (x80)	TYPE IV	30,600	3000K	1000 MA	480V 268W, 298VA	>0.9	HORIZ. TENON	NOTES 1, 2, 3
C	AMERICAN ELECTRIC LIGHTING ATB2-80BLEDE12-R4-P7	LED (x80)	TYPE IV	35,000	3000K	1200 MA	480V 330W, 367VA	>0.9	HORIZ. TENON	NOTES 1, 2, 3
E	AMERICAN ELECTRIC LIGHTING ATB2-60BLEDE10-R3-P7	LED (x60)	TYPE III	23,400	3000K	1000 MA	480V 204W, 227VA	>0.9	HORIZ. TENON	NOTES 1, 2, 3

NOTES:

- ALL LUMINAIRES SHALL BE FURNISHED WITH 0-10V DIMMING BALLAST, 7-PIN NEMA PHOTOCELL RECEPTACLE, AND WIRELESS CONTROL NODE.
- PROVIDE ALL LUMINAIRES WITH FIELD ADJUSTABLE OUTPUT, ADJUSTABLE IN APPROXIMATELY 10 TO 15% INCREMENTS.
- PROVIDE SCHEDULED LUMINAIRES OR APPROVED EQUAL. REFER TO SECTION 740 SPECIFICATIONS.

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ELECTROLIER SUMMARY
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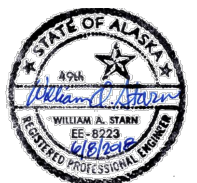
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	06/08/2018	ADDED J-BOX 26 TO SCHEDULE	ALASKA	0617012/NFHWY00270	2018	H26	H54
		ADJUST JB49 & 50					

LUMINAIRE JUNCTION BOX SUMMARY

JUNCTION BOX No.	ALIGN.	STATION	OFFSET	TYPE	CIRCUIT	REMARKS
26	"01"	97+35	RT	1-A	GJ3/GJ9	
27	"01"	98+54	RT	1-A	GJ3/GJ9	
29	"01"	100+14	RT	1-A	GJ3/GJ9	
32	"01"	101+64	RT	1-A	GJ3/GJ9	
35	"01"	106+44	RT	1-A	GJ1, GJ2, GJ5	
36	"01"	106+36	LT	1-A	GJ1	
37	"01"	108+49	RT	1-A	GJ1, GJ2, GJ5	
38	"01"	108+41	LT	1-A	GJ1	
39	"01"	109+99	RT	1-A	GJ1, GJ2, GJ5	
40	"01"	111+46	RT	1-A	GJ1, GJ2, GJ5	
41	"01"	112+03	RT	1-A	GJ1, GJ2	
42	"01"	112+60	LT	1-A	GJ1	
43	"01"	114+02	RT	1-A	GJ2	
44	"01"	113+90	LT	1-A	GJ1	
45	"01"	115+36	RT	1-A	GJ2	
46	"01"	116+59	RT	1-A	GJ2	
47	"01"	117+72	LT	1-A	GJ2	
48	"01"	119+04	RT	1-A	GJ2	
49	"01" 	120+32.4	RT	1-A	GJ2	
50	"01"	121+69.2	RT	1-A	GJ2	
51	"01"	123+09	RT	1-A	GJ2	
68	"01"	105+11	LT	1-A	GJ1	
87	"01"	112+81	RT	II	GJ1, GJ2	
88	"01"	116+01	RT	II	GJ2	
89	"01"	118+14	RT	II	GJ2	

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LUMINAIRE JUNCTION BOX SUMMARY



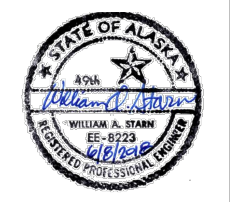
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	H27	H54

ELECTROLIER DEMOLITION SUMMARY			
ALIGN.	STATION	OFFSET	REMARKS
"01"	98+23	RT	
"01"	100+90	RT	
"01"	107+14	RT	
"01"	109+01	RT	
"01"	111+66	RT	
"01"	112+77	RT	
"01"	114+76	RT	
"01"	116+49	RT	
"01"	118+39	RT	
"01"	120+33	RT	
"01"	122+11	RT	

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ELECTROLIER
 DEMOLITION SUMMARY



6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	06/06/2018	ADDED CONCRETE COLLAR TO VAULT #5	ALASKA	0617012/NFHWY00270	2018	H28	H54

FIBER-OPTIC INTERCONNECT VAULT SCHEDULE

I/C VAULT NO.	LOCATION			NOTES
	ALIGNMENT	STATION	OFFSET	
VAULT 2	"01"	102+95.9	103.0 RT	EXISTING MANHOLE
VAULT 3	"01"	105+07.4	58.2 RT	EXISTING MANHOLE
VAULT 4	"01"	111+51.0	47.0 RT	MANHOLE
VAULT 5	"01"	115+44.9	52.2 RT	VAULT TYPE 1, USE CONCRETE COLLAR
VAULT 6	"01"	118+22.0	48.7 RT	VAULT TYPE 1
VAULT 7	"01"	119+43.4	49.8 LT	VAULT TYPE 1

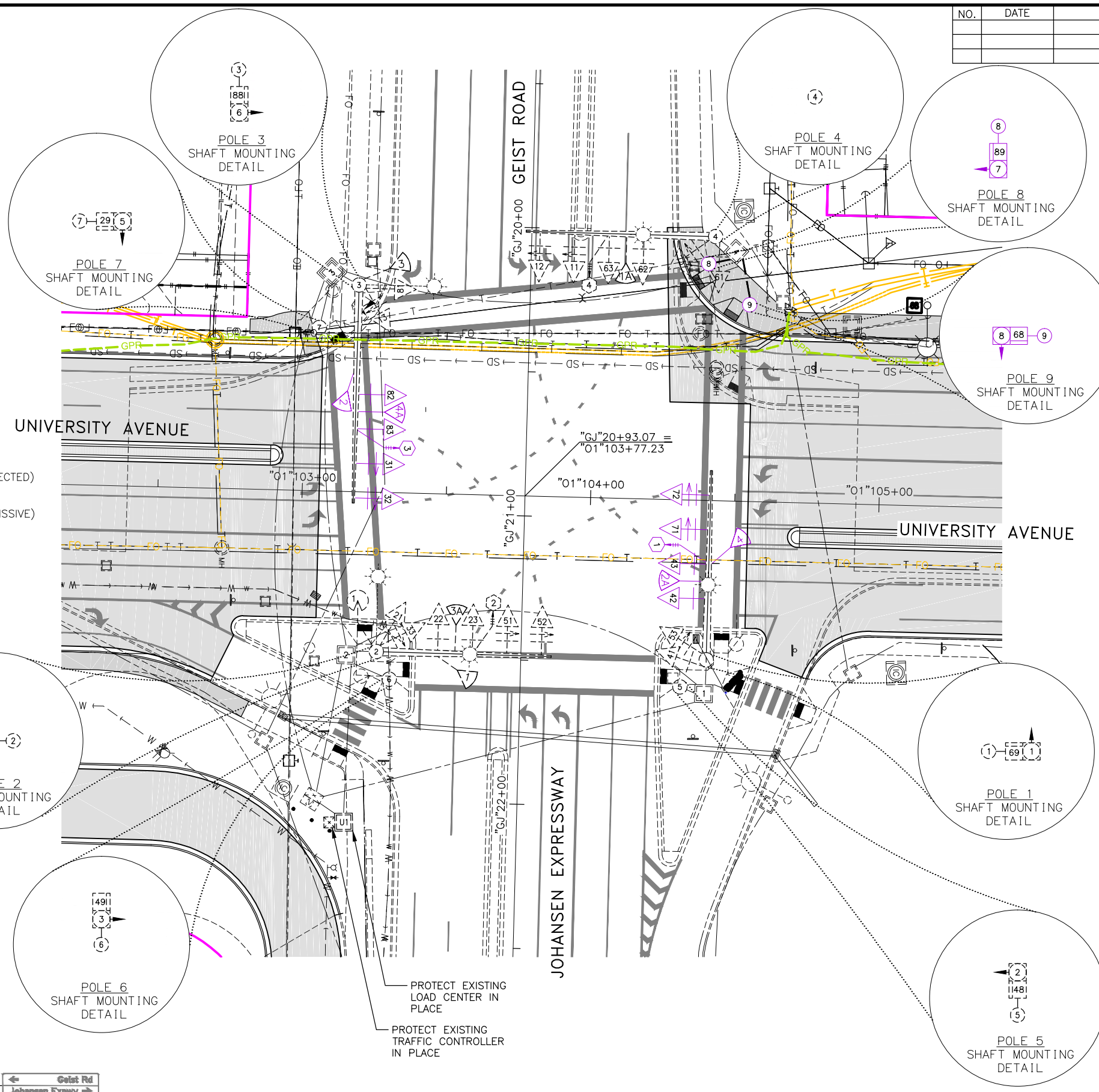
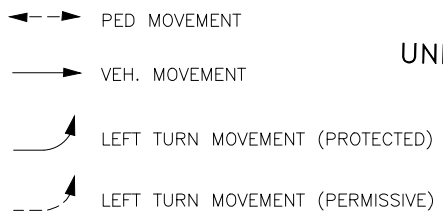
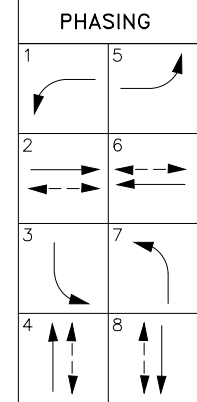
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VAULT SCHEDULE



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H29	H54

PHASE SEQUENCE



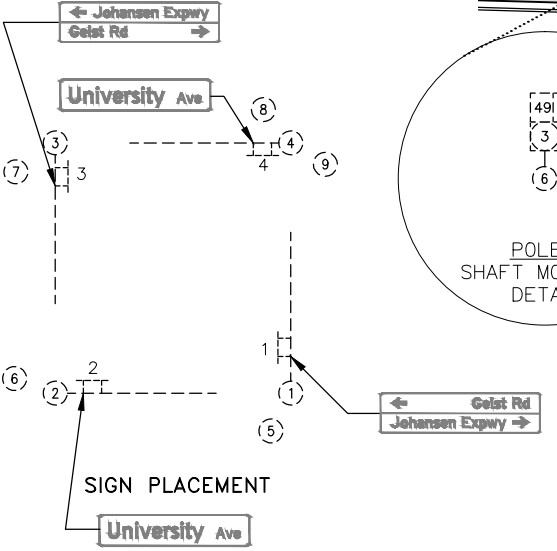
NOTES:

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE MAKING MODIFICATIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- EXISTING UNDERGROUND UTILITIES ARE NOT LOCATED. CONTRACTOR SHALL CONTACT 811 DIGLINE AND ARRANGE FOR FIELD LOCATES.
- SALVAGE EXISTING SIGNAL EQUIPMENT PER THE SPECIFICATIONS. EXISTING SIGNAL EQUIPMENT NOT REUSED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
- SIGNS DESIGNATED TO REMAIN WILL BE REPLACED AT NO ADDITIONAL COST TO OWNER IF DAMAGED.
- SIGNAL MODIFICATIONS FOR THIS INTERSECTION INCLUDES THE FOLLOWING:
 - REMOVE SPLIT PHASING. THIS REQUIRES RENUMBERING SIGNAL HEADS TO REMAIN. SEE TABLE BELOW FOR MORE INFORMATION.
 - INSTALL NEW SIGNAL HEADS AND EQUIPMENT ON THE MAST ARMS OF POLES 1 & 3.
 - RELOCATE EXISTING RADAR DETECTION SENSORS LOCATED ON THE MAST ARMS OF POLES 1 & 3.
 - INSTALL NEW PEDESTRIAN POLES 8 & 9.
 - REMOVE CABLES SERVICING SIGNAL EQUIPMENT AND RADAR SENSORS MOUNTED ON THE MAST ARMS OF POLES 1 & 3 BACK TO TRAFFIC CONTROLLER. REPULL NEW CABLES FOR NEW AND RELOCATED FACILITIES. SEE WIRING DIAGRAM ON SHEET H30 FOR MORE INFORMATION.
- REPAIR HOLES LEFT IN THE MAST ARMS DUE TO REMOVAL AND RELOCATION OF EQUIPMENT; PLUG WELD, GRIND SMOOTH, AND APPLY COATING AS PROVIDED FOR REPAIR OF DAMAGED COATINGS IN AASHTO M 36.

RENUMBER EXISTING SIGNAL HEADS

POLE	SIGNAL HEAD	
	EXISTING FACE NO.	PROPOSED FACE NO.
2	35	33
3	31	81
	38*	88*
4	45	73

* PEDESTRIAN SIGNAL HEAD



UNIVERSITY AND GEIST SIGNAL PLAN



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOTPF\University Avenue Traffic Design\ST-NORTH\Production\06173_N_H33_Geist_Signal-H29_Fri_Jun/08/18_06:37pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H30	H54

WIRING DIAGRAM CODING LEGEND

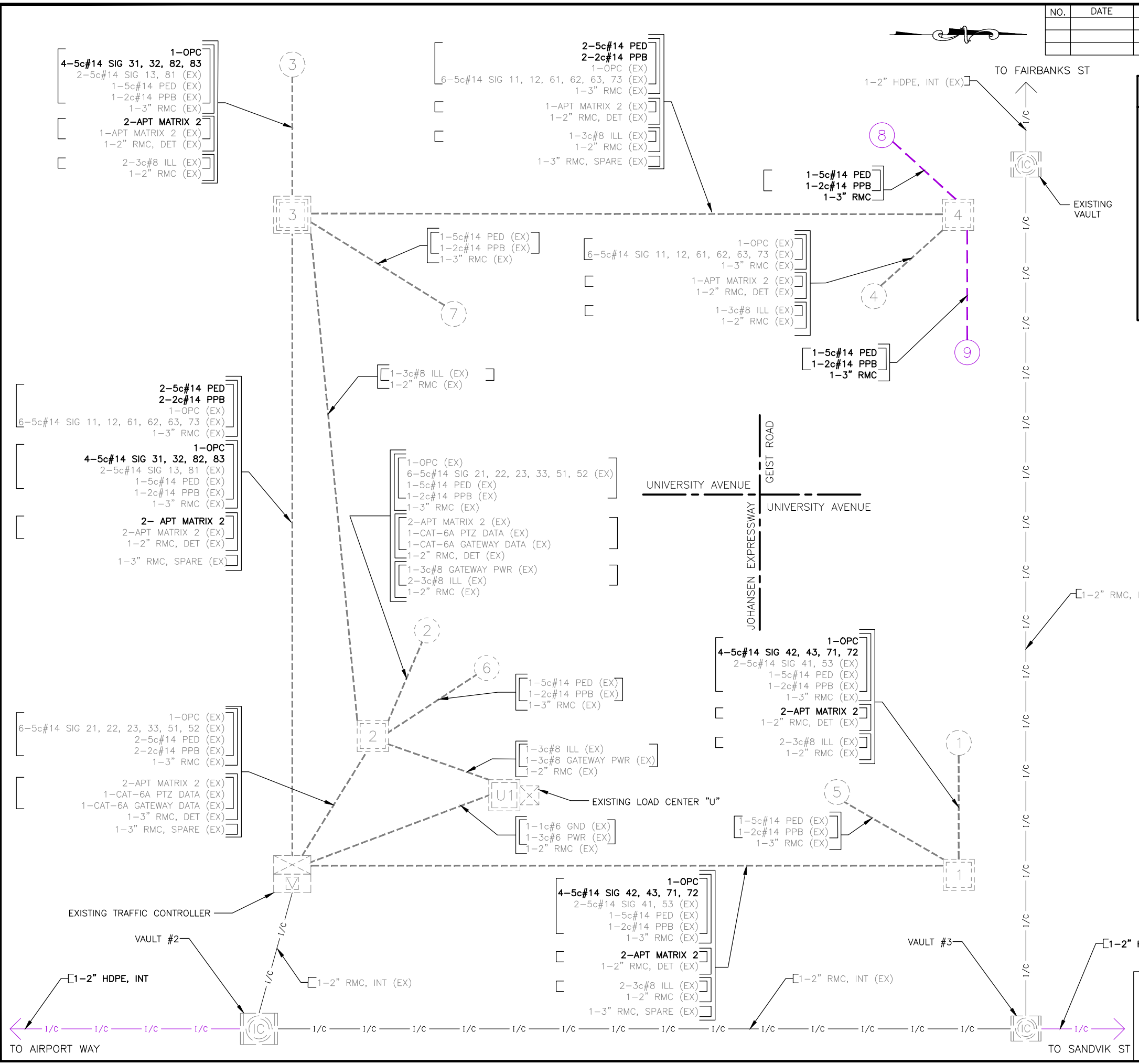
OPC = OPTICOM CABLE	5c#14 TRAFFIC SIGNALS
LL = LOOP LEAD-IN	7c#14 PROTECTED-PERMITTED SIGNALS
INT = INTERCONNECT	5c#14 PEDESTRIAN SIGNALS
PWR = POWER CONDUCTORS FOR SIGNAL CONTROLLER	2c#14 PEDESTRIAN PUSH-BUTTON
T = TRANSFORMER	3pr#18 } LOOP LEAD-IN CABLE & VDCT
PTZ = PAN, TILT, ZOOM CAMERA	6pr#18 }
GND = GROUND	9pr#18 }
ILL = ILLUMINATION	15pr#18 }
RMC = RIGID METAL CONDUIT	3c#8 ILLUMINATION
PVC = POLYVINYL CHLORIDE CONDUIT	3c#6 SIGNAL POWER
HDPE = HIGH DENSITY POLYETHYLENE	1c#8 BARE COPPER GROUND
PPB = PEDESTRIAN PUSH-BUTTON	1c#6 BARE COPPER GROUND
SIG# = SIGNAL HEAD NUMBER	18pr#19 PE-39 INTERCONNECT CABLE
PED = PEDESTRIAN SIGNAL	1c#6 BARE COPPER GROUND
DET = DETECTION CONDUIT	1c#6 RDET HOME RUN CABLE
F = FUTURE USE	CAT-6A DATA CABLE
RDET = RADAR DETECTION	SMFO SINGLE MODE FIBER OPTIC
EX = EXISTING TO REMAIN	
AAWF = ACTIVE ADVANCED WARNING FLASHER	

NOTES:

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE MAKING MODIFICATIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- EXCEPT FOR CONDUITS WITH FIBER OPTIC CABLE, INSTALL 1-1c#8 BARE COPPER GROUND CONDUCTOR IN ALL CONDUITS UNLESS ANOTHER GROUND CONDUCTOR IS SPECIFIED.
- REMOVE ALL EXISTING CABLES SERVICING SIGNAL EQUIPMENT AND RADAR SENSORS INSTALLED ON THE MAST ARM OF POLES 1 & 3, AND ANY UNUSED CABLES DESIGNATED BY THE ENGINEER. REPULL NEW CABLES FOR NEW AND RELOCATED FACILITIES, AS SHOWN, BACK TO EXISTING TRAFFIC CONTROLLER.

WIRING LEGEND:

- 1/c — INDICATES EXISTING INTERCONNECT CONDUIT RUN
- 1/c — INDICATES NEW INTERCONNECT CONDUIT RUN
- INDICATES EXISTING CONDUIT RUN
- INDICATES NEW RIGID METAL CONDUIT RUN(S)
- E --- INDICATES THE CONNECTION BETWEEN EXISTING AND NEW CONDUIT



UNIVERSITY AND GEIST
WIRING DIAGRAM



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H34_Geist Wire Diag-H30 Fri, Jun/08/18 06:37pm

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H35-H36-Geist Signal sched-H31 Fri Jun/08/18 06:37pm

POLE-POST DESIGN LOADING SCHEDULE

POLE NO.	CORNER	ILLUMINATION # ARM L. (FT.)	SIGNAL ARM L. (FT.)									REMARKS
				A	B	C	D	E	F	G		
1	NE	22'	60'	SIG. OR SIGN	SIGNAL	SIGNAL	SIGNAL	RADAR	RADAR	SIGNAL	SIGN	EX LUMINAIRE ARM @ 0' MOUNTING HEIGHT AT 40'
				LOC. OFFSET	57.2	45.2	33.2	32.4	27.2	21.2	12.0	
				LxW OR S.F.	11.50	11.50	11.50	1.00	1.00	11.50	25.00	
2	SE	LUMINAIRE ARM 1-22' LUMINAIRE ARM 2-22'	60'	SIG. OR SIGN	SIGNAL	SIGNAL	SIGNAL	RADAR	SIGNAL	RADAR	SIGN	EX LUMINAIRE ARM 1 @ 0' MOUNTING HEIGHT AT 40' EX LUMINAIRE ARM 2 @ 0' MOUNTING HEIGHT AT 40'
				LOC. OFFSET	57.2	45.2	33.2	27.2	21.2	19.7	12.3	
				LxW OR S.F.	11.50	11.50	11.50	1.00	11.50	11.50	20.00	
3	SW	22'	75'	SIG. OR SIGN	SIGNAL	SIGNAL	SIGNAL	RADAR	SIGNAL	RADAR	SIGN	EX LUMINAIRE ARM @ 270' MOUNTING HEIGHT AT 34'
				LOC. OFFSET	73.9	61.9	49.9	43.9	37.9	27.2	24.6	
				LxW OR S.F.	11.50	11.50	11.50	1.00	11.50	1.00	25.00	
4	NW	22'	65'	SIG. OR SIGN	SIGNAL	SIGNAL	SIGNAL	RADAR	SIGNAL	SIGN	EX LUMINAIRE ARM @ 0' MOUNTING HEIGHT AT 40'	
				LOC. OFFSET	60.7	48.7	36.7	30.7	24.7	15.7		
				LxW OR S.F.	11.50	11.50	11.50	1.00	11.50	20.00		

POLE-POST DESIGN LOADING SCHEDULE NOTES:

- BOTH SIGNAL AND ILLUMINATION MAST ARMS ARE ORIENTED IN THE SAME DIRECTION UNLESS OTHERWISE NOTED.
- ORIENT SIGNAL MAST ARM(S) 90° TO THE CL OF THE ROADWAY UNLESS NOTED OTHERWISE.

SIGNAL HEAD SCHEDULE

POLE/POST NO.	FACE NO.	INDICATIONS												MOUNTING			REMARKS
		12" BALL			12" ARROW			8" BALL			MAST ARM		SIDE MTNG. TYPE	TOP OF POST			
		R	Y	G	R	Y	FYA	G	R	Y	G	LOC. OFFSET			ELEV. PLUMB		
1	41	X	X	X												D	EXISTING
	53				L	L		L								D	EXISTING
	42	X	X	X							21.2	X					NEW
	43	X	X	X							33.2	X					NEW
	71				L	L		L			45.2	X					NEW
2	21	X	X	X												D	EXISTING
	33				L	L		L								D	EXISTING
	22	X	X	X							21.2	X					EXISTING
	23	X	X	X							33.2	X					EXISTING
	51				L	L		L			45.2	X					EXISTING
3	81	X	X	X												D	EXISTING
	13				L	L		L								D	EXISTING
	82	X	X	X							37.9	X					NEW
	83	X	X	X							49.9	X					NEW
	31				L	L		L			61.9	X					NEW
4	61	X	X	X												D	EXISTING
	73				L	L		L								D	EXISTING
	62	X	X	X							24.7	X					EXISTING
	63	X	X	X							36.7	X					EXISTING
	11				L	L		L			48.7	X					EXISTING
12				L	L		L			60.7	X					EXISTING	

SIGNAL HEAD SCHEDULE NOTES:

LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO CL OF SIGNAL POLE.

PED SIGNAL HEAD SCHEDULE

POLE/POST NO.	FACE NO.	MOUNTING TYPE		REMARKS
1	69	P		EXISTING
2	28	P		EXISTING
3	88	P		EXISTING
5	48	P		EXISTING
6	49	P		EXISTING
7	29	P		EXISTING
8	89	P		NEW
9	68	P		NEW

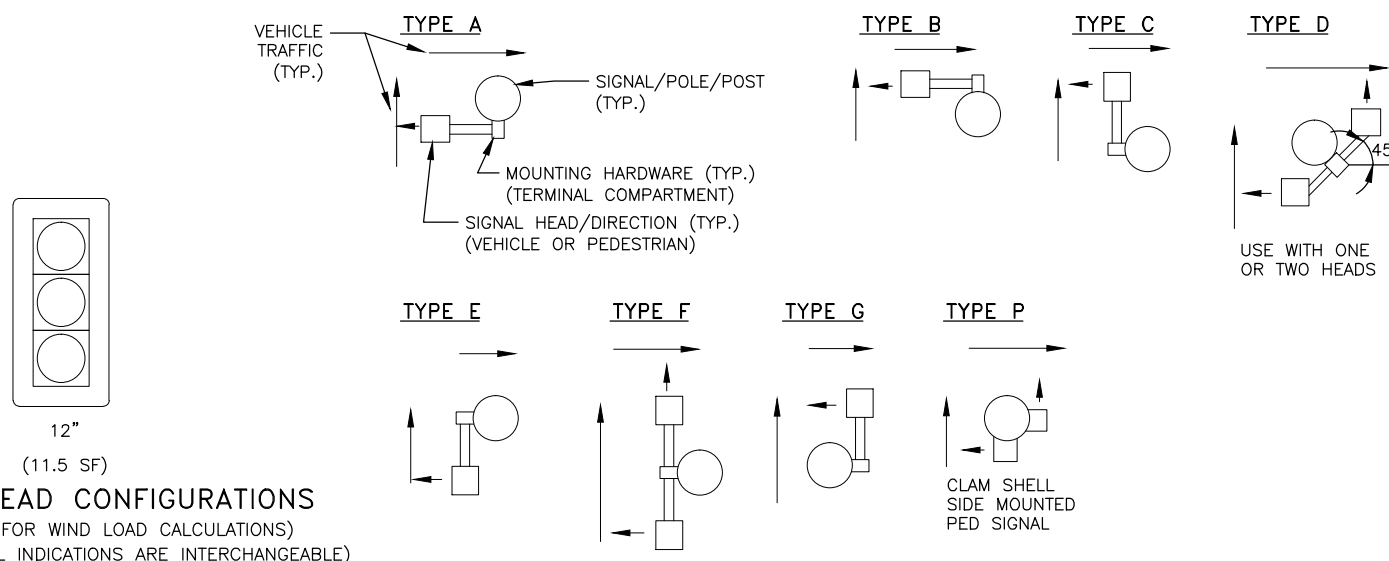
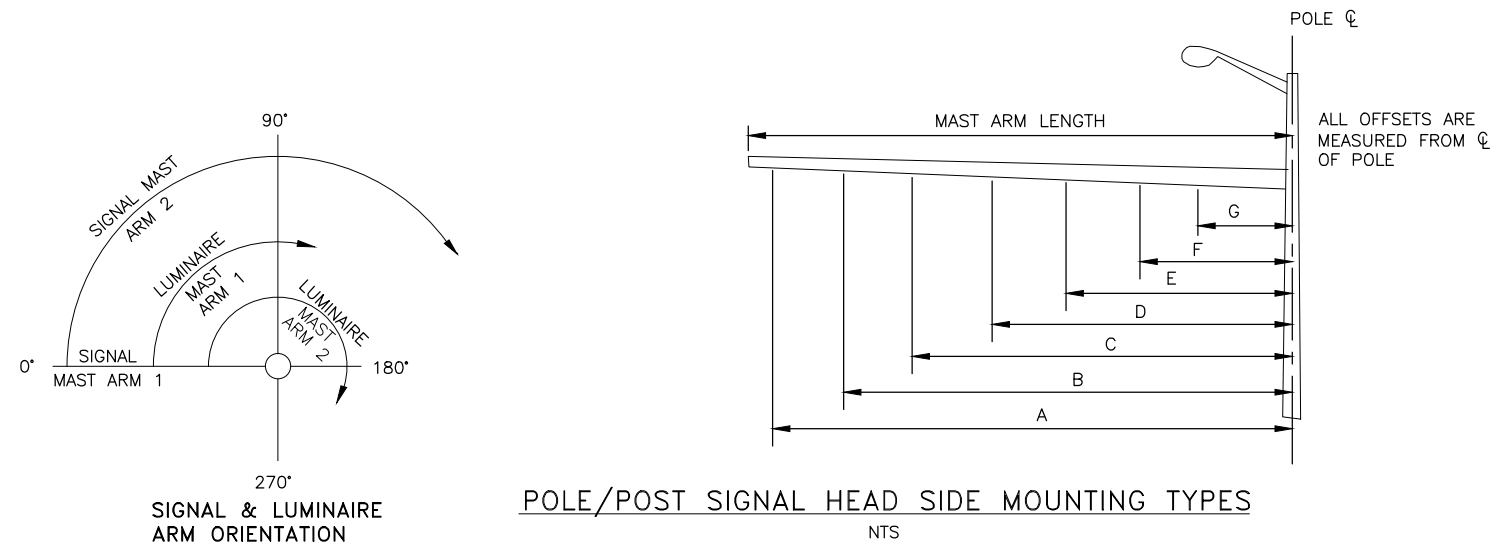
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H31	H54

SIGNAL SIGN SCHEDULE

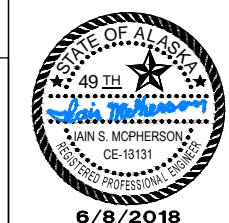
SIGN NO.	LOCATION		ASDS CODE	LEGEND	SIZE HxV (INCHES)	AREA (SQ FT)	BRACING/FRAMING		REMARKS
	POLE NO.	OFFSET					BRACED	FRAMED	
1	1	12.0	D3-102	<-- Geist Rd/ Johansen Expwy -->					EXISTING
2	2	12.3	D3-1	University Ave					EXISTING
3	3	24.6	D3-102	<-- Johansen Expwy/ Geist Rd -->					EXISTING
4	4	15.7	D3-1	University Ave					EXISTING

SIGNAL SIGN SCHEDULE NOTES:

LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO CL OF SIGNAL POLE.



UNIVERSITY AND GEIST
SIGNAL SCHEDULE 1 OF 2



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H32	H54

BASE & JUNCTION BOX SCHEDULE												
LOCATION		DESCRIPTION			BASE TYPE*			JUNCTION BOX TYPE				REMARKS
STATION	OFFSET	POLE NO.	JUNCTION BOX NO.	CONTROLLER	CIDH	P	A	IA	II	III	IV	
"01"	104+41.4	55.3' RT			X							EXISTING
"01"	103+27.1	55.3' RT			X							EXISTING
"01"	103+17.9	71.7' LT			X							EXISTING
"01"	104+41.0	91.6' LT			X							EXISTING
"01"	104+32.6	64.9' RT					X					EXISTING
"01"	103+31.7	64.7' RT					X					EXISTING
"01"	103+04.5	56.6' LT					X					EXISTING
"01"	104+38.9	82.1' LT					X					NEW
"01"	104+53.5	68.1' LT					X					NEW
"01"	104+42.6	65.3' RT	1					X				EXISTING
"01"	103+18.9	57.7' RT	2					X				EXISTING
"01"	103+10.1	74.3' LT	3							X		EXISTING
"01"	104+51.6	81.3' LT	4					X				EXISTING
"01"	103+14.8	114.7' RT	U1					X				EXISTING
"01"	103+06.0	107.0' RT			X							EXISTING

*P = PRECAST BASE (FOUNDATION)
A = TYPE "A" SIGNAL BASE POST FOUNDATION. SEE STD. DWG, T-31.00
CIDH = CAST IN DRILLED HOLE

RADAR DETECTION EQUIPMENT-NEW	
QTY	DESCRIPTION
0	SMARTSENSOR ADVANCE EXTENDED RANGE (WX-SS-200E)
0	SMARTSENSOR MATRIX (WX-SS-225)
0	PELCO MOUNT (WX-SS-611)
4	SMARTSENSOR 6-CONDUCTOR CABLE (WX-SS-704-XXX)
0	SMARTSENSOR ADVANCE (WX-SS-200V)

PEDESTRIAN DETECTION SCHEDULE			
POLE	PUSH BUTTON	PHASE	REMARKS
1	1	6	EXISTING
5	2	4	EXISTING
6	3	4	EXISTING
2	4	2	EXISTING
7	5	2	EXISTING
3	6	8	EXISTING
8	7	8	NEW, SEE NOTE 1
9	8	6	NEW, SEE NOTE 2

- PEDESTRIAN DETECTION NOTES:**
- INSTALL R10-3eL SIGN ABOVE PEDESTRIAN PUSH BUTTON. SIGN INSTALLATION SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.
 - INSTALL R10-3eR SIGN ABOVE PEDESTRIAN PUSH BUTTON. SIGN INSTALLATION SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

OPTICOM DETECTOR SCHEDULE					
LOCATION	DET. NO.	PHASE CALL	FACING DIR.	PREEMPTOR PRIORITY	REMARKS
ON TOP OF SIGNAL HEAD 43	1	4, 7	SOUTH		NEW
ON TOP OF SIGNAL HEAD 23	2	2, 5	WEST		EXISTING
ON TOP OF SIGNAL HEAD 83	3	3, 8	NORTH		NEW
ON TOP OF SIGNAL HEAD 63	4	1, 6	EAST		EXISTING

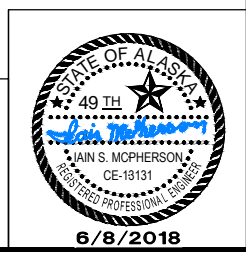
—# OPTICOM DETECTOR NUMBER

RADAR DETECTION SCHEDULE							
DET. NO.	PHASE CALL	TYPE	FACING DIR.	POLE NO.	LOCATION	RADAR TYPE	REMARKS
1	1&6	STOP BAR	NORTHEAST	2	SIGNAL MAST ARM	SMARTSENSOR MATRIX	EXISTING
2	4&7	STOP BAR	SOUTHEAST	3	SIGNAL MAST ARM	SMARTSENSOR MATRIX	EXISTING, RELOCATE TO OFFSET SHOWN IN COLUMN D OF POLE-POST DESIGN LOADING SCHEDULE
3	2&5	STOP BAR	NORTHWEST	3	SIGNAL SHAFT	SMARTSENSOR MATRIX	EXISTING
4	3&8	STOP BAR	NORTHWEST	1	SIGNAL MAST ARM	SMARTSENSOR MATRIX	EXISTING, RELOCATE TO OFFSET SHOWN IN COLUMN D OF POLE-POST DESIGN LOADING SCHEDULE
1A	6	ADVANCE	EAST	4	SIGNAL MAST ARM	SMARTSENSOR ADVANCE EXTENDED RANGE	EXISTING
2A	4	ADVANCE	SOUTH	1	SIGNAL MAST ARM	SMARTSENSOR ADVANCE EXTENDED RANGE	EXISTING, RELOCATE TO OFFSET SHOWN IN COLUMN E OF POLE-POST DESIGN LOADING SCHEDULE
3A	2	ADVANCE	WEST	2	SIGNAL MAST ARM	SMARTSENSOR ADVANCE EXTENDED RANGE	EXISTING
4A	8	ADVANCE	NORTH	3	SIGNAL MAST ARM	SMARTSENSOR ADVANCE EXTENDED RANGE	EXISTING, RELOCATE TO OFFSET SHOWN IN COLUMN F OF POLE-POST DESIGN LOADING SCHEDULE

—# RADAR DETECTOR NUMBER

FLASH PROGRAM COLOR								
PHASE	1	2	3	4	5	6	7	8
COLOR	R	R	R	R	R	R	R	R

UNIVERSITY AND GEIST
SIGNAL SCHEDULE 2 OF 2



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\ST-NORTH\Production\06173_N_H35-H36-H36_Geist_Signal Sched-H32 Fri, Jun/08/18 06:37pm

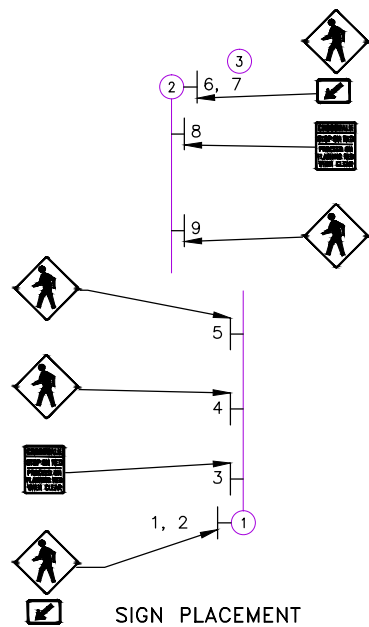
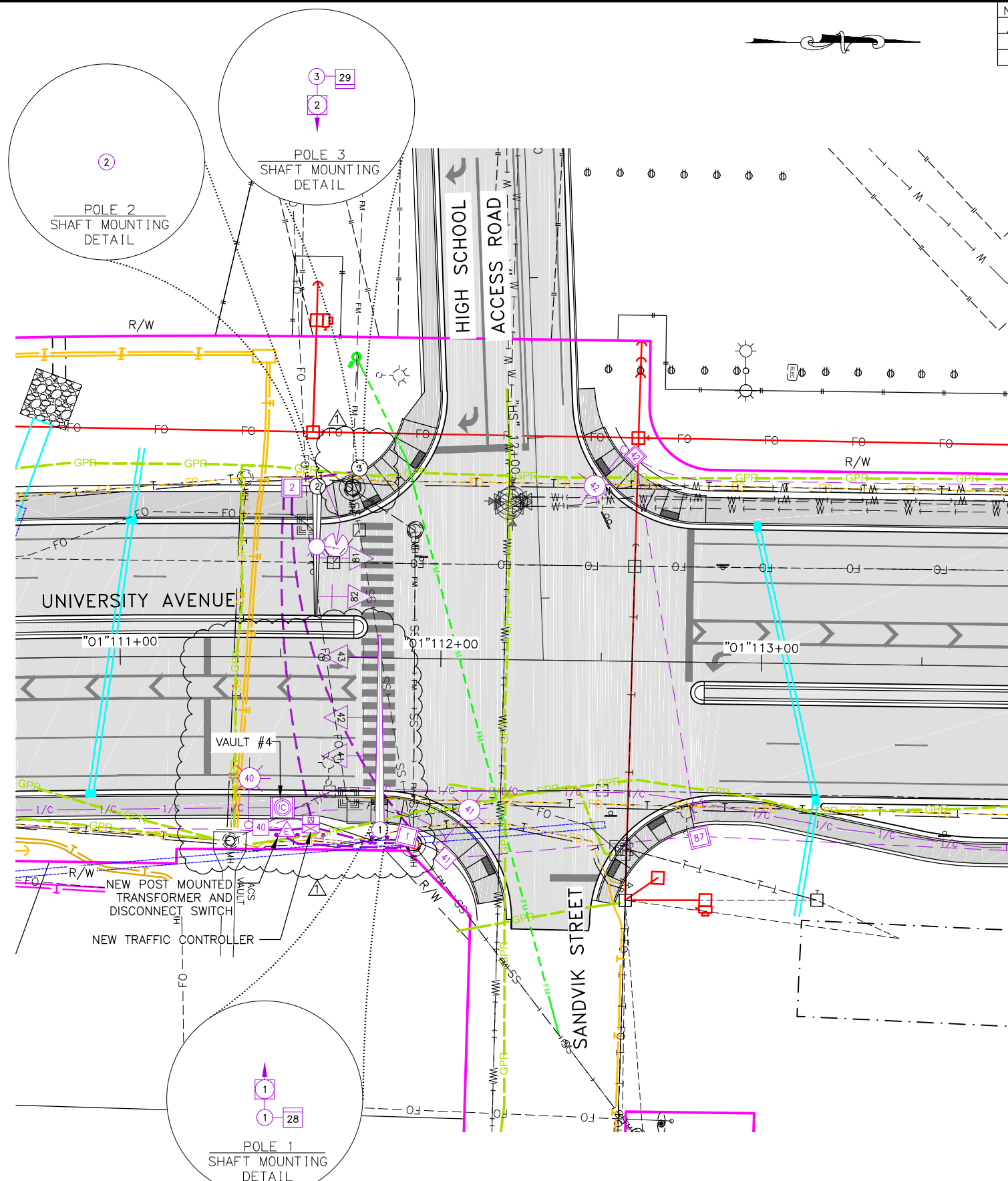
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	06/08/2018	ADJUSTED POLE LOCATIONS TO AVOID GPR ADJUSTED UTILITIES	ALASKA	0617012/NFHWY00270	2018	H33	H54

NOTES:

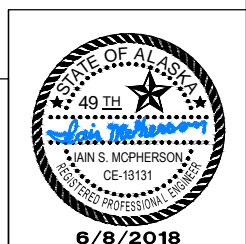
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- EXISTING UNDERGROUND UTILITIES ARE NOT LOCATED. CONTRACTOR SHALL CONTACT 811 DIGLINE AND ARRANGE FOR FIELD LOCATES.
- SEE SHEETS H18-H20 AND H23 FOR SIGNAL POWER ROUTING TO THE SANDVIK SIGNAL CONTROLLER.
- INSTALLATION OF NEW SIGNS ON TRAFFIC SIGNAL STRUCTURES WILL BE PAID FOR UNDER PAY ITEM 615(1).
- INSTALL NEW SIGNAL CONTROLLER TRANSFORMER AND DISCONNECT AS SHOWN. PAYMENT SHALL BE MADE UNDER PAY ITEM 661(6) TRANSFORMERS, 5KVA. SEE INSTALLATION DETAIL ON SHEET H59 OF THE UNIVERSITY AVE SEGMENT II PLANS.
- SEE SHEET H26 FOR INSTALLATION LOCATION OF JUNCTION BOXES 40, 41, 42 & 87. PAYMENT FOR THESE JUNCTION BOXES SHALL BE MADE UNDER PAY ITEM 660(3) HIGHWAY LIGHTING SYSTEM COMPLETE.
- INSTALL BOLLARD POSTS PER DETAIL SHEET H44 AT THE FOLLOWING LOCATIONS:
 - 111+49.1 55.6 RT
 - 111+55.9 55.7 RT
 - 111+64.0 55.5 RT
 - 111+79.4 55.9 RT
 - 111+84.0 55.9 RT

PHASING	
1	5
2	6
3	7
4	8

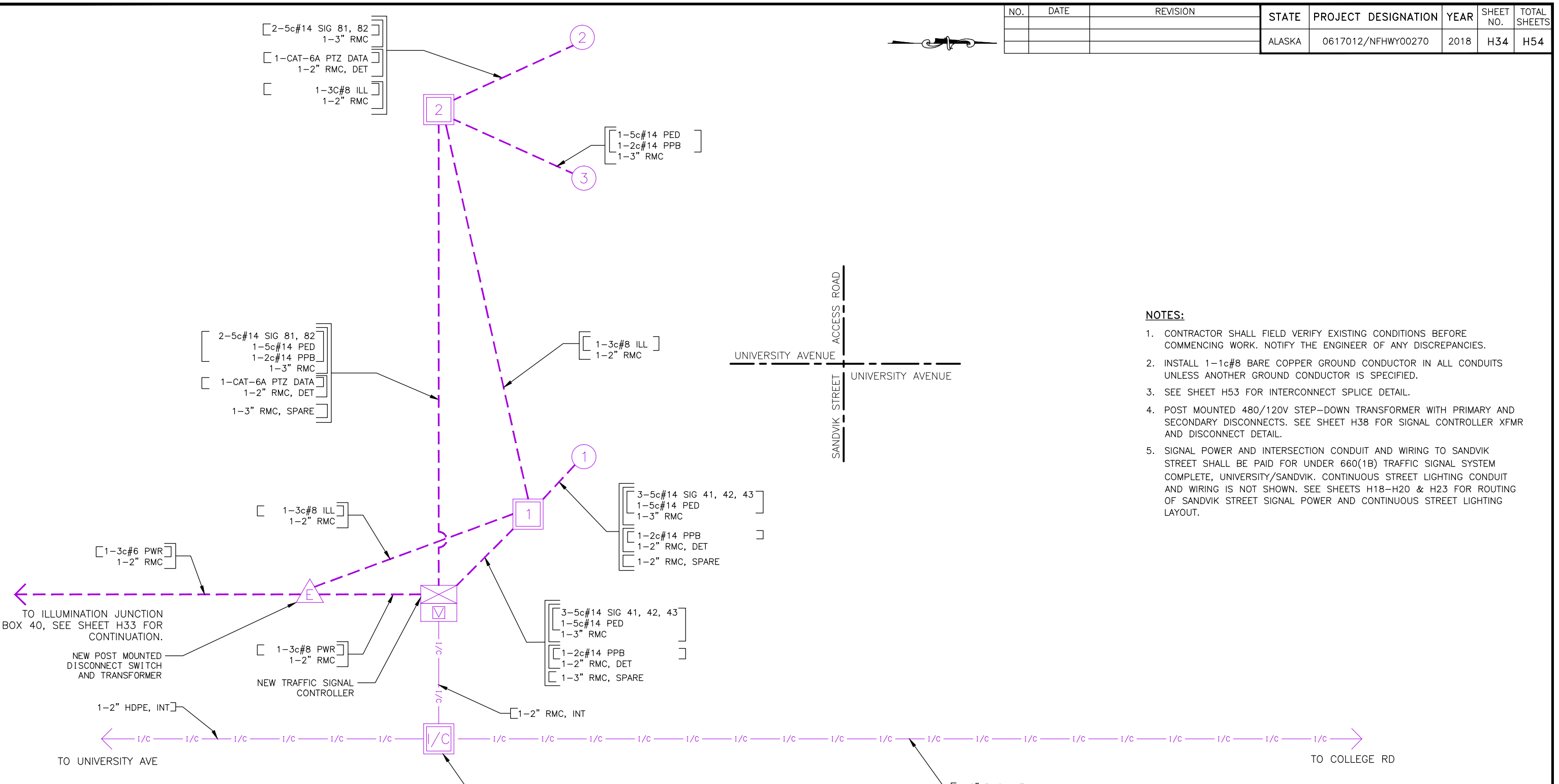
- PED. MOVEMENT
- VEH. MOVEMENT
- LEFT TURN MOVEMENT (PROTECTED)
- LEFT TURN MOVEMENT (PERMISSIVE)



UNIVERSITY AND SANDVIK
PEDESTRIAN HYBRID BEACON
SIGNAL PLAN



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H34	H54



- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - INSTALL 1-1c#8 BARE COPPER GROUND CONDUCTOR IN ALL CONDUITS UNLESS ANOTHER GROUND CONDUCTOR IS SPECIFIED.
 - SEE SHEET H53 FOR INTERCONNECT SPLICE DETAIL.
 - POST MOUNTED 480/120V STEP-DOWN TRANSFORMER WITH PRIMARY AND SECONDARY DISCONNECTS. SEE SHEET H38 FOR SIGNAL CONTROLLER XFMR AND DISCONNECT DETAIL.
 - SIGNAL POWER AND INTERSECTION CONDUIT AND WIRING TO SANDVIK STREET SHALL BE PAID FOR UNDER 660(1B) TRAFFIC SIGNAL SYSTEM COMPLETE, UNIVERSITY/SANDVIK. CONTINUOUS STREET LIGHTING CONDUIT AND WIRING IS NOT SHOWN. SEE SHEETS H18-H20 & H23 FOR ROUTING OF SANDVIK STREET SIGNAL POWER AND CONTINUOUS STREET LIGHTING LAYOUT.

WIRING DIAGRAM CODING LEGEND

OPC = OPTICOM CABLE	5c#14 TRAFFIC SIGNALS
LL = LOOP LEAD-IN	7c#14 PROTECTED-PERMITTED SIGNALS
INT = INTERCONNECT	5c#14 PEDESTRIAN SIGNALS
PWR = POWER CONDUCTORS FOR SIGNAL CONTROLLER	2c#14 PEDESTRIAN PUSH-BUTTON
T = TRANSFORMER	3pr#18 } LOOP LEAD-IN CABLE & VD ET
PTZ = PAN, TILT, ZOOM CAMERA	6pr#18 }
GND = GROUND	9pr#18 }
ILL = ILLUMINATION	15pr#18 }
RMC = RIGID METAL CONDUIT	3c#8 ILLUMINATION
PVC = POLYVINYL CHLORIDE CONDUIT	3c#6 SIGNAL POWER
HDPE = HIGH DENSITY POLYETHYLENE	1c#8 BARE COPPER GROUND
PPB = PEDESTRIAN PUSH-BUTTON	18pr#19 PE-39 INTERCONNECT CABLE
SIG# = SIGNAL HEAD NUMBER	1c#6 BARE COPPER GROUND
PED = PEDESTRIAN SIGNAL	APT MATRIX 2 RDET HOME RUN CABLE
DET = DETECTION CONDUIT	CAT-6A PTZ DATA
F = FUTURE USE	SMFO SINGLE MODE FIBER OPTIC
RDET = RADAR DETECTION	
EX = EXISTING	
AAWF = ACTIVE ADVANCED WARNING FLASHER	

- WIRING LEGEND:**
- 1/c — INDICATES NEW INTERCONNECT CONDUIT RUN
 - - - - - INDICATES EXISTING CONDUIT RUN
 - - - - - INDICATES NEW RIGID METAL CONDUIT RUN(S)
 - E - INDICATES THE CONNECTION BETWEEN EXISTING AND NEW CONDUIT

UNIVERSITY AND SANDVIK PHB WIRING DIAGRAM

6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOT\F\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H38_Sandvik Wire Diag-H34 Fri, Jun/08/18 06:42pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	06/08/2018	ADJUSTED POLE LOCATIONS TO AVOID GPR ADJUSTED UTILITIES	ALASKA	0617012/NFHWY00270	2018	H35	H54

SIGNAL SIGN SCHEDULE									
SIGN NO.	LOCATION		ASDS CODE	LEGEND	SIZE HxV (INCHES)	AREA (SQ FT)	BRACING/FRAMING		REMARKS
	POLE NO.	OFFSET					BRACED	FRAMED	
1	1	0.0	W11-2	PEDESTRIAN WARNING SIGN	36X36	9.0			SHAFT MOUNT PER DETAIL ON H16
2	1	0.0	W16-7PL	(LEFT-DOWN) ARROW	24X12	2.0			SHAFT MOUNT BELOW W11-2 PER DETAIL ON H16
3	1	13.4	R10-23a	CROSSWALK STOP ON RED...	30x36	7.5			
4	1	29.1	W11-2	PEDESTRIAN WARNING SIGN	36X36	9.0			
5	1	48.6	W11-2	PEDESTRIAN WARNING SIGN	36X36	9.0			
6	2	0.0	W11-2	PEDESTRIAN WARNING SIGN	36X36	9.0			SHAFT MOUNT PER DETAIL ON H16
7	2	0.0	W16-7PL	(LEFT-DOWN) ARROW	24X12	2.0			SHAFT MOUNT BELOW W11-2 PER DETAIL ON H16
8	2	13.0	R10-23a	CROSSWALK STOP ON RED...	30x36	7.5			
9	2	28.2	W11-2	PEDESTRIAN WARNING SIGN	36X36	9.0			
						64.0	SUBTOTAL SIGNAL SIGNS		

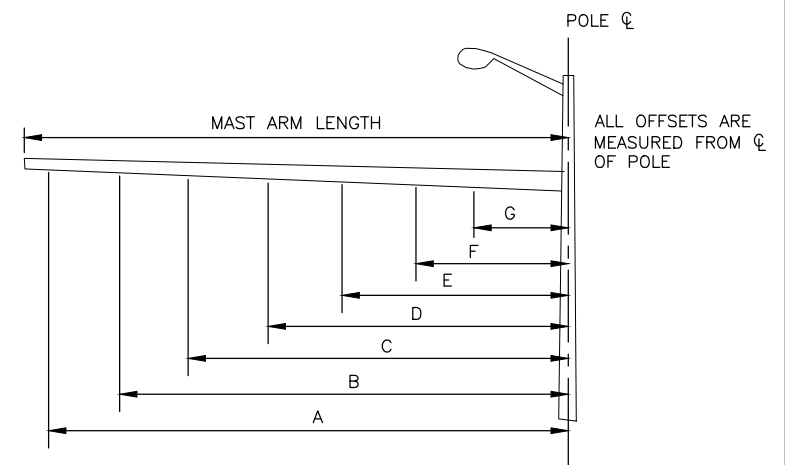
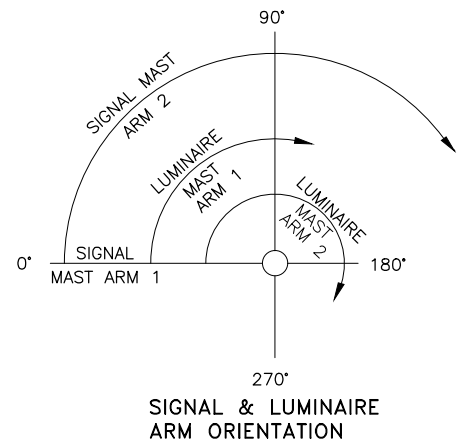
SIGNAL SIGN SCHEDULE NOTES:

1. LOCATION OFFSETS ARE FROM CENTER OF SIGN TO ϕ OF SIGNAL POLE.
2. FOR SHAFT MOUNTED SIGN PANELS SEE STD DWG S-05.01 FOR REQUIREMENTS FOR PANEL SEPARATION AND MOUNTING HEIGHT.

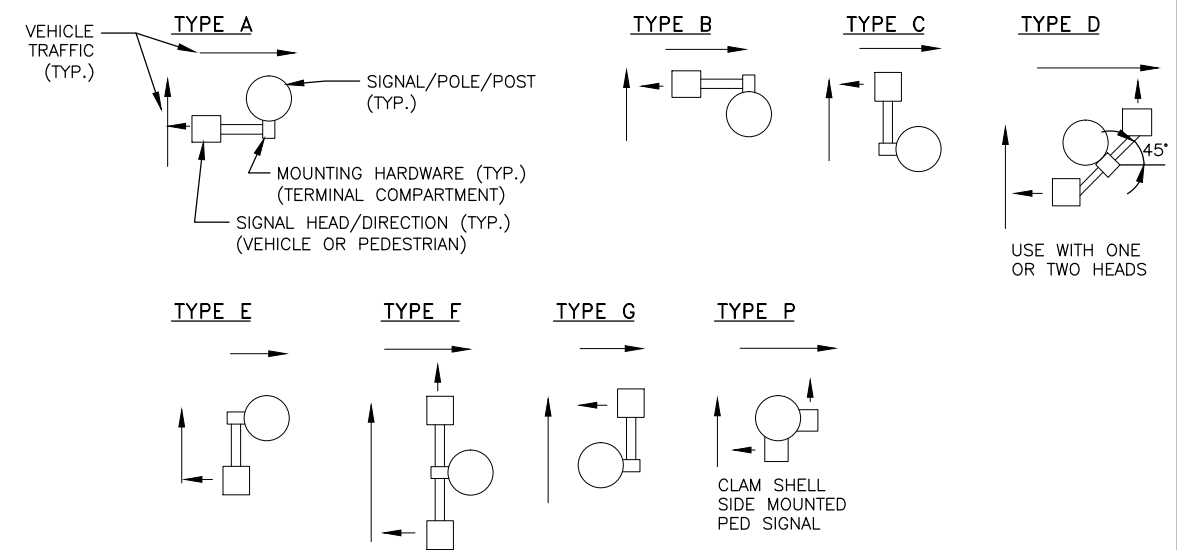
POLE-POST DESIGN LOADING SCHEDULE												
POLE NO.	CORNER	ILLUMINATION # ARM L. (FT.)	SIGNAL ARM L. (FT.)	A	B	C	D	E	F	G	REMARKS	
												SIG. OR SIGN
1	SE		60'	SIG. OR SIGN	SIGNAL	SIGN	SIGNAL	SIGN	SIGNAL	SIGN		
				LOC. OFFSET	54.1	48.6	35.1	29.1	23.1	13.4		
2	SW	22'	40'	SIG. OR SIGN	SIGNAL	SIGN	SIGNAL	SIGN				
				LOC. OFFSET	34.2	28.2	22.2	13.0				
				LxW OR S.F.	12.9	9.0	12.9	9.0	12.9	7.5		
				LxW OR S.F.	12.9	9.0	12.9	7.5			LUMINAIRE ARM @ 0' MOUNTING HEIGHT AT 33'	

POLE-POST DESIGN LOADING SCHEDULE NOTES:

1. BOTH SIGNAL AND ILLUMINATION MAST ARMS ARE ORIENTED IN THE SAME DIRECTION UNLESS OTHERWISE NOTED.
2. ORIENT SIGNAL MAST ARM(S) 90° TO THE ϕ OF THE ROADWAY UNLESS NOTED OTHERWISE.



POLE/POST SIGNAL HEAD SIDE MOUNTING TYPES

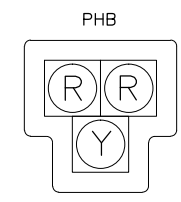


SIGNAL HEAD SCHEDULE													
POLE/POST NO.	FACE NO.	INDICATIONS						MOUNTING				REMARKS	
		12" BALL		12" ARROW		8" BALL		MAST ARM		SIDE MTNG. TYPE	TOP OF POST		
		R	Y	G	R	Y	FYA	G	R				Y
1	41	x2	X						23.1	X			
	42	x2	X						35.1	X			
	43	x2	X						54.1	X			
2	81	x2	X						22.2	X			
	82	x2	X						34.2	X			

SIGNAL HEAD SCHEDULE NOTES:

1. LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO ϕ OF SIGNAL POLE.
2. FYA = FLASHING YELLOW ARROW.
3. x2 = TWO SIGNAL HEADS

PED SIGNAL HEAD SCHEDULE			
POLE/POST NO.	FACE NO.	MOUNTING TYPE	REMARKS
1	28	P	
3	29	P	



12" (12.9 SF)

SIGNAL HEAD CONFIGURATION
(AREAS ARE FOR WIND LOAD CALCULATIONS)
(ARROWS AND BALL INDICATIONS ARE INTERCHANGEABLE)

UNIVERSITY AND SANDVIK PHB SCHEDULE 1 OF 2



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102 Z:\PROJECTS\DOTPF\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H39-H40_Sandvik Signal sched-H35 Fri, Jun/08/18 06:42pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	06/08/2018	ADJUSTED LOCATIONS TO AVOID GPR ADJUSTED UTILITIES	ALASKA	0617012/NFHWY00270	2018	H36	H54

BASE & JUNCTION BOX SCHEDULE												
LOCATION		DESCRIPTION			BASE TYPE*			JUNCTION BOX TYPE				REMARKS
STATION	OFFSET	POLE NO.	JUNCTION BOX NO.	CONTROLLER	CIDH	P	A	IA	II	III	IV	
"01"	111+81.6	53.6' RT	1									
"01"	111+60.8	53.3' LT	2									
"01"	111+73.9	59.1' LT	3									
"01"	111+88.9	53.3' RT		1					X			SEE NOTE 1
"01"	111+52.8	52.9' LT		2					X			SEE NOTE 1
"01"	111+60.0	52.2' RT			X							

*P = PRECAST BASE (FOUNDATION)
A = TYPE "A" SIGNAL BASE POST FOUNDATION. SEE STD. DWG, T-31.00
CIDH = CAST IN DRILLED HOLE

NOTES:

1. MAINTAIN 5' MINIMUM DISTANCE FROM SIGNAL POLE FOUNDATION.

PEDESTRIAN DETECTION SCHEDULE			
POLE	PUSH BUTTON	PHASE	REMARKS
1	1	2	SEE NOTE 2
3	2	2	SEE NOTE 1

PEDESTRIAN DETECTION NOTES:

1. INSTALL R10-3eL SIGN ABOVE PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.
2. INSTALL R10-3eR SIGN ABOVE PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

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Z:\PROJECTS\DOTPF\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H39-H40_Sandvik Signal sched-H36 Fri, Jun/08/18 06:42pm

UNIVERSITY AND
SANDVIK PHB
SCHEDULE 2 OF 2



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H37	H54

LOAD CENTER "GJ" (EXISTING)

TYPE 1 LOAD CENTER, LOCATION: "GJ" STA. 25+29, 90' RT.
SERVICE LOCATION: "GJ" STA. 25+38, 87' RT. APPROX. DISTANCE: 10'
240/480V SINGLE PHASE SERVICE
100 AMP MAIN BREAKER, 10,000 AIC MIN.

CIRCUIT	BRANCH BREAKER	PURPOSE	CONTACTOR	LOAD
GJ1	20 AMP, 2P, 480V	FUTURE LIGHTING	30 AMP	
GJ2	20 AMP, 2P, 480V	FUTURE LIGHTING	30 AMP	
GJ3	20 AMP, 2P, 480V	LIGHTING	30 AMP	4.4 AMPS
GJ4	20 AMP, 2P, 480V	LIGHTING	30 AMP	7.1 AMPS
GJ5	XX AMP, 2P, 480V	FUTURE TRAFFIC CONTR.	N/A	
GJ6	15 AMP, 2P, 480V	SPD FEEDBACK SIGN	N/A	2.1 AMPS
GJ7	15 AMP, 1P, 240V	LIGHTING CONTACTOR	N/A	0.1 AMPS
GJ8	20 AMP, 2P, 480V	EXISTING HPS LIGHTING	30 AMP	6.3 AMPS
GJ9	20 AMP, 2P, 480V	EXISTING HPS LIGHTING	30 AMP	8.4 AMPS
GJ10	15 AMP, 1P, 240V	LIGHTING CONTACTOR	N/A	0.1 AMPS
TOTAL LOAD				28.4 AMPS
NEC TOTAL LOAD (125%)				35.5 AMPS
DEMAND				17.0 KVA

NOTES:

- LOAD CENTER GJ PROVIDED UNDER PHASE 1A PROJECT AND IS ASSUMED TO BE EXISTING. REVISE THE LOAD CENTER AS INDICATED.
- UPDATE AND REPLACE EXISTING CIRCUIT DIRECTORY.
- ADDITIONAL LOAD IS CONNECTED TO LOAD CENTER GJ AS PART OF UNIVERSITY AVE SEGMENT 1 NORTH WORK. COORDINATE WITH GVEA TO DETERMINE IF EXISTING 240/480V, 15 KVA SERVICE TRANSFORMER REQUIRES REPLACEMENT DUE TO ADDITIONAL LOAD.
- PROVIDE EQUIPMENT GROUNDING CONDUCTORS WITH ALL FEEDERS AND BRANCH CIRCUITS. TERMINATE EACH END ON SUITABLE LUG, BUS OR BUSING. SIZE EQUIPMENT GROUNDING CONDUCTORS IN ACCORDANCE WITH NEC AND ADOT PROJECT SPECIFICATION SECTION 660 AND 661, UNLESS OTHERWISE INDICATED, BUT NOT SMALLER THAN NO. 8 AWG.
- CIRCUIT GJ5: PROVIDE NEW BREAKERS; SIZE AS INDICATED IN REVISED LOAD CENTER GJ SCHEDULE.
- CIRCUIT GJ8: AS INDICATED IN ILLUMINATION AND INTERCONNECT PLANS, EXISTING HPS LIGHTING ARE TO BE DEMOLISHED. DEMOLISH EXISTING CIRCUIT GJ8 BACK TO LOAD CENTER BRANCH CIRCUIT BREAKER, INCLUDING CONDUCTOR ROUTED THROUGH THIS LOAD CENTERS EXTERIOR MOUNTED LIGHTING CONTACTOR.

LOAD CENTER "GJ" (REVISED)

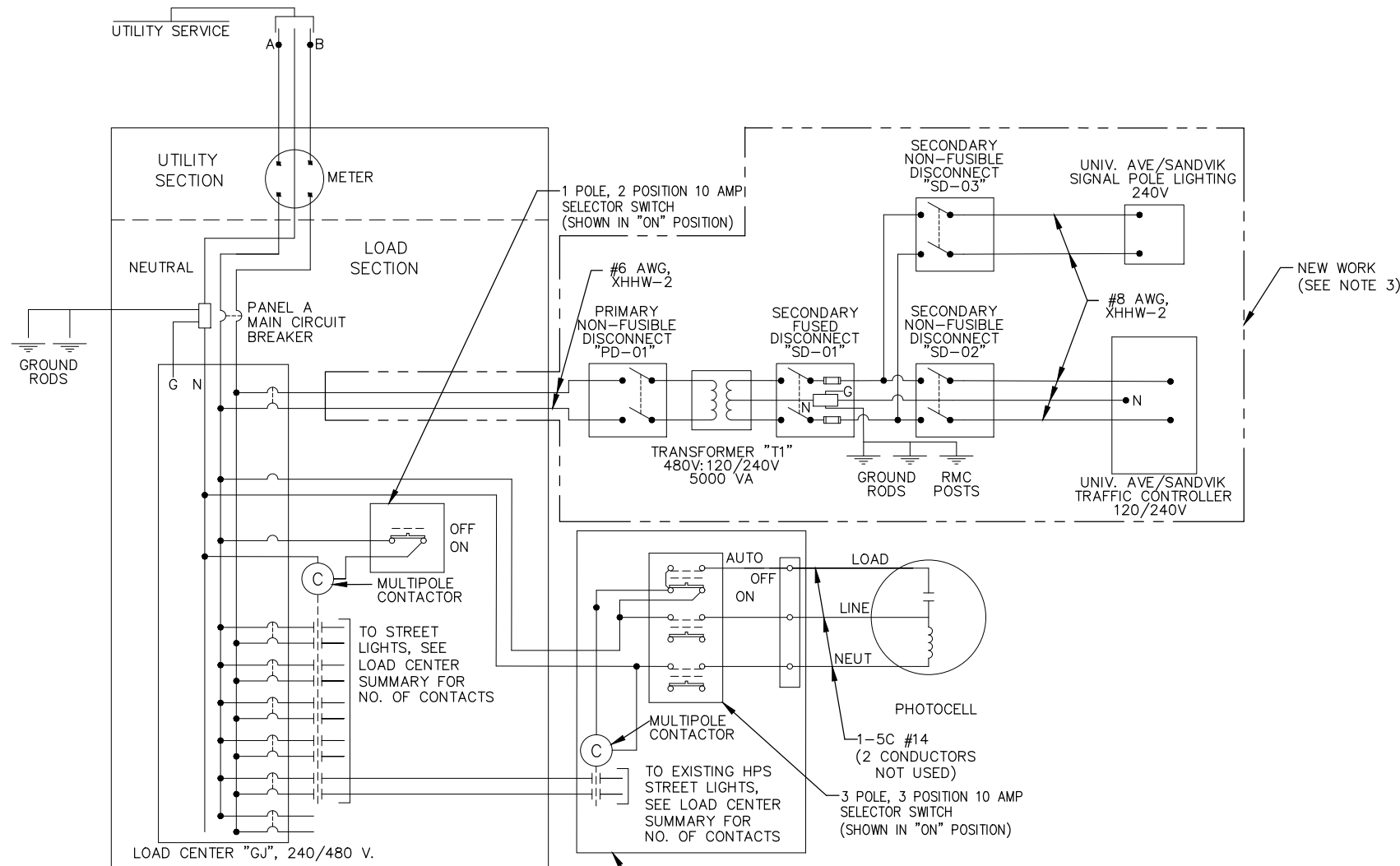
TYPE 1 LOAD CENTER, LOCATION: "GJ" STA. 25+29, 90' RT.
SERVICE LOCATION: "GJ" STA. 25+38, 87' RT. APPROX. DISTANCE: 10'
240/480V SINGLE PHASE SERVICE
100 AMP MAIN BREAKER, 10,000 AIC MIN.

CIRCUIT	BRANCH BREAKER	PURPOSE	CONTACTOR	LOAD
GJ1	20 AMP, 2P, 480V	LIGHTING	30 AMP	4.8 AMPS
GJ2	20 AMP, 2P, 480V	LIGHTING	30 AMP	5.6 AMPS
GJ3	20 AMP, 2P, 480V	LIGHTING	30 AMP	7.0 AMPS
GJ4	20 AMP, 2P, 480V	LIGHTING	30 AMP	7.1 AMPS
GJ5	30 AMP, 2P, 480V	LIGHTING, TRAFFIC CTRL	N/A	7.4 AMPS
GJ6	15 AMP, 2P, 480V	SPD FEEDBACK SIGN	N/A	2.1 AMPS
GJ7	15 AMP, 1P, 240V	LIGHTING CONTACTOR	N/A	0.1 AMPS
GJ8	20 AMP, 2P, 480V	SPARE	30 AMP	
GJ9	20 AMP, 2P, 480V	EXISTING HPS LIGHTING	30 AMP	6.3 AMPS
GJ10	15 AMP, 1P, 240V	LIGHTING CONTACTOR	N/A	0.1 AMPS
TOTAL LOAD				40.7 AMPS
NEC TOTAL LOAD (125%)				50.9 AMPS
DEMAND				24.4 KVA
SEE NOTE 5 AND NOTE 6				

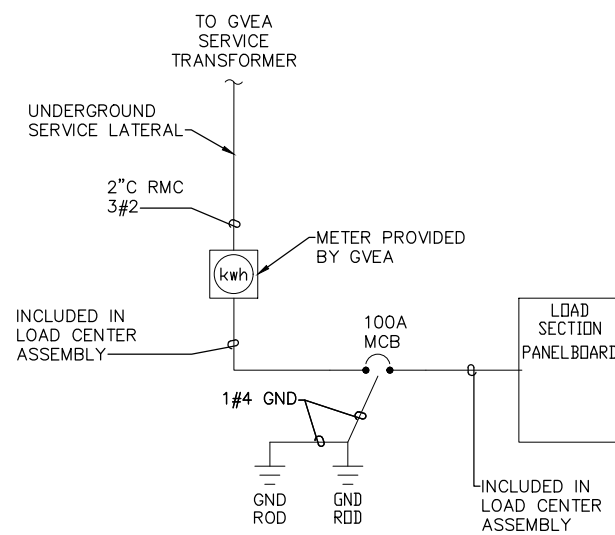
LOAD CENTER SUMMARY AND LIGHTING DETAILS



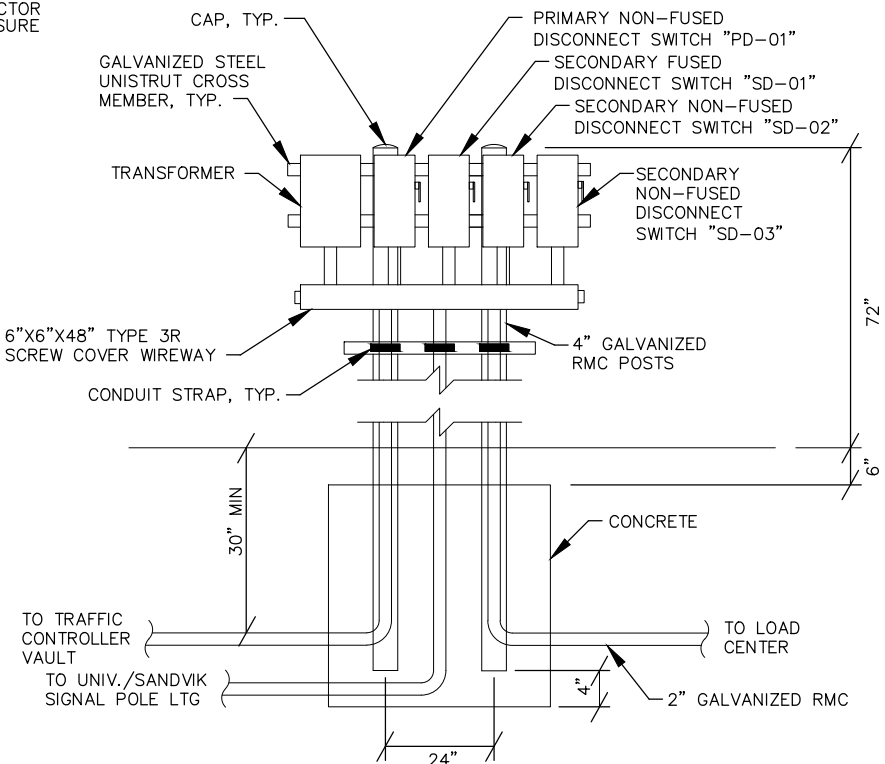
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H38	H54



**LOAD CENTER "GJ"
WIRING DIAGRAM AND
SELECTOR SWITCH WIRING**



**LOAD CENTERS "GJ"
ONE-LINE DIAGRAM**



**NEW WORK
POST-MOUNTED TRANSFORMER AND DISCONNECT**

NOTES - FOR LOAD CENTERS "GJ":

1. THIS DRAWING SHOWS EXISTING CONDITIONS, UNLESS OTHERWISE INDICATED.
2. SEE THE LOAD CENTER SUMMARIES AND PLANS FOR THE STATION AND OFFSET OF THE LOAD CENTER AND POWER SOURCE.
3. SEE ILLUMINATION AND INTERCONNECT PLANS FOR EQUIPMENT LOCATIONS AND CONDUCTOR IN RACEWAY ROUTING.
4. PRIMARY NON-FUSIBLE DISCONNECTS "PD-01" SHALL BE RATED FOR 30 AMPS, 600V AND NEMA TYPE 3R ENCLOSURE.
5. SECONDARY FUSED DISCONNECT "SD-01" SHALL BE RATED FOR 30 AMPS, 240V AND NEMA TYPE 3R ENCLOSURE. FUSE TO BE SIZED AT 30 AMPS.
6. SECONDARY NON-FUSIBLE DISCONNECTS "SD-02" AND "SD-03" SHALL BE RATED FOR 30 AMPS, 240V AND NEMA TYPE 3R ENCLOSURE.
7. SEE POST-MOUNT TRANSFORMER AND DISCONNECT DETAIL FOR ADDITIONAL INFORMATION AND CONSTRUCTION OF ASSEMBLY.

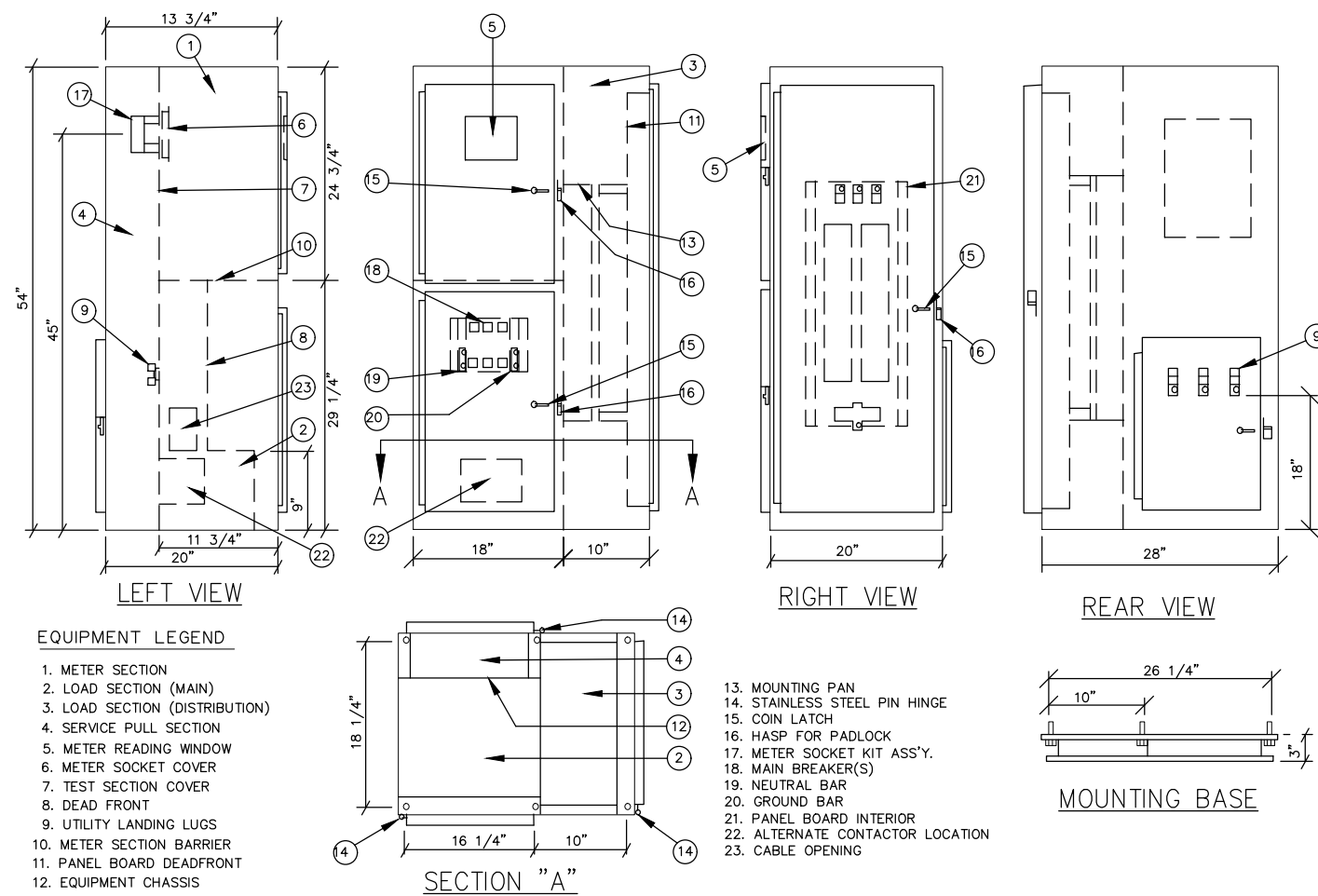
NOTES - POST-MOUNTED TRANSFORMER AND DISCONNECT:

1. SEE ILLUMINATION AND INTERCONNECT PLANS FOR LOCATION OF EQUIPMENT.
2. THE DIMENSIONS OF THE CONCRETE BLOCK IS 36"x36"x24" (HxWxD).

LOAD CENTER DETAILS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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EQUIPMENT LEGEND

1. METER SECTION
2. LOAD SECTION (MAIN)
3. LOAD SECTION (DISTRIBUTION)
4. SERVICE PULL SECTION
5. METER READING WINDOW
6. METER SOCKET COVER
7. TEST SECTION COVER
8. DEAD FRONT
9. UTILITY LANDING LUGS
10. METER SECTION BARRIER
11. PANEL BOARD DEADFRONT
12. EQUIPMENT CHASSIS

13. MOUNTING PAN
14. STAINLESS STEEL PIN HINGE
15. COIN LATCH
16. HASP FOR PADLOCK
17. METER SOCKET KIT ASS'Y.
18. MAIN BREAKER(S)
19. NEUTRAL BAR
20. GROUND BAR
21. PANEL BOARD INTERIOR
22. ALTERNATE CONTACTOR LOCATION
23. CABLE OPENING

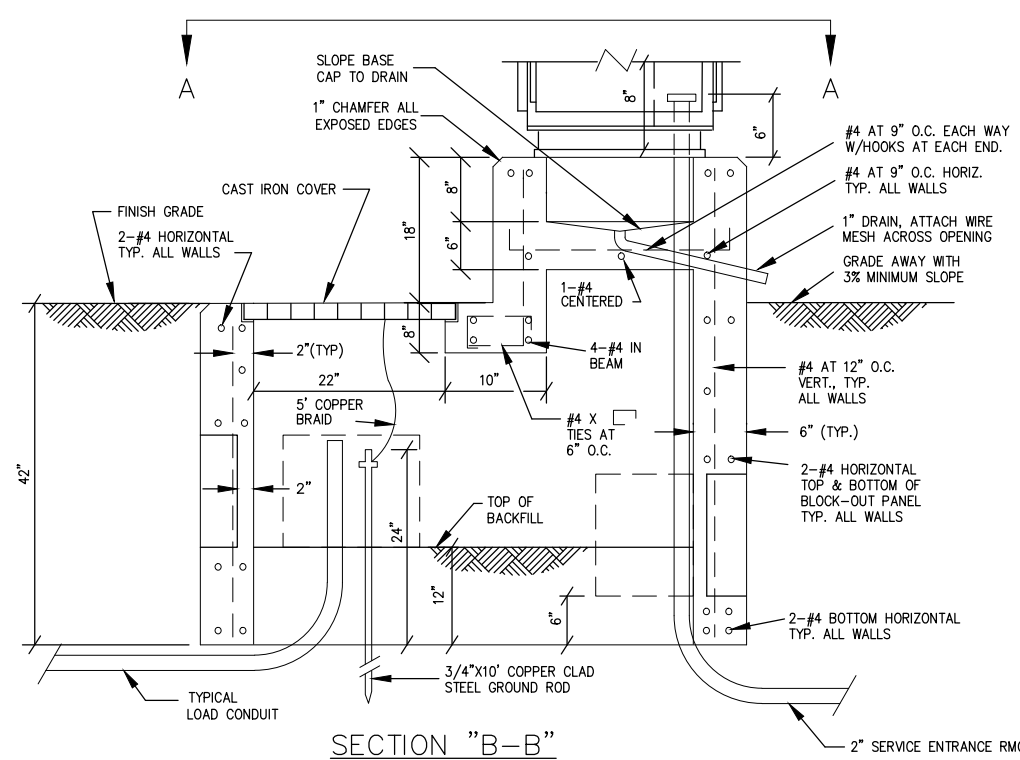
TYPE 1 LOAD CENTER CABINET SECTION / ELEVATION

NOTES:

1. THIS DRAWING SHOWS EXISTING CONDITIONS, UNLESS OTHERWISE INDICATED.

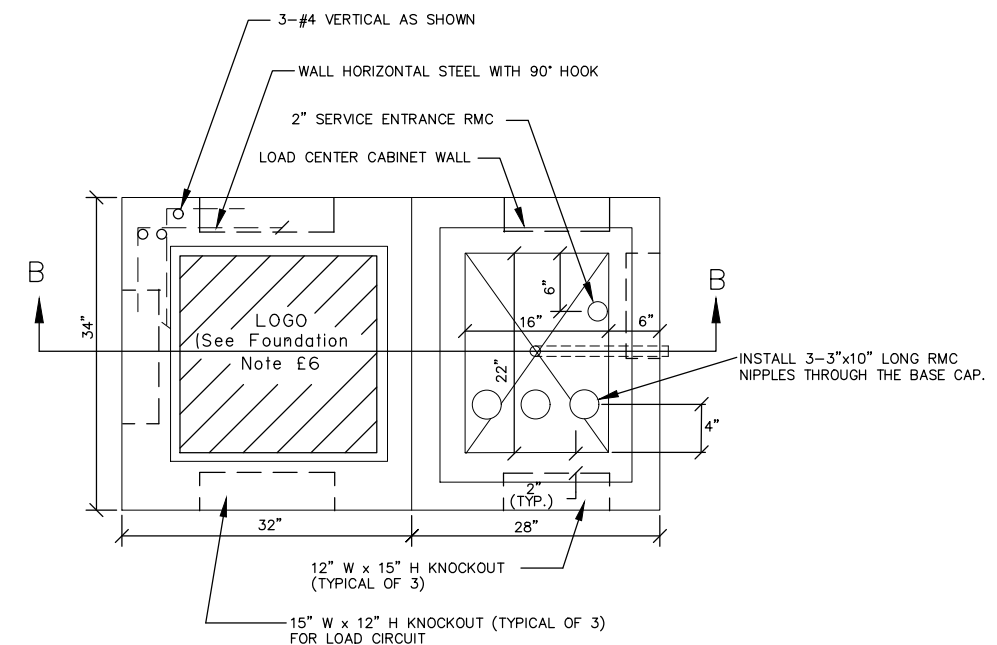
FOUNDATION NOTES:

1. INSTALL THE SURFACE WITH CAST IRON COVER FLUSH WITH THE PAVEMENT, SIDEWALK, OR FINISHED GRADE. GRADE AWAY FROM THE BASE WITH A MINIMUM SLOPE OF 3%. USE A PRE-MOULDED BITUMINOUS JOINT BETWEEN THE BASE AND CONCRETE SIDEWALK OR PAVING.
2. WHEN INSTALLING THE BASE, EXCAVATE TO 60" BELOW FINISHED GRADE AND INSTALL A DRAIN CONSISTING OF 18" OF COARSE CONCRETE AGGREGATE APPROVED BY THE ENGINEER. BACKFILL AROUND THE BASE IN 6" LIFTS WITH SELECTED MATERIAL TYPE "A".
3. BACKFILL INSIDE THE FOUNDATION TO WITHIN 30" OF THE LID AFTER ALL CONDUITS ARE INSTALLED, USING COARSE AGGREGATE. TERMINATE THE ENDS OF ALL LOAD CONDUITS A MINIMUM OF 6" ABOVE THE COARSE CONCRETE AGGREGATE BACKFILL AND A MINIMUM OF 12" BELOW THE LID.
4. PROVIDE ANCHOR BOLTS OR EXPANSION ANCHORS IN THE BASE FOR MOUNTING THE CABINET PER THE MANUFACTURER'S SHOP DRAWINGS. ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO EITHER ASTM A307 OR A449 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
5. USE GRADE 60 REINFORCING STEEL CONFORMING TO ASTM 615 AND CLASS "A" CONCRETE CONFORMING TO SECTION 501 OF THE SPECIFICATIONS WHEN CASTING THE BASE.
6. FINISH THE BASE ACCESS OPENING WITH A 24" SQUARE IRON FRAME AND COVER, WEIGHING APPROXIMATELY 280 LBS. PROVIDE COVERS INSCRIBED WITH THE LEGEND "LIGHTING" FOR THOSE LOAD CENTERS WITH STREET LIGHTING CIRCUITS ONLY, AND "TRAFFIC" FOR THOSE LOAD CENTERS WITH A TRAFFIC SIGNAL CIRCUIT.
7. IF THE BASE IS PRECAST, INSTALL TWO 3/4" FERRULE LOOP INSERTS IN TWO SIDES OPPOSITE ONE ANOTHER FOR LIFTING.



TYPE 1 LOAD CENTER BASE

NOTE: STOP HORIZONTAL & VERTICAL STEEL AT BLOCK-OUT PANELS & OPTIONAL JOINT USING 90° HOOK. INSTALL 2 EXTRA #4 HORIZONTAL & VERTICAL BARS ON ALL SIDES OF EACH KNOCKOUT.



VIEW "A-A"
(PLAN VIEW)

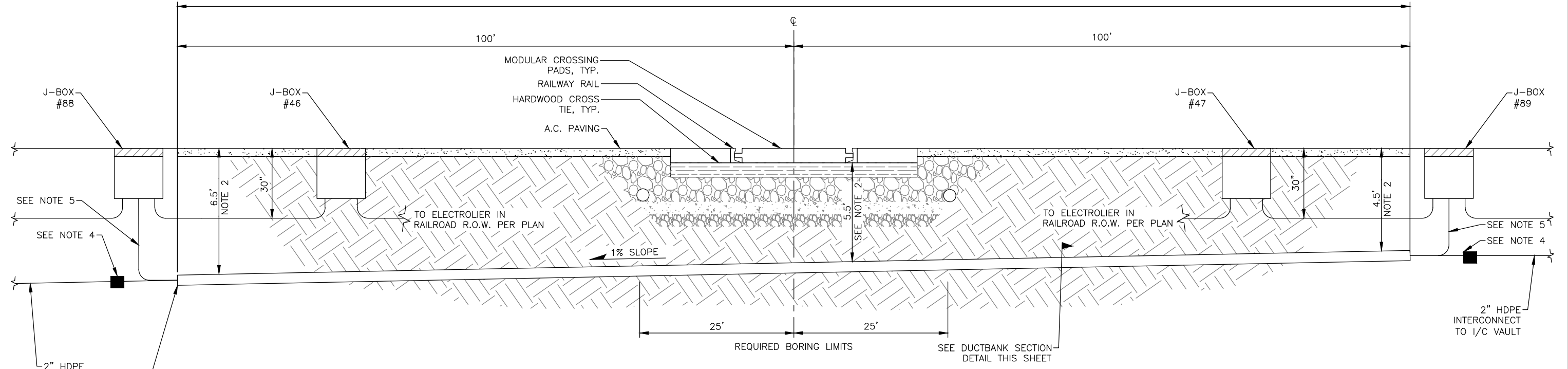
LOAD CENTER
FOUNDATION DETAILS



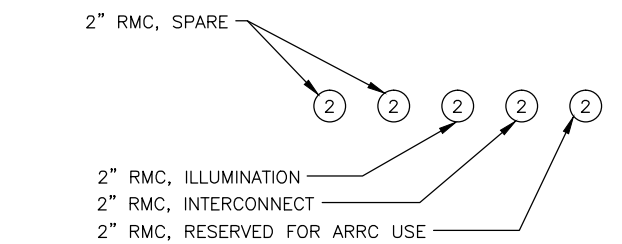
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H40	H54



ARRC R.O.W. (NOTE 1)



PROFILE AT RAILROAD R.O.W.
NTS



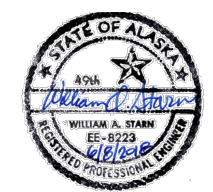
DUCTBANK SECTION AT RAILROAD R.O.W.
NTS

NOTES:

1. OBTAIN A TEMPORARY CONSTRUCTION PERMIT (TCP) FROM THE ARRC AS REQUIRED BEFORE COMMENCEMENT OF ANY WORK WITHIN THE RAILROAD ROW. ALL CONSTRUCTION WITHIN THE RAILROAD ROW SHALL ALSO COMPLY WITH THE ARRC STANDARD SPECIFICATIONS FOR WORK ON RAILROAD PROPERTY, AS CONTAINED IN THE PROJECT SPECIAL CONDITIONS.
2. CONDUIT INSTALLED UNDER RAILROAD TRACKS SHALL BE NOT LESS THAN 5.5 FEET FROM BASE OF RAILROAD TRACK RAIL TO TOP OF CONDUIT AT ITS CLOSEST POINT. WITHIN RAILROAD ROW WHERE CASING IS NOT DIRECTLY BENEATH ANY TRACK, THE DEPTH FROM GROUND SURFACE TO TOP OF CASING SHALL BE NOT LESS THAN 4 FEET.
3. PROVIDE CONDUIT DRAINS AND GRAVEL SUMP IN ACCORDANCE WITH SECTION 660 AS REQUIRED AT LOW END OF CASING PIPE.
4. PROVIDE AN APPROVED COUPLING TO TRANSITION FROM RMC TO HDPE CONDUIT.
5. SWEEP ALL ILLUMINATION & SPARE CONDUITS UP INTO J-BOX AT EDGE OF ARRC R/W. CAP ENDS OF UNUSED AND SPARE CONDUITS RESERVED FOR FUTURE USE.
6. ADJUST THE HORIZONTAL POSITION OF THE DUCTBANK TO AVOID CONFLICTS WITH UTILITIES AND AKRRR SIGNAL EQUIPMENT.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\51-NORTH\Production\06173_N_H44_RR\ Ductbank Detail-H40 Fri, Jun/08/18 06:43pm

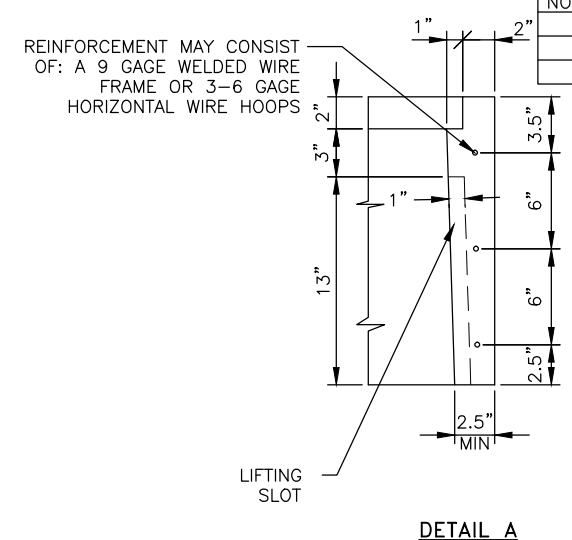
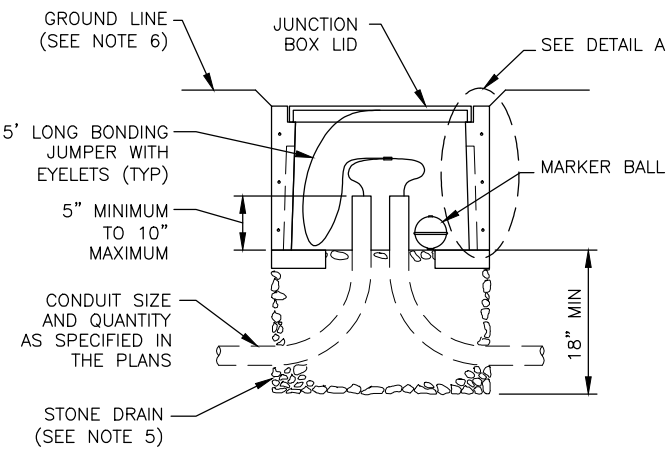
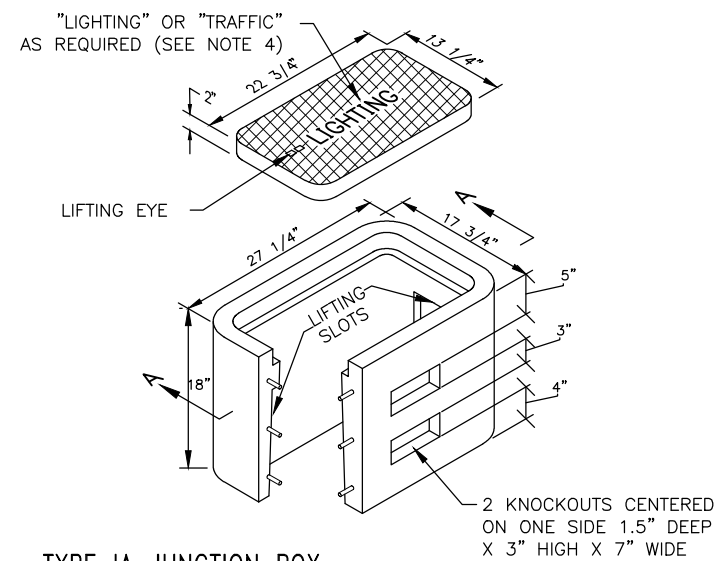
**RAILROAD CROSSING
DUCTBANK DETAILS**



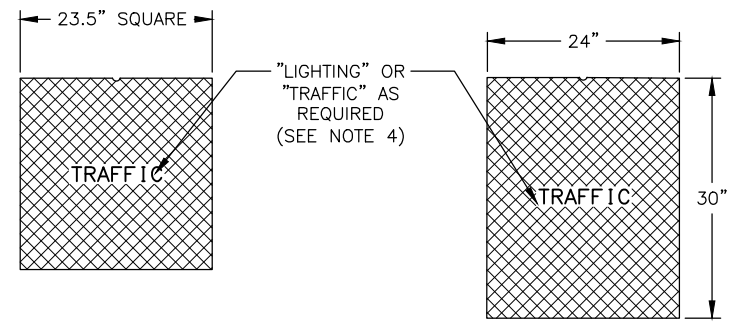
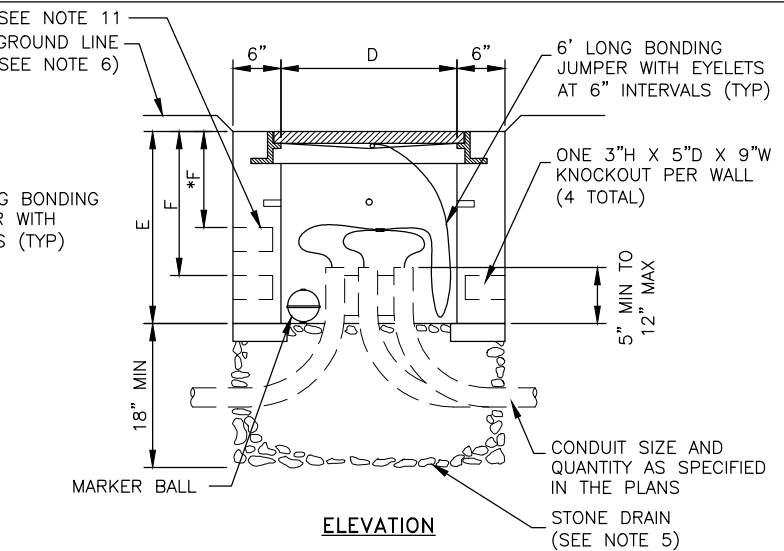
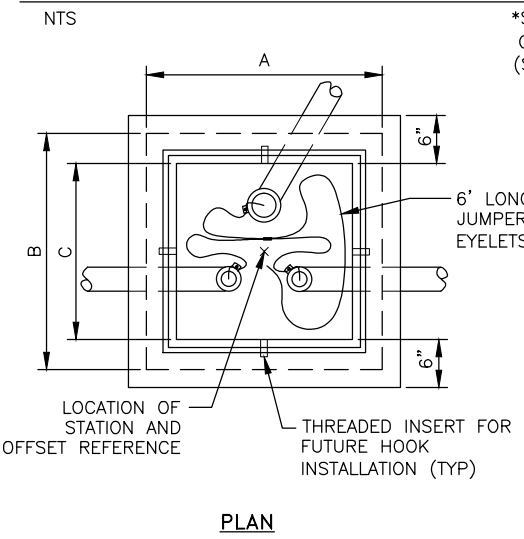
6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOTPE\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H45_J-Box Details-H41 Fri, Jun/08/18 06:43pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H41	H54



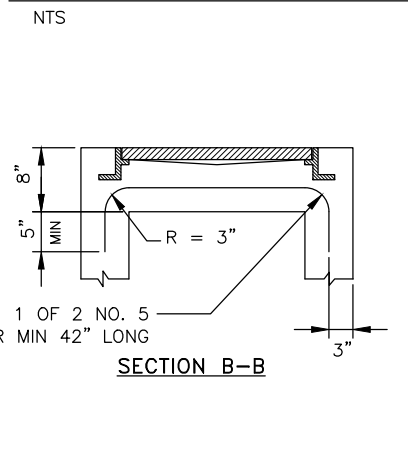
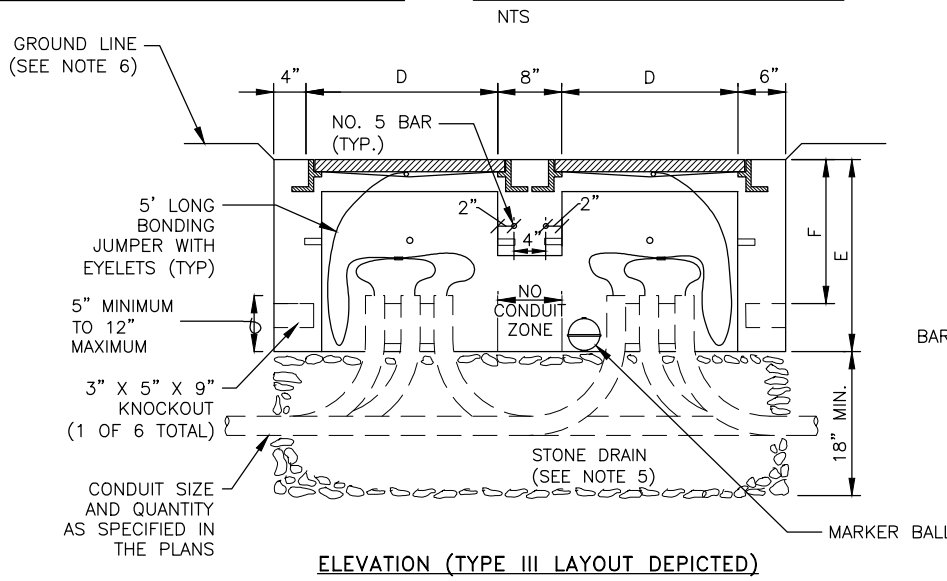
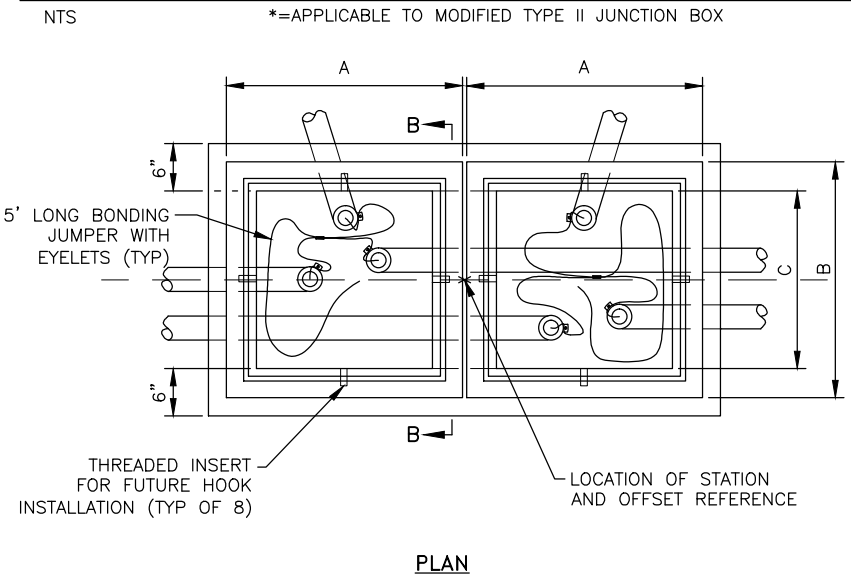
TYPE IA JUNCTION BOX



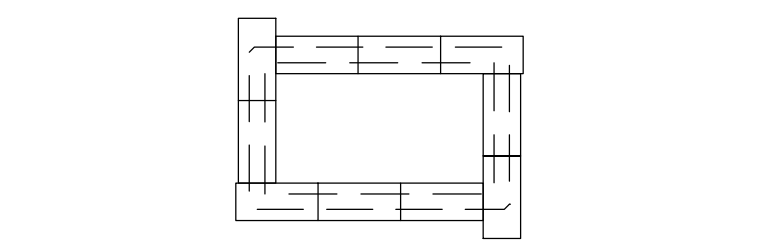
TYPE II/MODIFIED TYPE II JUNCTION BOX

LID FOR TYPE II, MOD. TYPE II & TYPE III J-BOX

LID FOR TYPE IV J-BOX



J-BOX TYPE	DIMENSIONS					
	A (MAX.)	B (MAX.)	C (MIN.)	D (MIN.)	E (MIN.)	F
II	29 1/2"	29 1/2"	22"	22"	24"	18"
MOD. II	29 1/2"	29 1/2"	22"	22"	24"	12"
III	29 1/2"	29 1/2"	22"	22"	24"	18"
IV	30"	36"	30"	24"	30"	18"



BRICK BASE TYPE IA AND TYPE II ONLY

TYPE III/IV JUNCTION BOX

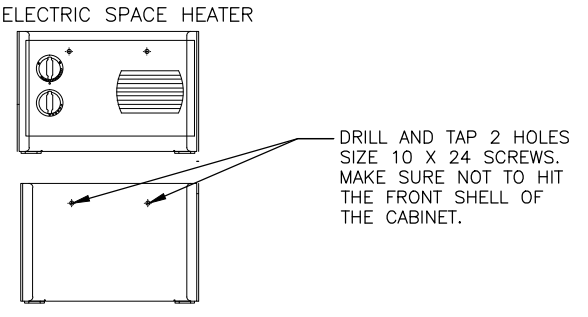
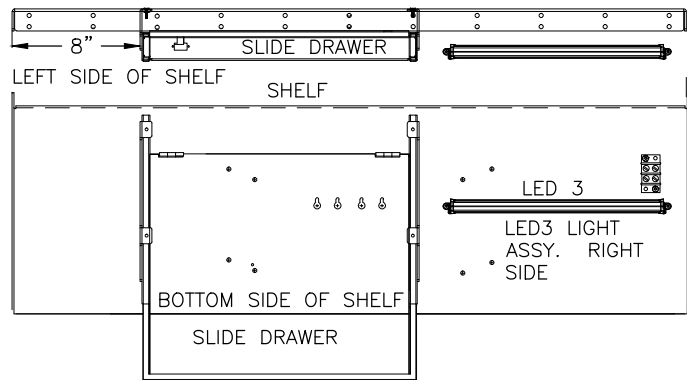
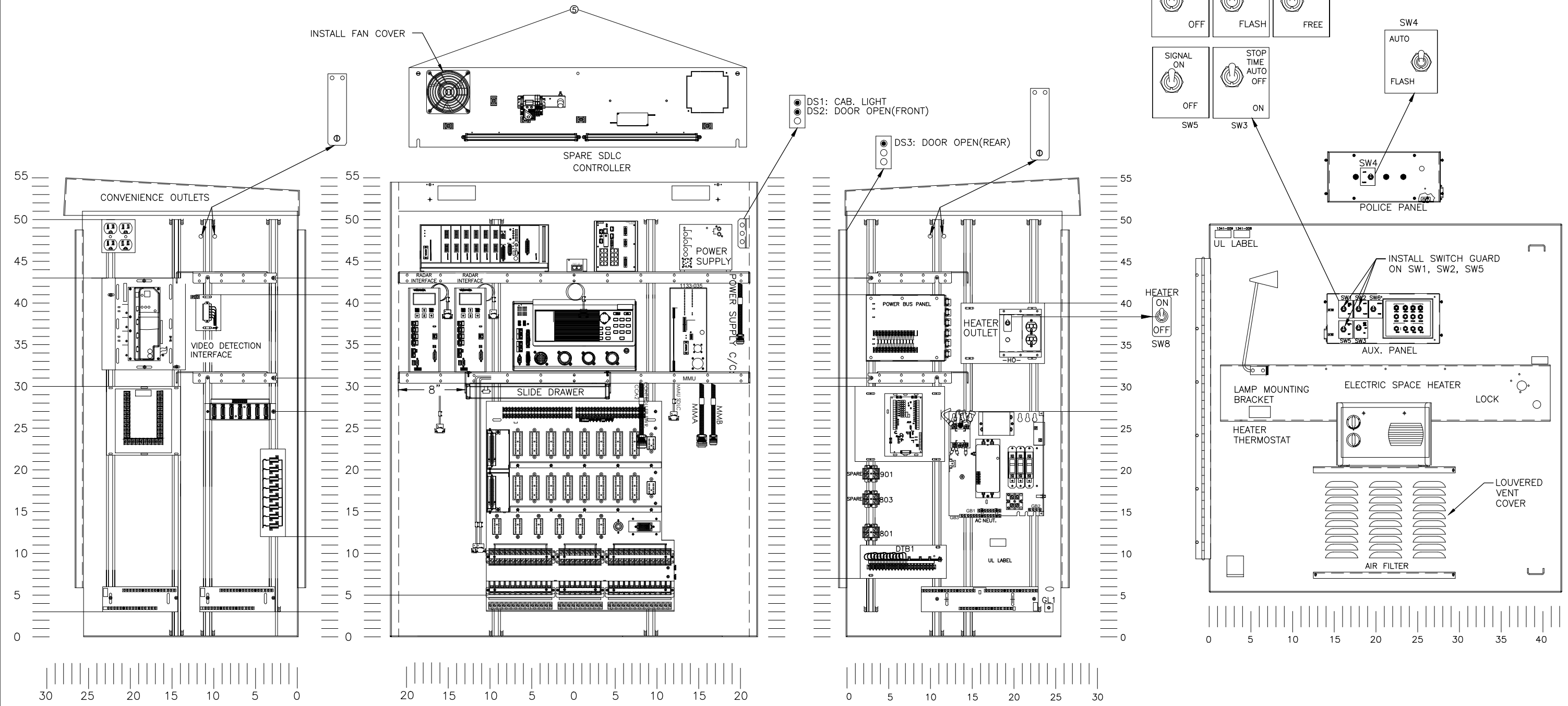
JUNCTION BOX DETAILS



6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H42	H54

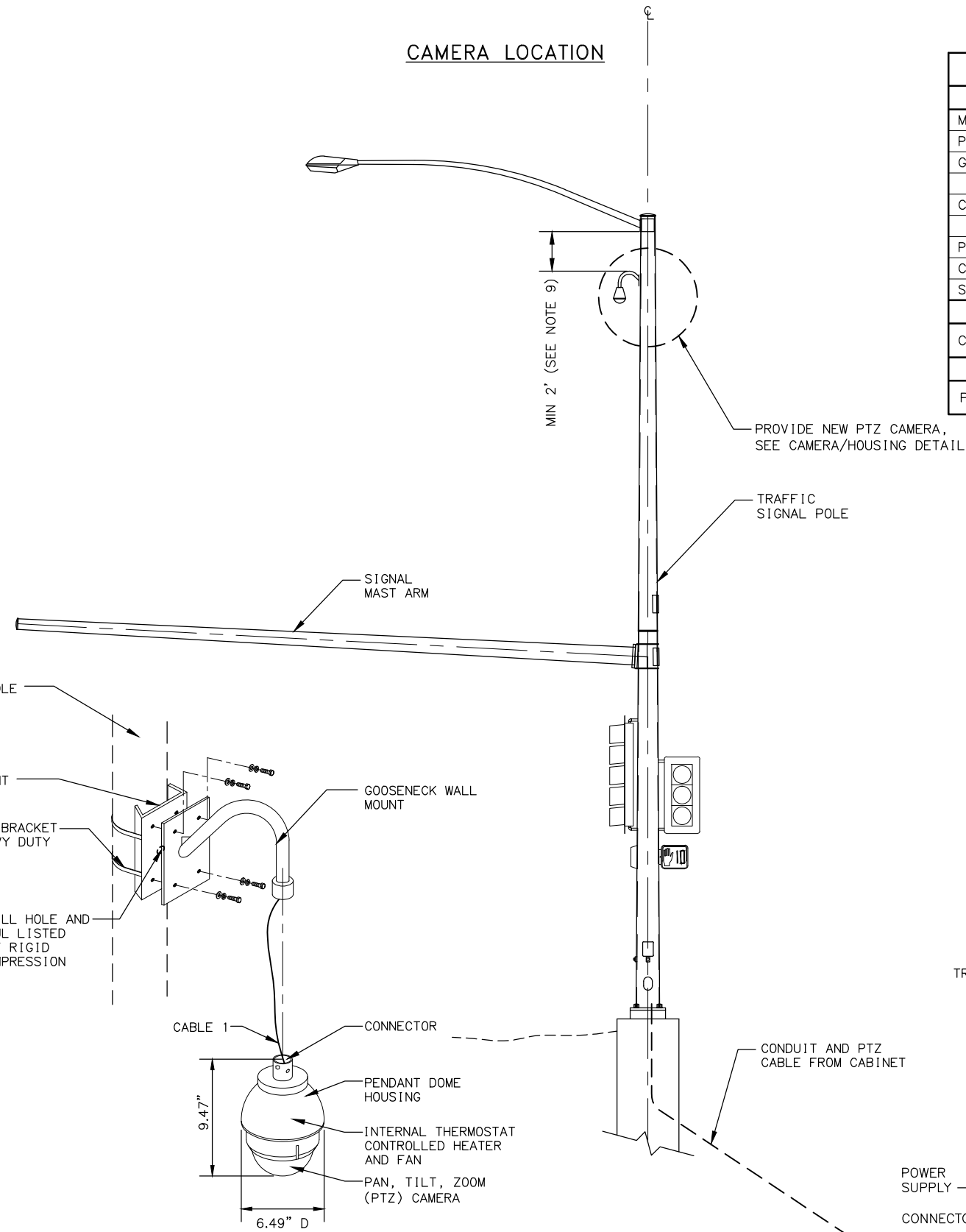
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOTPE\University Avenue Traffic Design\06173_N_H46-H48-SIGNAL DETLS-H42 Fri, Jun/08/18 06:44pm



CONTROLLER CABINET LAYOUT

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H43	H54

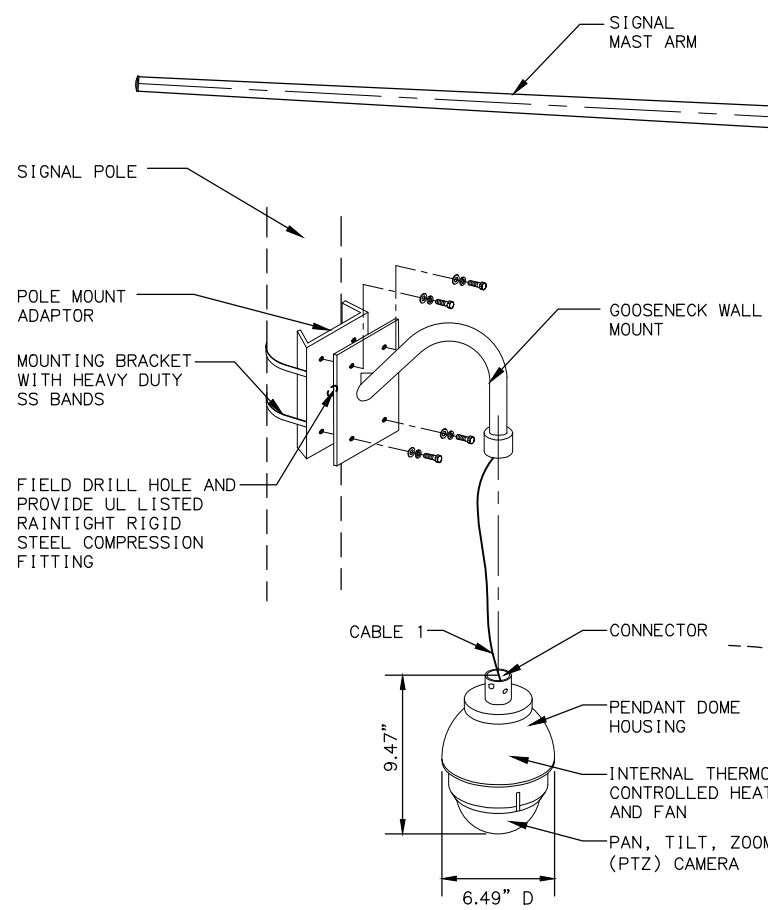
CAMERA LOCATION



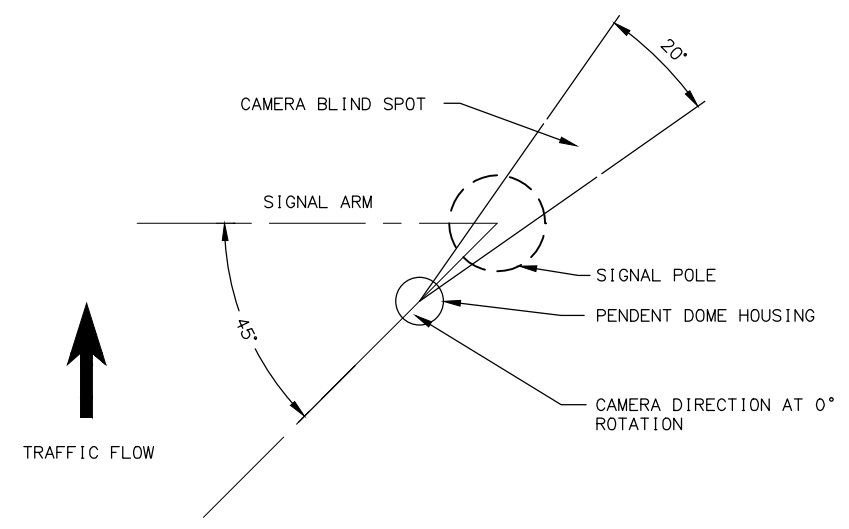
MATERIAL REQUIREMENTS	
ALL ASSEMBLIES	
MOUNTING BRACKET	PELCO TRITON BRACKET OR APPROVED EQUAL
POLE MOUNT ADAPTOR	AXIS T91A57 OR APPROVED EQUAL
GOOSENECK WALL MOUNT	AXIS T91G61 OR APPROVED EQUAL
CABLE 1	CAT-6a, FOILED
POWER SUPPLY	AXIS T8134 60W OR APPROVED EQUAL
CONNECTOR	ENVIRONMENTALLY HARDENED RJ-45
STRAIN RELIEF	REMKE 2201-013 OR APPROVED EQUAL
CAMERA	
CAMERA	UNLESS OTHERWISE NOTED, PROVIDE AXIS Q6155-E OR APPROVED EQUAL
HOUSING	
PENDANT DOME HOUSING	OUTDOOR, INTEGRATED WITH CAMERA OR APPROVED EQUAL

NOTES:

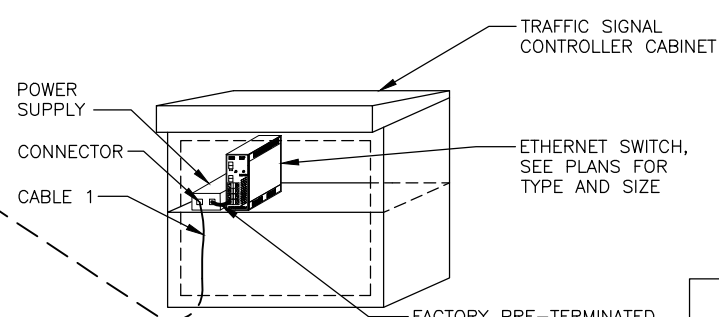
1. PROTECT CABLE ENDS FROM MOISTURE AT ALL TIMES.
2. PULL CABLE IN ACCORDANCE WITH SECTION 660 OF THE SPECIAL PROVISIONS. PULL CABLE SO THAT THERE IS SUFFICIENT LENGTH TO REACH THE TOP OF THE CONTROLLER CABINET. CABLES ARE TO BE PULLED WITHOUT CONNECTORS ATTACHED. WHEN CABLE HAS BEEN PULLED TO FINAL LOCATIONS INSTALL AND MAKE FINAL CONNECTIONS.
3. CABLE RUNS ARE TO BE MADE CONTINUOUS WITHOUT SPLICES EXCEPT FOR IN LOCATION SHOWN IN SPICE DETAIL WITH SPECIFIED CONNECTOR.
4. CABLE WITH DAMAGED INSULATION, OR THAT HAS BEEN CRIMPED OR BENT BEYOND THE MINIMUM BEND RADIUS MUST BE REPLACED AT NO ADDITIONAL COST.
5. THE MINIMUM CABLE BEND RADIUS SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS.
6. MOUNT THE PENDANT DOME HOUSING AT A 45° ANGLE AT THE REQUIRED HEIGHT. ANGLE AND HEIGHT MAY BE ADJUSTED BY THE ENGINEER TO AVOID WELDS, APPENDICES AND TO IMPROVE CAMERA VIEWS.
7. ADJUST CAMERA INSIDE THE PENDANT DOME HOUSING AS SHOWN. ENSURE THAT THE CAMERA IS MOUNTED AT A 0° TILT ANGLE.
8. AT CABLE END CONNECTOR LOCATION PROVIDE A SECURE CONNECTION USING CONNECTOR PARTS SPECIFIED. AFTER CONNECTION IS MADE COVER SPLICE WITH WATER PROOF HEAT SHRINK TUBING. PROVIDE A STRAIN RELIEF CABLE AS NECESSARY.
9. CAT6a TOTAL CABLE LENGTH SHALL NOT EXCEED 325 FEET FROM THE ETHERNET SWITCH TO THE PTZ CAMERA. WHEN MOUNTED ON THE SAME POLE AS A LIGHTING CONTROL GATEWAY MOUNT THE PTZ CAMERA BELOW THE GATEWAY WITH 2- FEET OF SEPARATION BETWEEN THE TOP OF THE PTZ WALL MOUNT AND THE BOTTOM OF THE GATEWAY, OR AT THE ENGINEER'S DIRECTION.



CAMERA/HOUSING DETAIL
NTS



PLAN



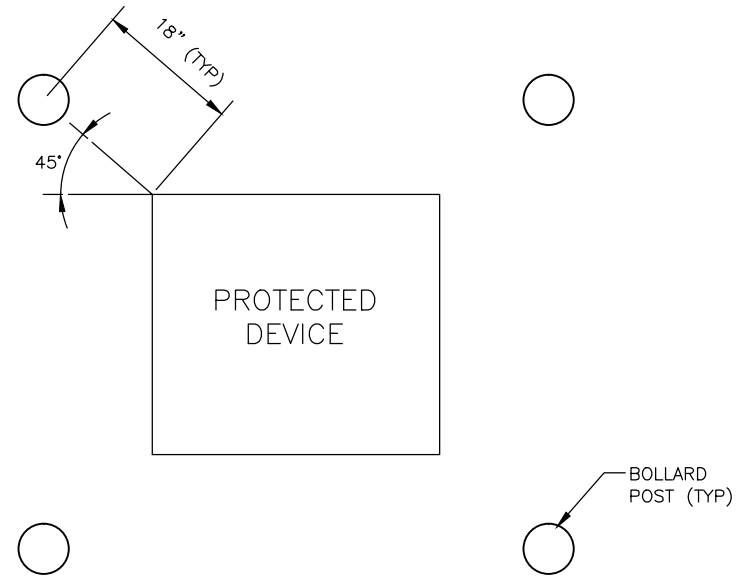
**PAN, TILT, ZOOM
CAMERA DETAILS**



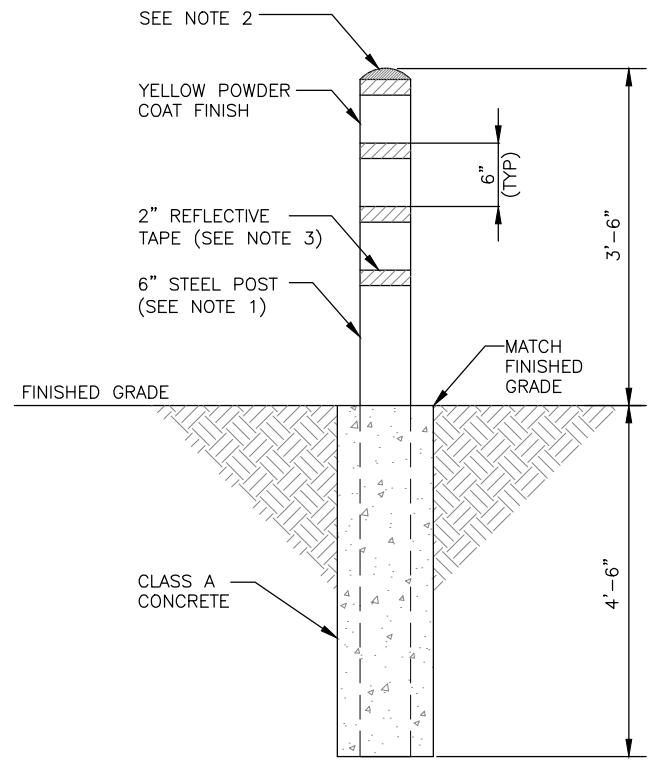
6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 11102
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H44	H54



PLAN
LOCATE POSTS AS SHOWN PER PLAN

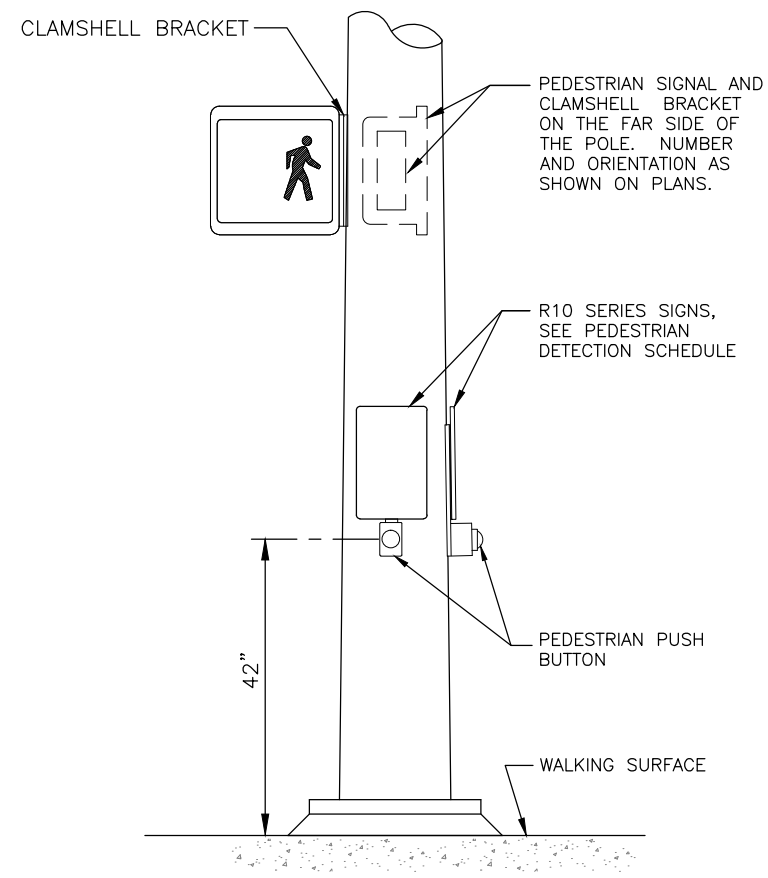


ELEVATION

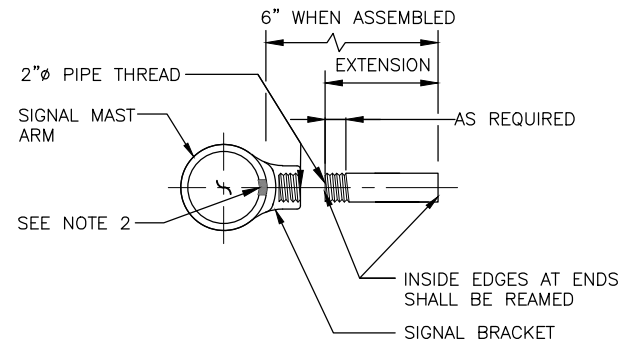
BOLLARD NOTES:

1. PROVIDE 6" DIA. GALVANIZED STEEL, SCHEDULE #40 PIPE, FILLED WITH CONCRETE.
2. ROUND CONCRETE AT TOP OF POST SMOOTH AND PAINT YELLOW. USE EXTERIOR ACRYLIC-EPOXY CONCRETE PAINT.
3. INSTALL 4-2" BANDS OF YELLOW REFLECTIVE TAPE AS SHOWN.
4. LOCATION AND QUANTITY OF POSTS AS INDICATED ON DRAWINGS.

BOLLARD POST DETAIL
NTS



SIGNAL POLE MOUNTED PEDESTRIAN HARDWARE & SIGNAGE
NTS

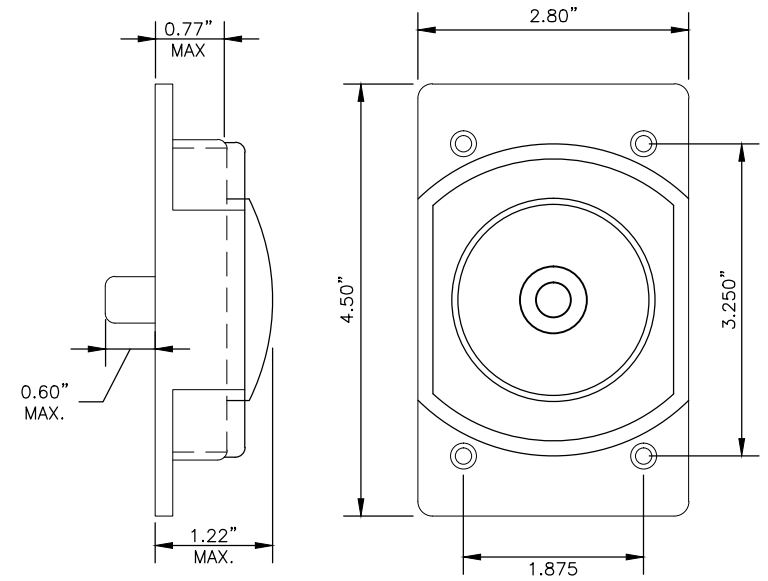


PLUMBIZER SIGNAL MOUNTING NOTES

1. THESE DETAILS MODIFY STANDARD DRAWING T-30.11.
2. FIELD DRILL WIRING ACCESS HOLE AS REQUIRED. REAM INSIDE & OUTSIDE AND PAINT WITH COLD ZINC GALVANIZING COMPOUND CONFORMING TO DOD-P-21035A, MIL-P-26915A, OR TT-P-460.
3. ONE 2" GALVANIZED SCHEDULE 40 RIGID METAL CONDUIT EXTENSION SHALL BE FURNISHED WITH EACH SIGNAL BRACKET.
4. SIGNAL BRACKETS SHALL BE ASTRO-BRAC AB-3008AK OR APPROVED EQUAL AND SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. THE ACTUAL LOCATION OF BRACKETS ON EACH ARM SHALL BE DETERMINED BY THE ENGINEER AFTER THE POLES AND ARMS HAVE BEEN INSTALLED.

PLUMBIZER SIGNAL MOUNTING DETAIL

NTS
(REQUIRED FOR ALL NEW OR RELOCATED PLUMBIZER [MAST ARM] MOUNTED SIGNALS)



PEDESTRIAN PUSH BUTTON DETAIL
NTS

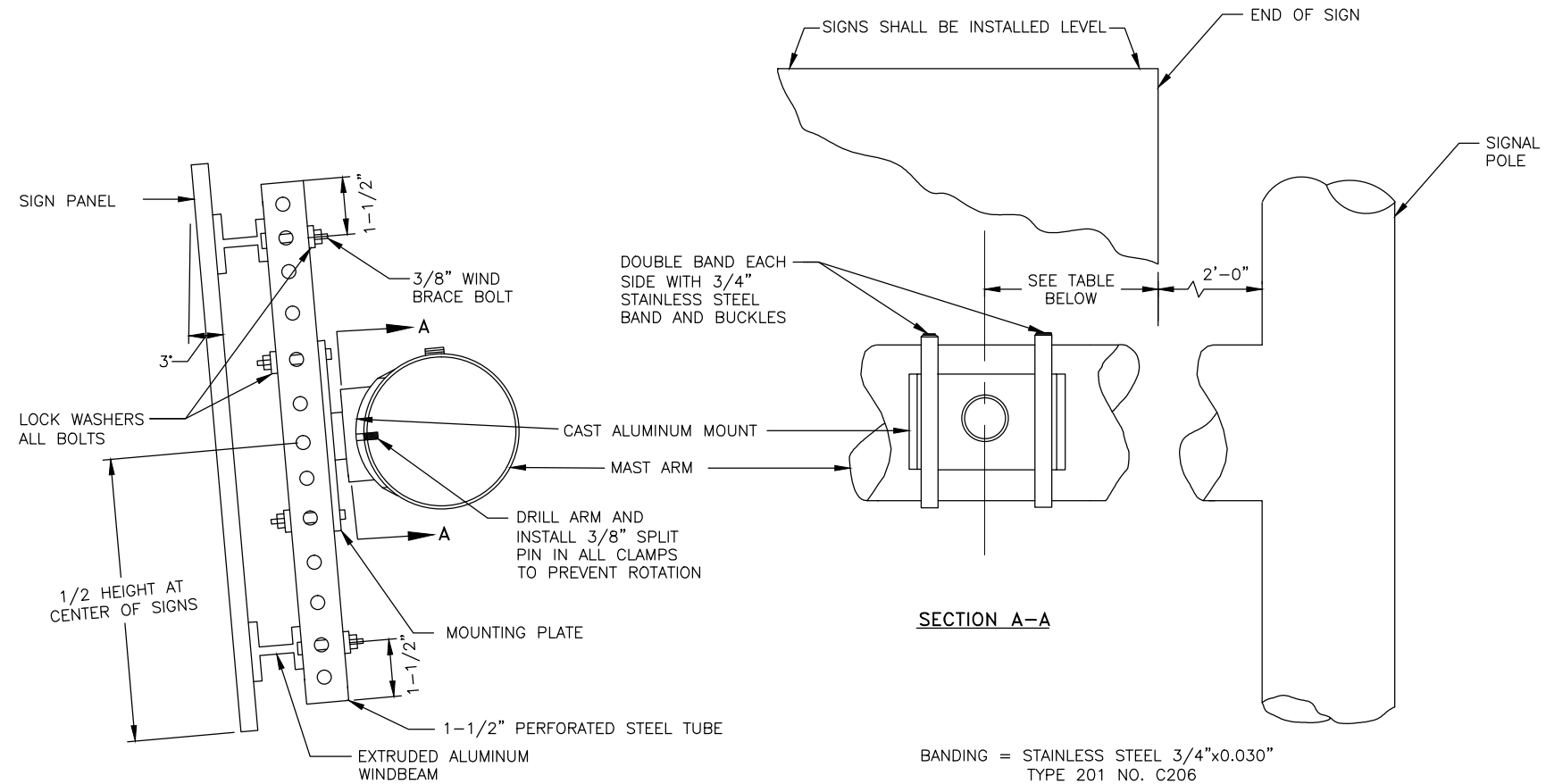
MISCELLANEOUS
SIGNAL DETAILS



6/8/2018

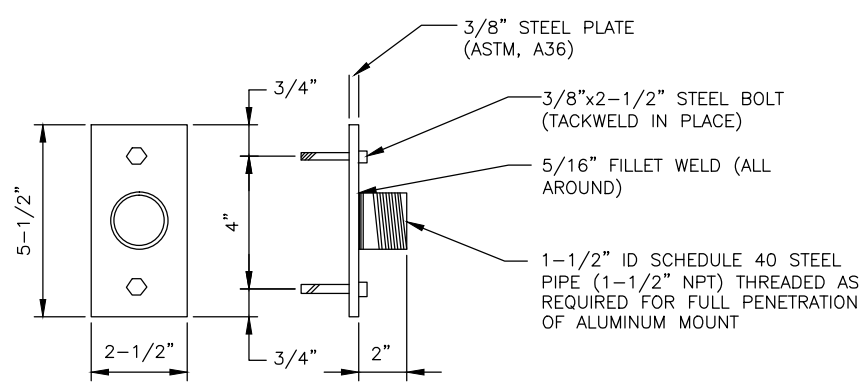
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			ALASKA	0617012/NFHWY00270	2018	H45	H54



BANDING = STAINLESS STEEL 3/4"x0.030" TYPE 201 NO. C206
 BUCKLES = STAINLESS STEEL 3/4" TYPE 201 NO. C256
 ALUMINUM MOUNT (SIGNAL) = 1-1/2"NPT NO. D040
 PIN = NO. D042

SIGNAL MAST ARM MOUNTED SIGNS (NOT FOR "R" SERIES SIGNS)
 NTS

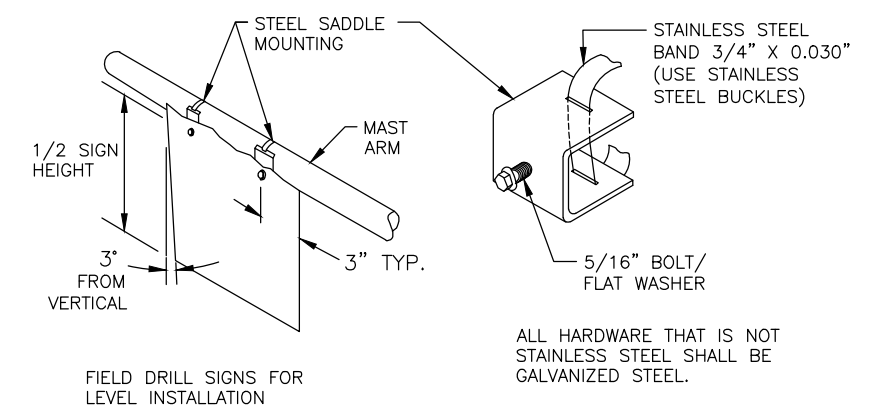


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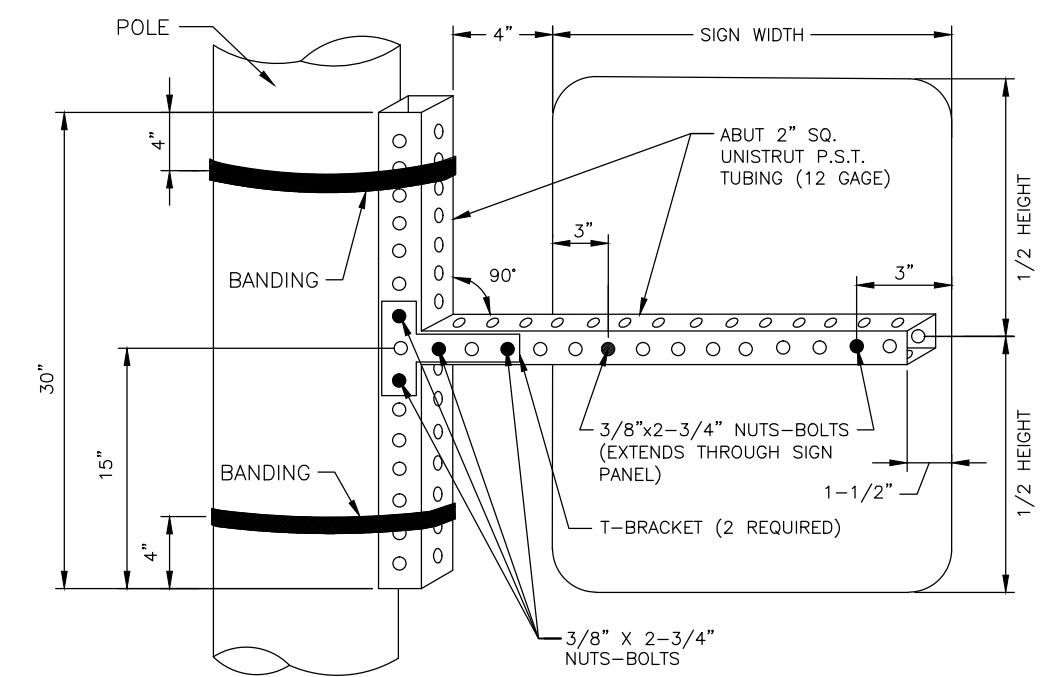
- CAST ALUMINUM MOUNTS AND BANDING MATERIALS SHALL BE "BAND-IT" OR APPROVED EQUAL.
- MOUNTING PLATE SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.
- ALL WELDING SHALL MEET AMERICAN WELDING SOCIETY SPECS.
- BOLTS, NUTS AND WASHERS SHALL MEET THE REQUIREMENTS OF STANDARD DRAWING S-20.10

MOUNTING PLATE DETAIL
 NTS

SIGN WIDTH(W)	NO. OF CLAMPS	CLAMP SPACING		
		OVERHANG	BETWEEN CLAMPS	OVERHANG
0-12 1/2'	2	0.2W	1 SPACE AT 0.6W	0.2W
13' TO 21'	3	0.15W	2 SPACES AT 0.35W	0.15W



MAST ARM MOUNTING FOR "R" SERIES SIGNS
 NTS



ALL NUTS SHALL BE INSTALLED WITH LOCK WASHERS
 BANDING = STAINLESS STEEL 3/4" X 0.030" (DOUBLE BANDING REQUIRED)
 BUCKLES = STAINLESS STEEL 3/4"

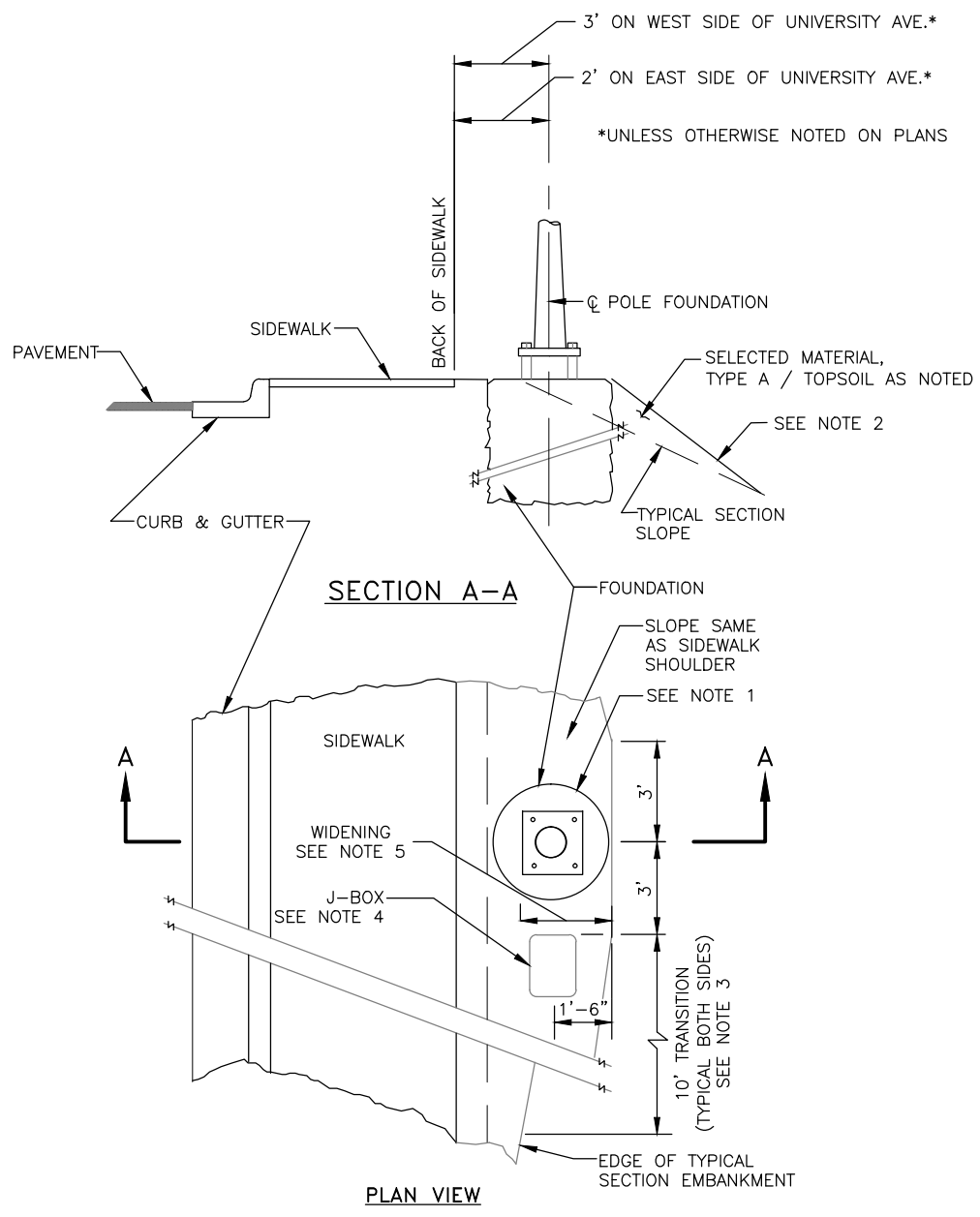
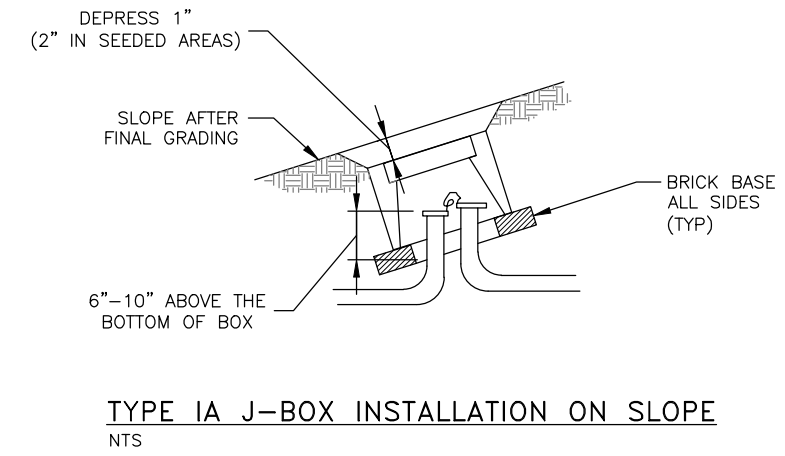
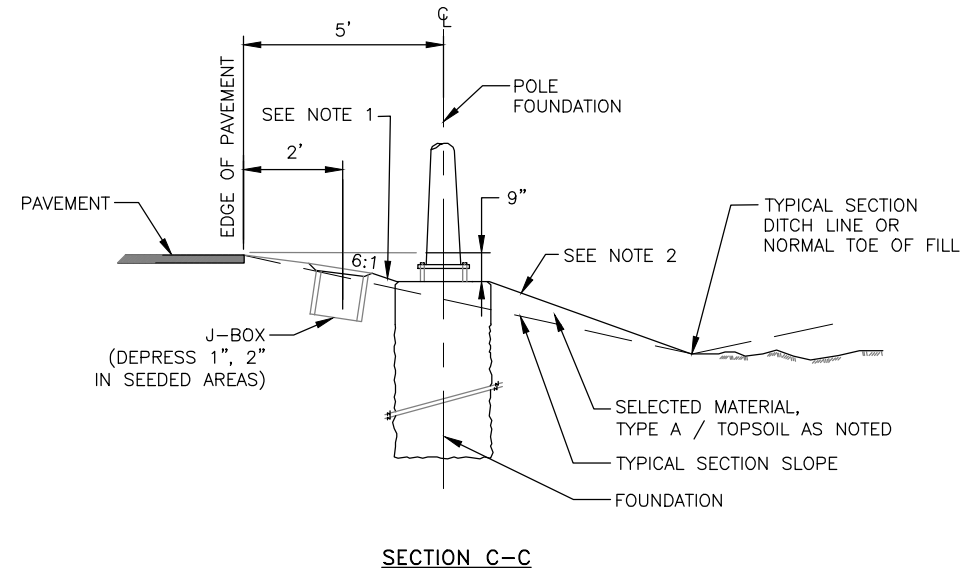
POLE/POST SIDE MOUNTED SIGN BRACKET
 NTS

SIGNAL MOUNTED SIGN DETAILS

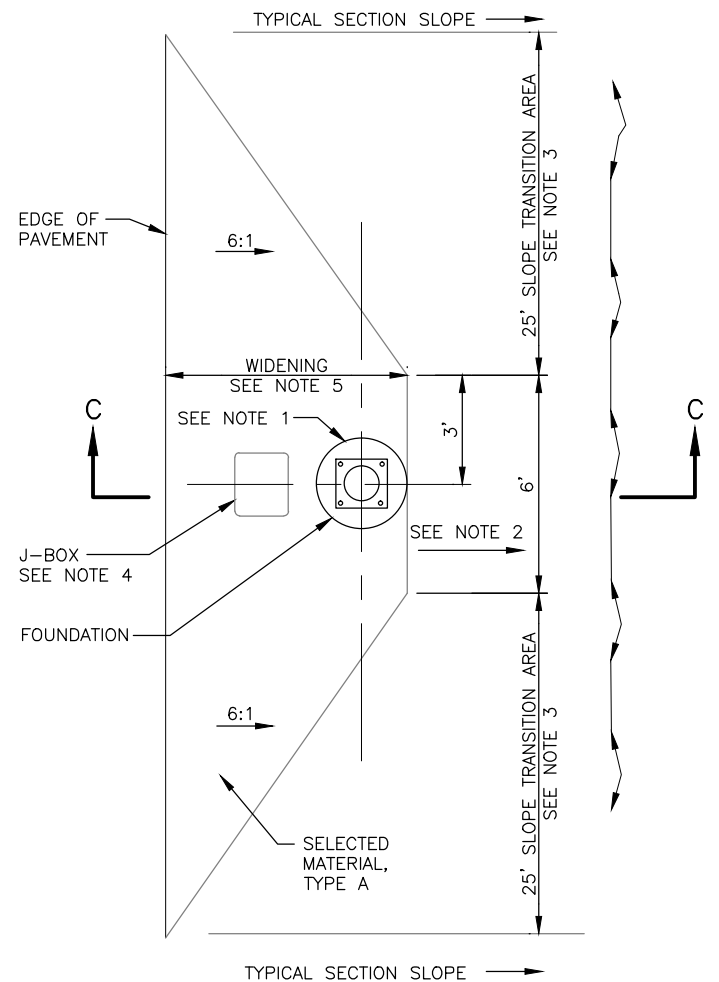


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			ALASKA	0617012/NFHWY00270	2018	H46	H54



LIGHT POLE WIDENING DETAIL "A"
NTS (USE WHEN POLE IS LOCATED OFF BACK OF SIDEWALK)

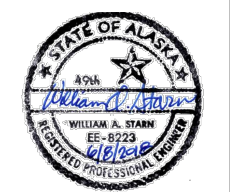


LIGHT POLE WIDENING DETAIL "C"
NTS (USE WHEN POLE IS LOCATED OFF SHOULDER)

LIGHT POLE WIDENING NOTES:

1. WARP SLOPE TO TOP CIRCUMFERENCE OF POLE FOUNDATION.
2. SLOPE FROM TOP EDGE OF POLE FOUNDATION TO TYPICAL SECTION DITCHLINE OR NORMAL TOE OF FILL. NO STEEPER THAN 2:1.
3. WHEN THE TYPICAL SECTION SLOPE IS STEEPER THAN 2:1 USE 35' FOR THE SLOPE TRANSITION AREA.
4. DEPRESS JUNCTION BOX 1" BELOW SURFACE. DEPRESS 2" IN SEEDED AREAS.
5. WIDENING SHALL BE CONSTRUCTED PRIOR TO POURING FOUNDATION.

LIGHTING AND JUNCTION BOX DETAILS



6/8/2018

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H47	H54

DESIGN NOTES:

DESIGN STANDARD: 2001 STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS WITH 2006 INTERIM.

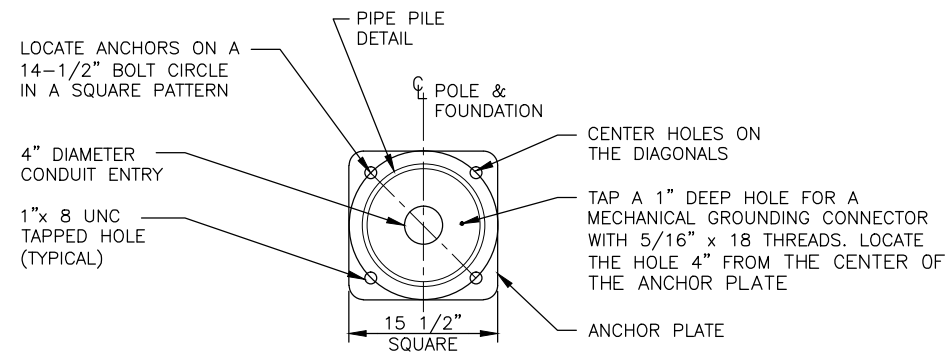
DESIGN LOADS: 5-KIPS AXIAL, 7.5-KIPS SHEAR, 40-KIP-FT MOMENT.

CONSTRUCTION STANDARD: STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2004 ENGLISH EDITION WITH SPECIAL PROVISIONS.

MATERIAL REQUIREMENTS		
STRUCTURAL STEEL PLATE	ASTM A709 GRADE 50	F _y = 50 ksi
STEEL PIPE PILE	ASTM A709, GRADE 50 T3	F _y = 50 ksi
	API 5L GRADE X 42	F _y = 42 ksi

NOTES:

- IN LIEU OF CONCRETE STREET LIGHT FOUNDATIONS SHOWN IN STANDARD DRAWING L-30.10, THE CONTRACTOR MAY PROVIDE STEEL PIPE PILE LIGHT POLE FOUNDATIONS IN ACCORDANCE WITH THIS DRAWING AND PROJECT SPECIFICATIONS AT NO ADDITIONAL COST TO THE STATE OF ALASKA.
- FURNISH STEEL PIPE PILES THAT CONFORM TO THE MATERIAL REQUIREMENTS AND SECTION 660, 715 AND 740 OF THE SPECIFICATIONS. NO SPLICES ARE ALLOWED BELOW THE PILECAP ADAPTER.
- DRIVE PILES OPEN ENDED. COMPLETE PILE WORK ACCORDING TO SECTIONS 505, 660 AND 715 OF THE SPECIFICATIONS. REMOVE AND REINSTALL PILES OUT OF PLUMB MORE THAN 1:40.
- FRESH HEAD THE TOP OF PILES IN A LEVEL PLANE AND CUT THE CONDUIT ENTRANCE HOLE AFTER DRIVING THE PILE. NOTE; ONLY MECHANICAL OR PLASMA CUTTER MEANS ARE PERMITTED. OXY-FUEL CUTTING IS PROHIBITED.
- FURNISH ONLY SHOP FABRICATED PILECAP ADAPTERS. INCLUDE STAMPED ENGINEERING CALCULATIONS, DRAWINGS, MILL CERTIFICATIONS AND WELDING PLANS FOR PILECAP ADAPTERS AND THE PILECAP ADAPTER TO PILE WELD. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE AWS D1.1, STRUCTURAL WELDING CODE-STEEL AND THE SPECIFICATIONS.
- AT EACH FOUNDATION, EXCAVATE A CONE SHAPED WORK HOLE 6.5' DIAMETER AT THE SURFACE DOWN TO 1 FOOT BELOW THE CONDUIT HOLE SUBJECT TO THE REQUIREMENTS AND RESTRICTIONS OF OSHA 1926.652. AFTER CUTTING THE CONDUIT ENTRANCE HOLE AND WELDING ON THE PILECAP ADAPTER, BACKFILL AND COMPACT THE WORK HOLE IN 8" LIFTS WITH A SOIL-CEMENT MIXTURE, CONSISTING OF 2 SACKS OF PORTLAND CEMENT PER CUBIC YARD OF SOIL. SUFFICIENT COMPACTIVE EFFORT WILL BE DETERMINED BY THE ENGINEER.
- WAIT AT LEAST 3 DAYS AFTER BACKFILLING THE WORK HOLE BEFORE ERECTING THE LUMINAIRE POLE.
- TERMINATE CONDUIT(S) 3" ABOVE THE TOP OF THE ANCHOR PLATE. INSTALL A GROUNDING BUSHING ON THE END OF THE RIGID METAL CONDUIT AND ESTABLISH A BOND WITH THE ANCHOR PLATE.



LOCATE ANCHORS ON A 14-1/2" BOLT CIRCLE IN A SQUARE PATTERN

4" DIAMETER CONDUIT ENTRY

1"x 8 UNC TAPPED HOLE (TYPICAL)

PLAN VIEW

SET THE TOP OF ANCHOR PLATE AT THE INTERSECTION OF FINISHED SLOPE AND ϕ OF FOUNDATION

CENTER HOLES ON THE DIAGONALS

TAP A 1" DEEP HOLE FOR A MECHANICAL GROUNDING CONNECTOR WITH 5/16" x 18 THREADS. LOCATE THE HOLE 4" FROM THE CENTER OF THE ANCHOR PLATE

ANCHOR PLATE

PLAN VIEW

SET THE TOP OF ANCHOR PLATE AT THE INTERSECTION OF FINISHED SLOPE AND ϕ OF FOUNDATION

FURNISH TRANSPO 5100 COUPLINGS OR APPROVED EQUAL

*FINISHED SLOPE

* TOP OF TOPSOIL, WHEN THE TYPICAL INCLUDES TOPSOIL

SEE PILE CAP ADAPTER AND WELD DETAILS

1

2

SEE PILE CAP ADAPTER AND WELD DETAILS

PILE-CUT OFF ELEVATION

15"

16"

15'

2" RMC

SEE PILE NOTES

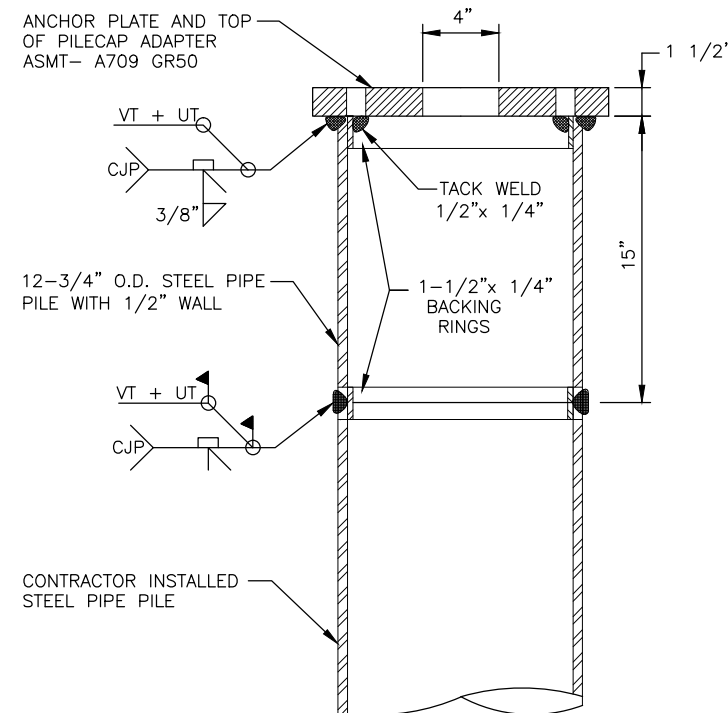
3" WIDE x 5" HIGH SLOTTED CONDUIT ENTRY

12-3/4" O.D. STEEL PIPE PILE WITH 1/2" WALL

PIPE PILE FOUNDATION

NTS

(SHOWN WITH FRANGIBLE COUPLINGS)



PILECAP ADAPTER DETAIL

NTS

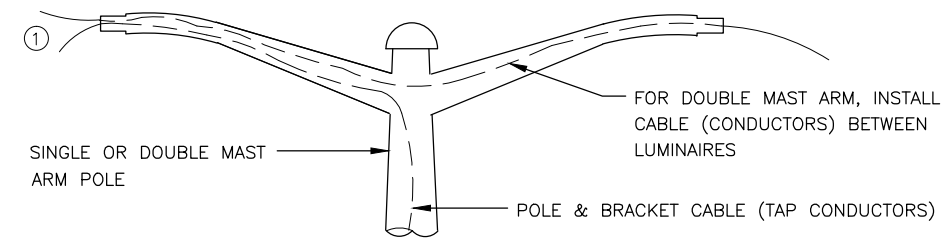
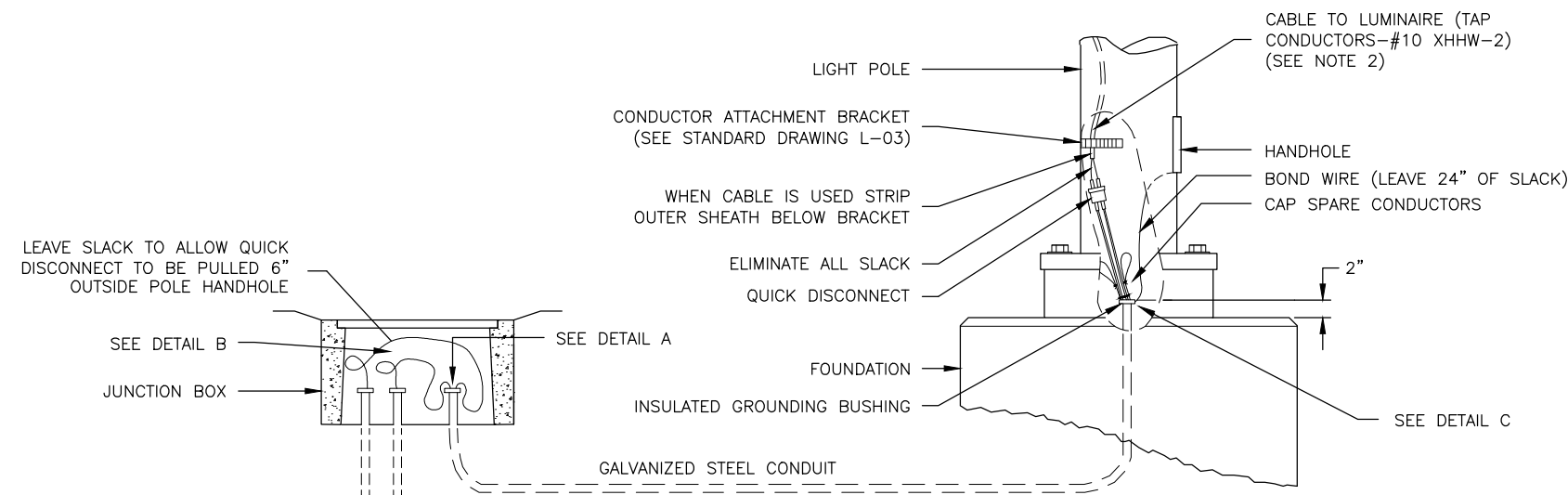
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PIPE PILE FOUNDATION
DETAILS FOR LIGHT POLES



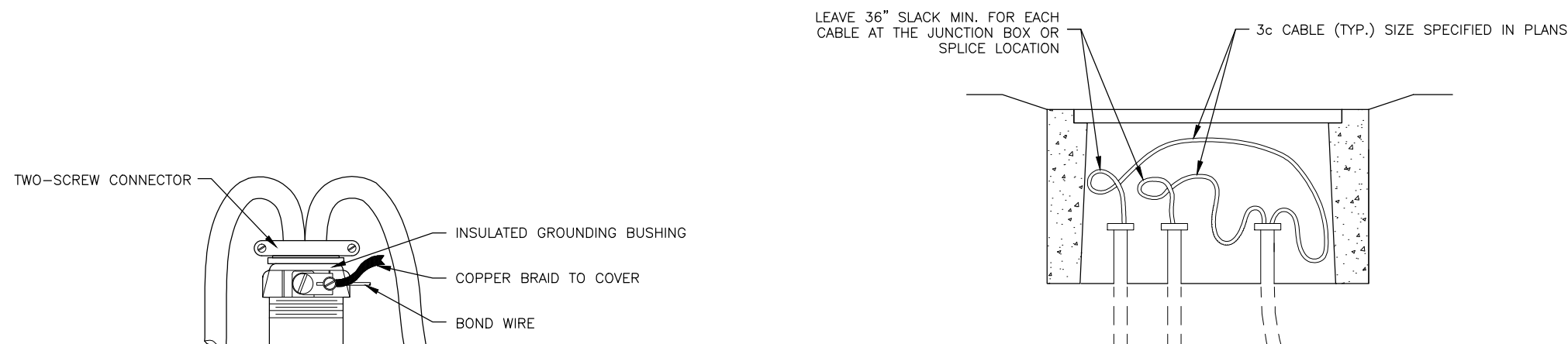
6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	05/24/2018	REPLACED WITH ADOT'S DETAIL TSM806	ALASKA	0617012/NFHWY00270	2018	H48	H54



① INSTALL 2"x1" REDUCING WASHER AND 1" CONNECTOR TO SECURE CONDUCTORS AT THE END OF THE MAST ARM

LIGHT STANDARD MAST ARM WIRING DETAIL

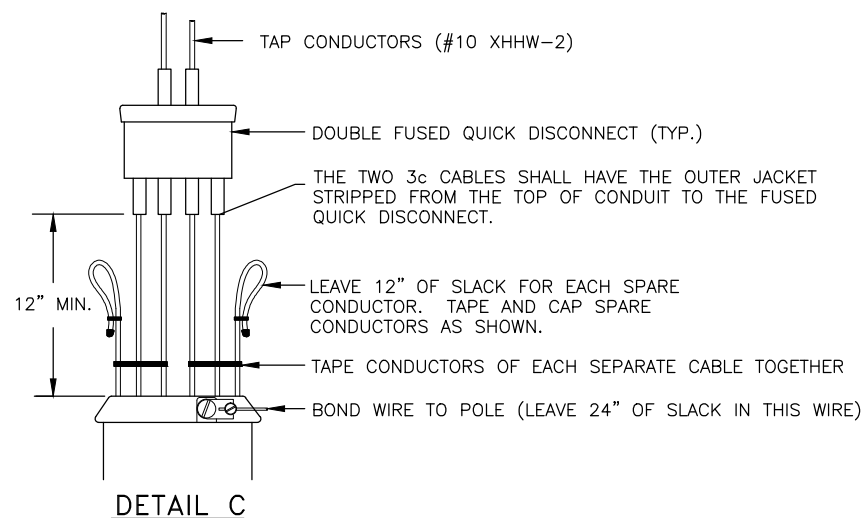


THE TWO-SCREW CONNECTOR SHALL BE SIZED SUCH THAT THE THREADS FIT INSIDE THE OPENING OF THE BUSHING AND THE CONNECTOR BODY IS LARGE ENOUGH TO PREVENT IT FROM SLIPPING THROUGH THE OPENING.

ELIMINATE ALL SLACK BETWEEN TWO-SCREW CONNECTOR AND CONDUCTOR ATTACHMENT BRACKET IN LIGHT POLE

DETAIL A

DETAIL B



DETAIL C

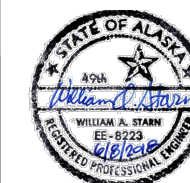
NOTES:

1. LABEL ALL CABLES AND CONDUCTORS IN POLE BASE AND J-BOX.
2. LEAVE ENOUGH SLACK ABOVE THE CONDUCTOR ATTACHMENT BRACKET TO ALLOW THE QUICK DISCONNECT TO BE PULLED 6" OUTSIDE OF HANDHOLE.
3. NOT ALL GROUNDING CONDUCTORS, AS REQUIRED BY SECTION 660-3.06, ARE SHOWN IN THESE DETAILS.

LIGHTING SYSTEM POLE AND J-BOX WIRING DETAILS

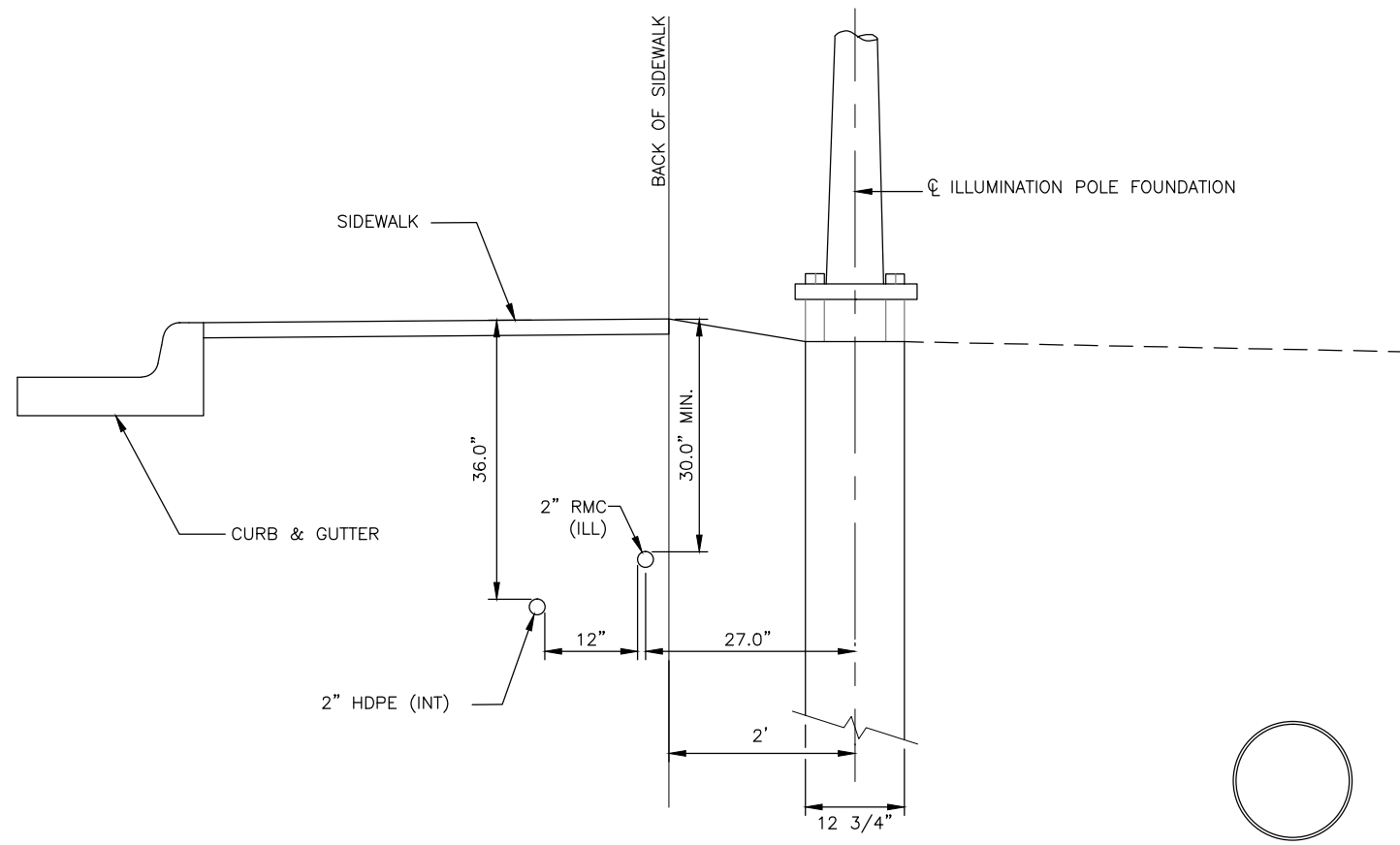
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LIGHTING SYSTEM POLE AND J-BOX DETAILS

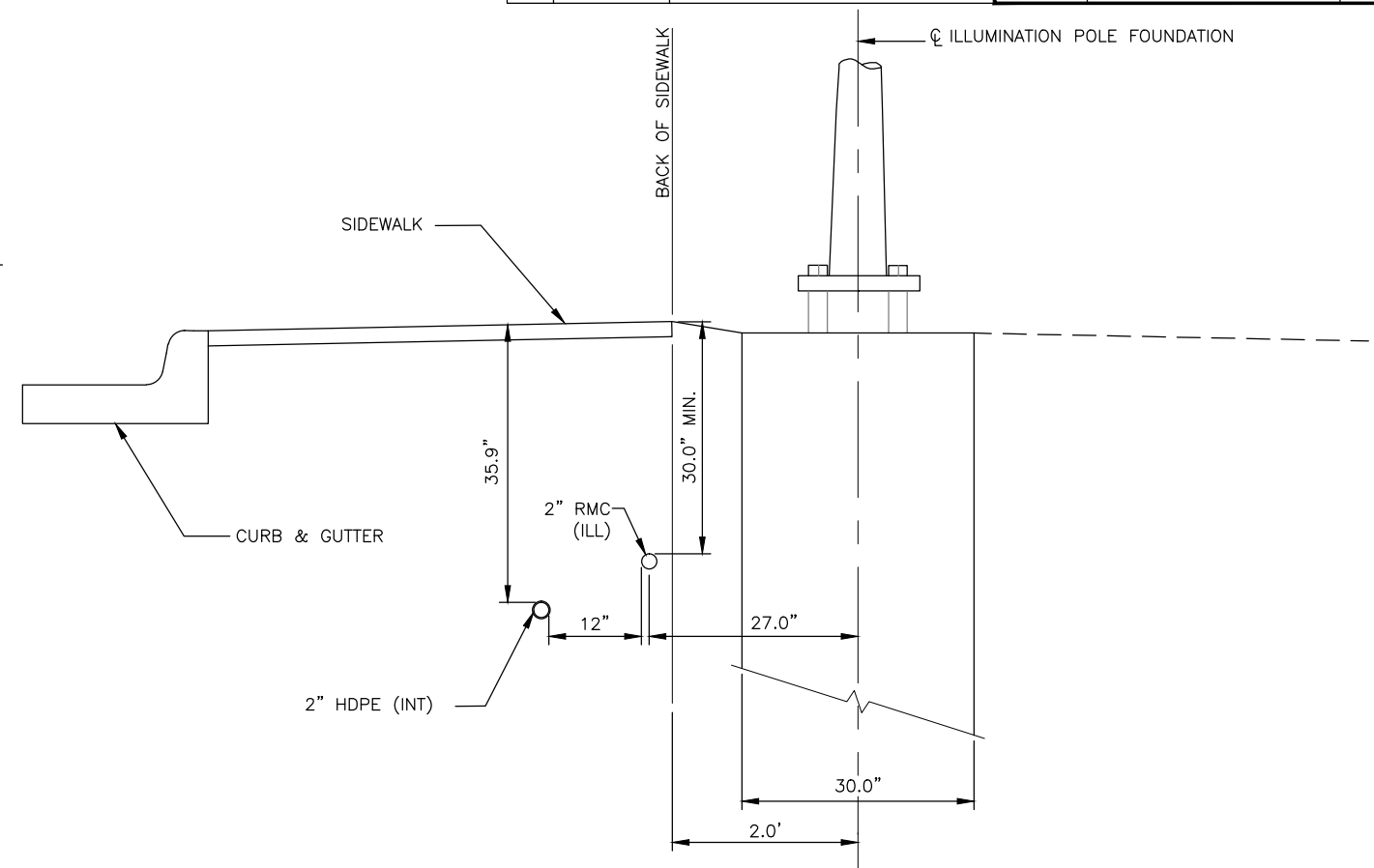


6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H49	H54



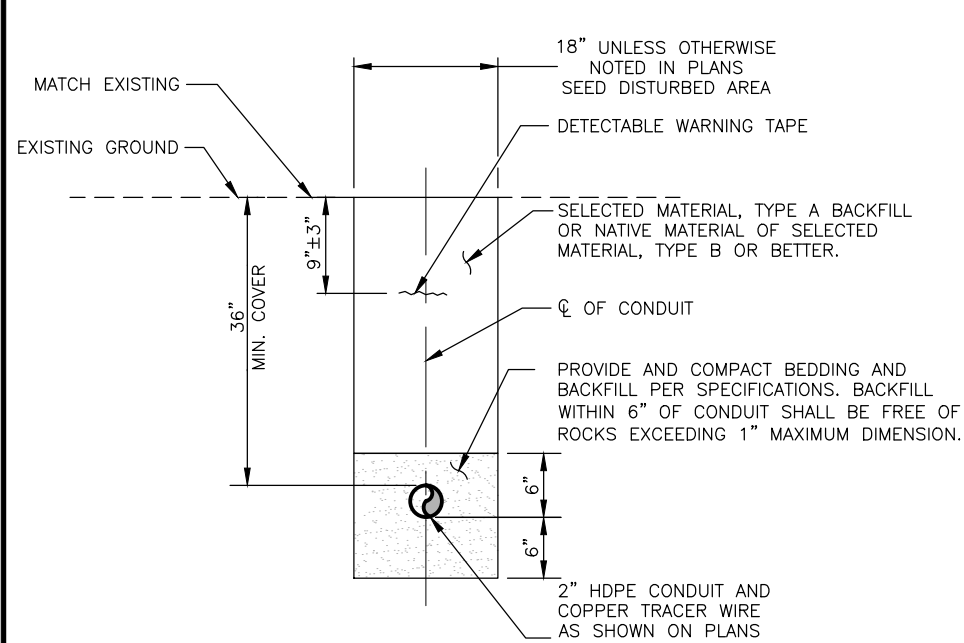
TYPICAL PLACEMENT ADJACENT TO STEEL PIPE PILE FOUNDATIONS



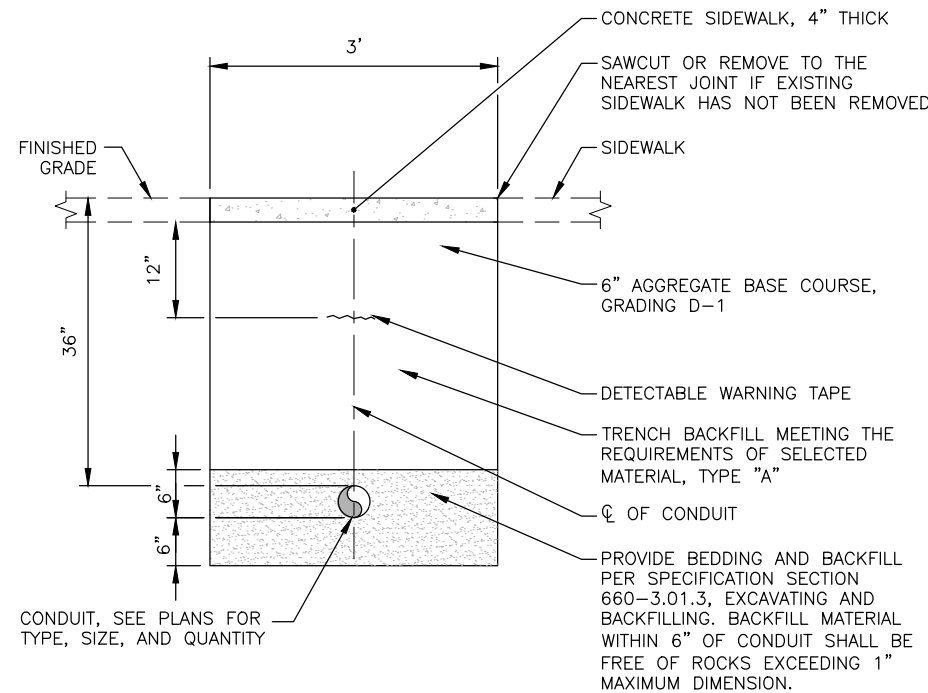
TYPICAL PLACEMENT ADJACENT TO CIDH LIGHT POLE FOUNDATIONS

UTILITY PLACEMENT DETAILS

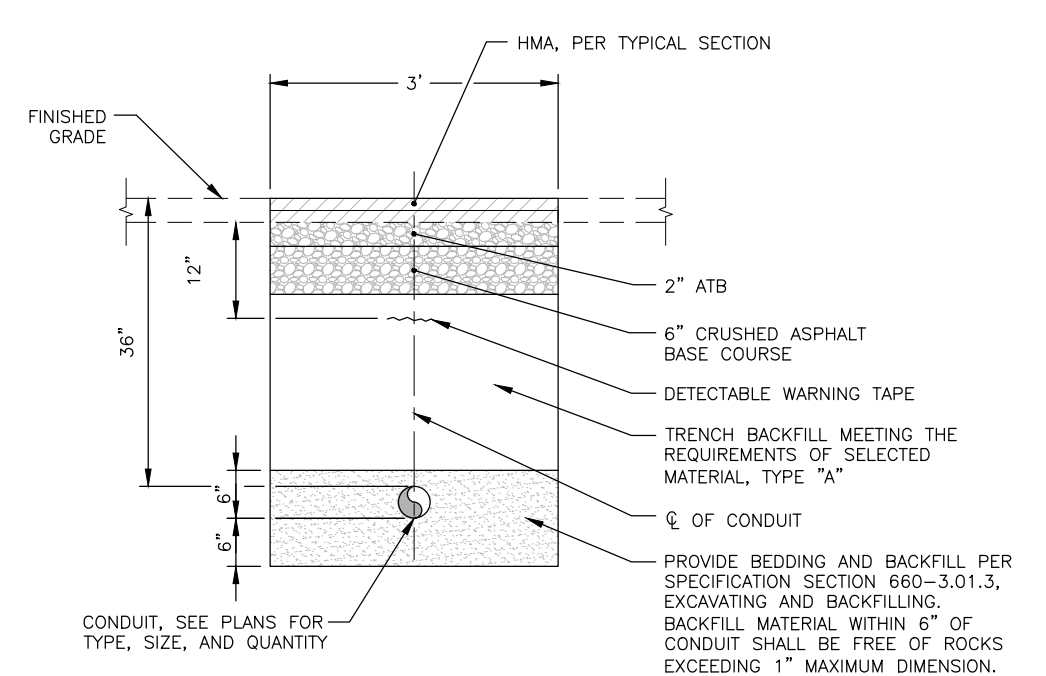
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TYPICAL INTERCONNECT CONDUIT TRENCH OUTSIDE OF PAVED AREAS



CONDUIT TRENCH AND EXCAVATION IN SIDEWALK AREAS



CONDUIT TRENCH AND EXCAVATION IN PAVING AREAS

TRENCH DETAILS

NTS

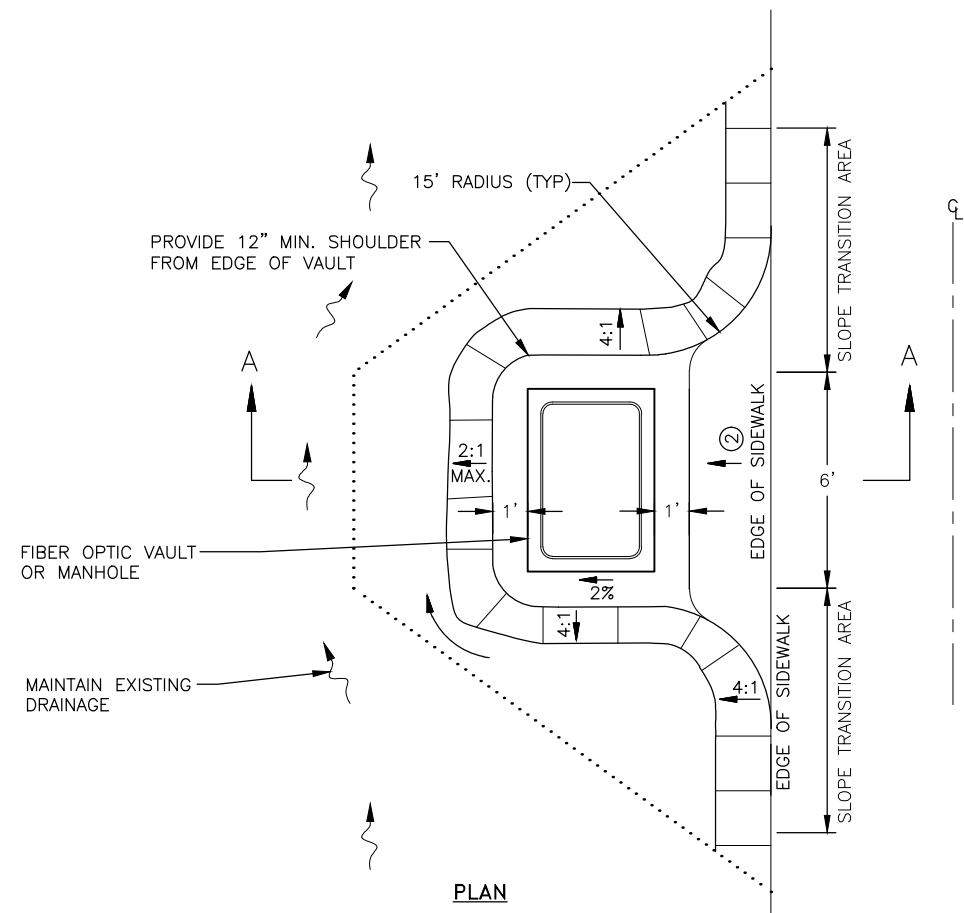
TRENCH DETAILS



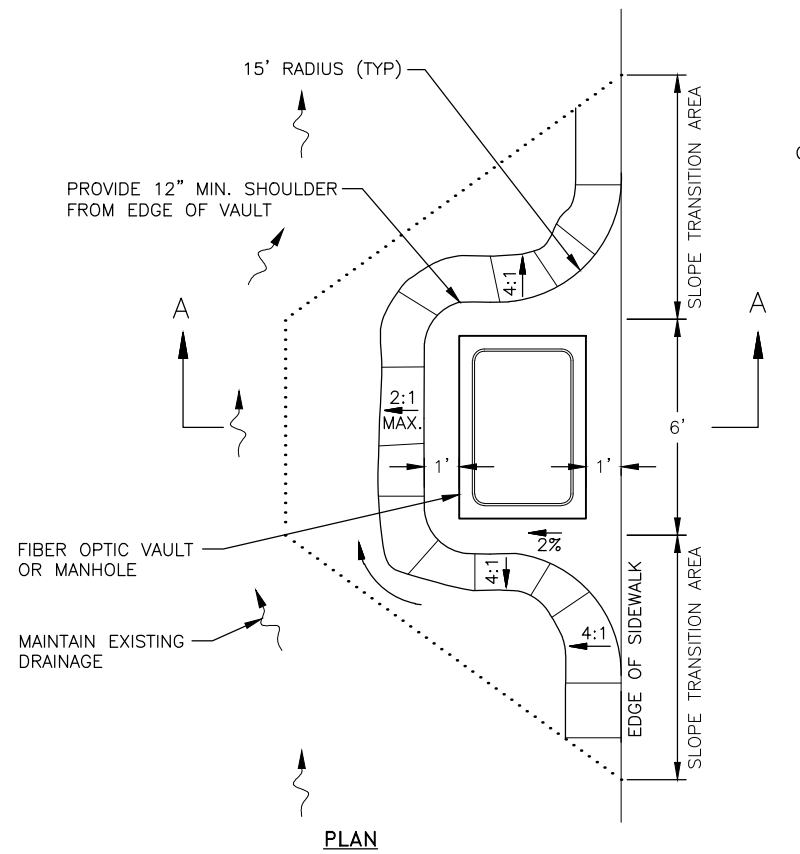
6/8/2018

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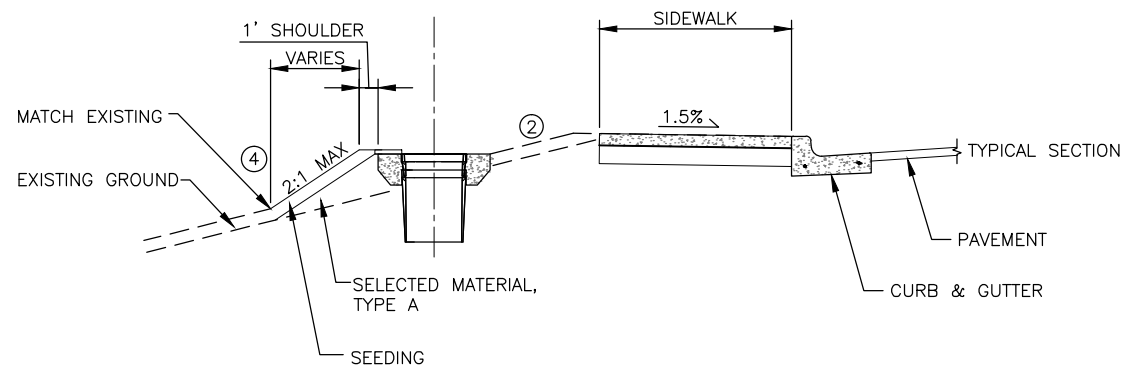
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			ALASKA	0617012/NFHWY00270	2018	H50	H54



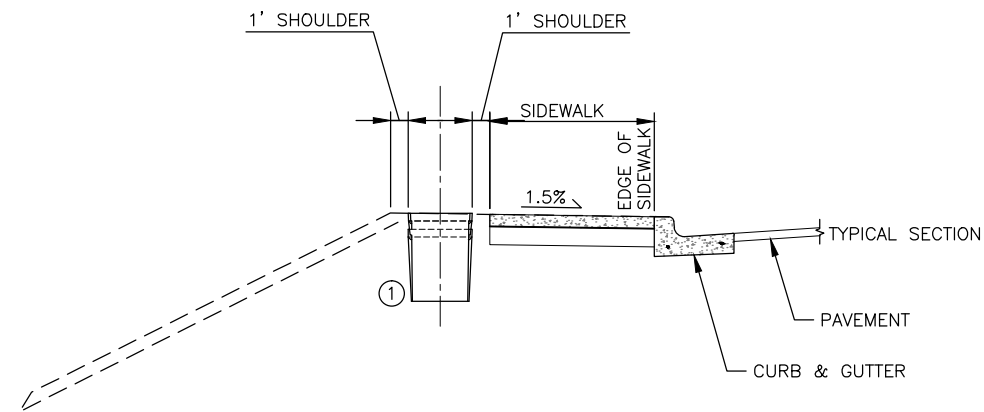
VAULT GRADING SEPARATED FROM SIDEWALK
NTS



VAULT GRADING ADJACENT TO SIDEWALK
NTS



VAULT GRADING SEPARATED FROM SIDEWALK
NTS



VAULT GRADING ADJACENT TO SIDEWALK
NTS

NOTES:

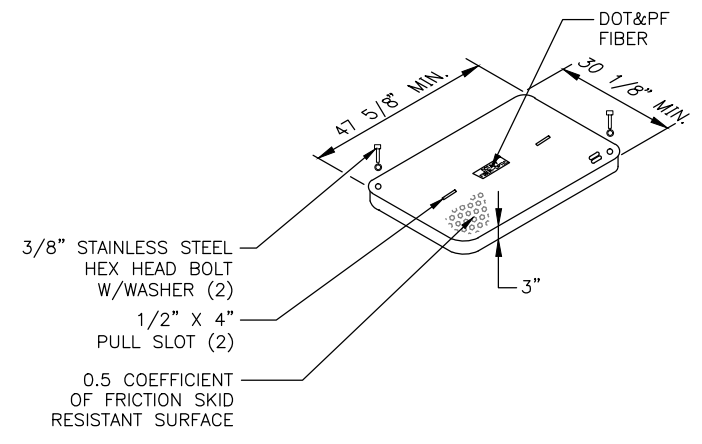
- ① WHEN VAULT IS LOCATED WITHIN OR ADJACENT TO A SIDEWALK DEPRESS VAULT 0" - 3/16" BELOW FINISH SIDEWALK GRADE.
- ② SLOPE AS CALLED FOR IN TYPICALS.
3. SEED DISTURBED AREAS AS DIRECTED BY THE ENGINEER.
- ④ STEEPEN SLOPES AS NECESSARY TO CONTAIN SLOPE LIMITS WITHIN THE ROW.
5. 1 FOOT SHOULDER SHALL BE FROM THE CONCRETE COLLAR WHERE CALL FOR IN SCHEDULE.

VAULT GRADING DETAIL



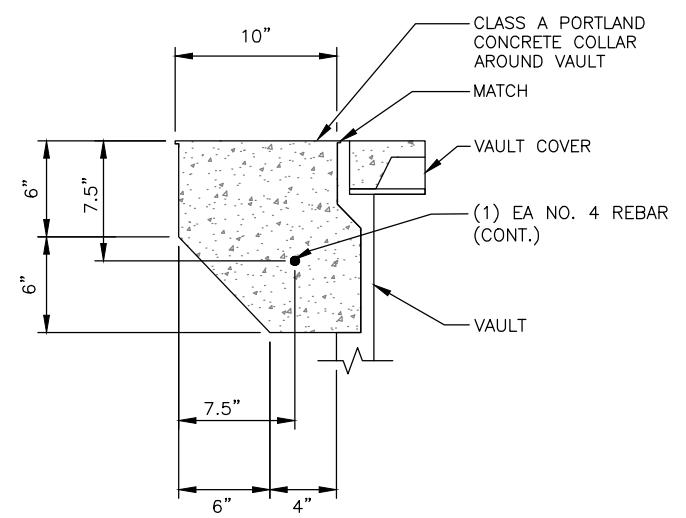
6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H51	H54



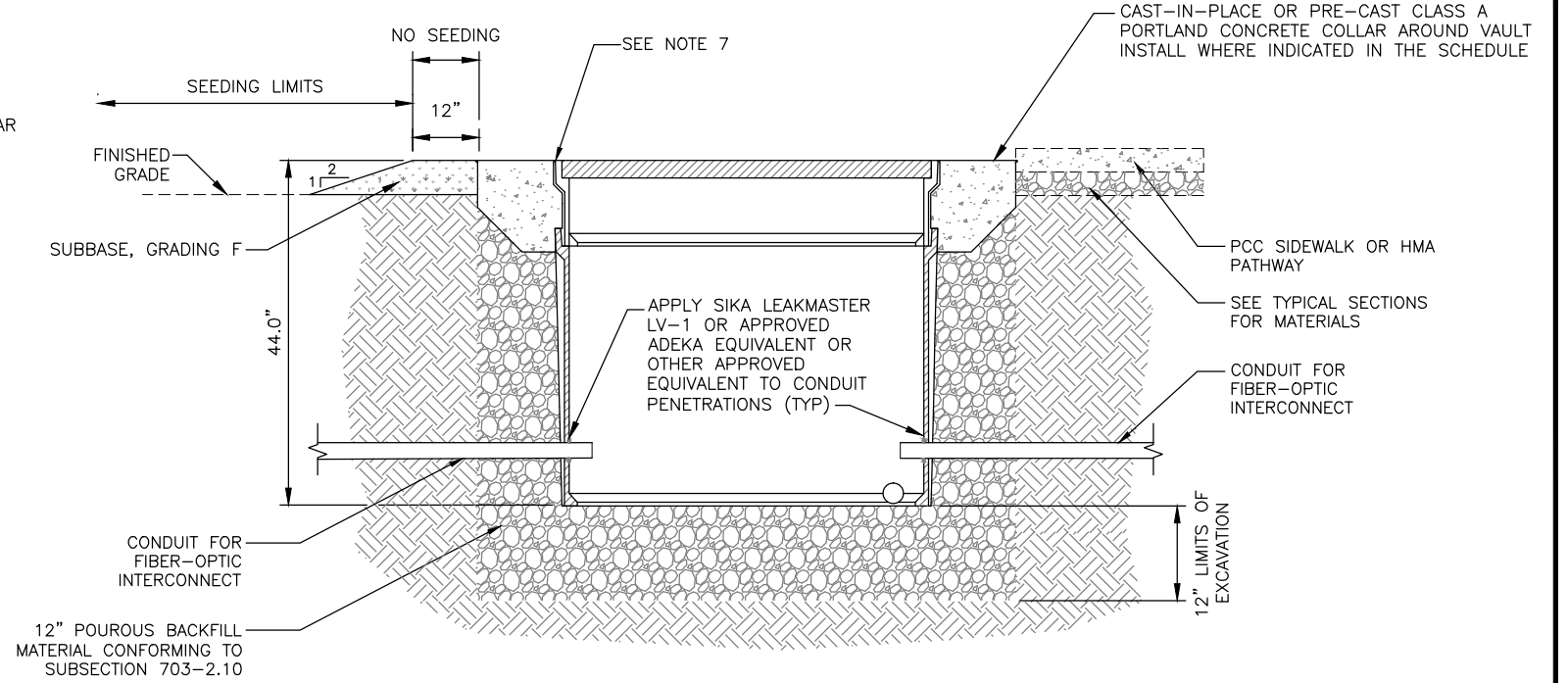
COVER

HUBBELL QUAZITE NO. PG3048HH00 OR APPROVED EQUIVALENT

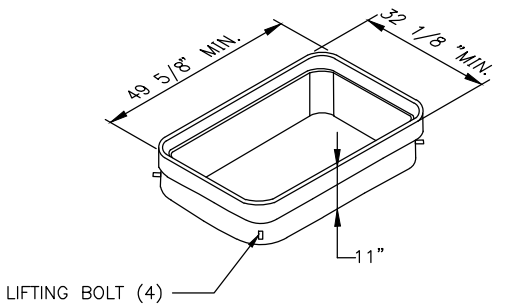


CONCRETE COLLAR DETAIL

NTS

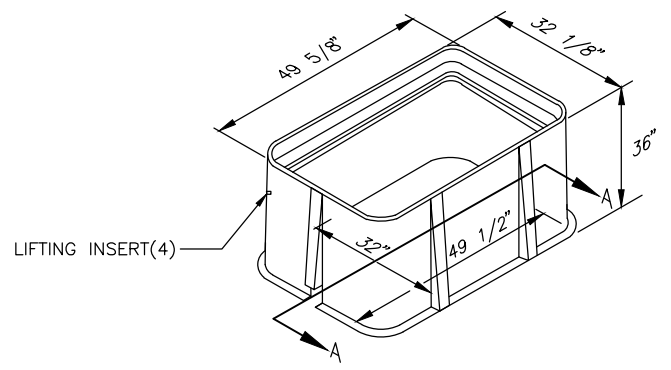


SECTION A-A



TOP EXTENSION

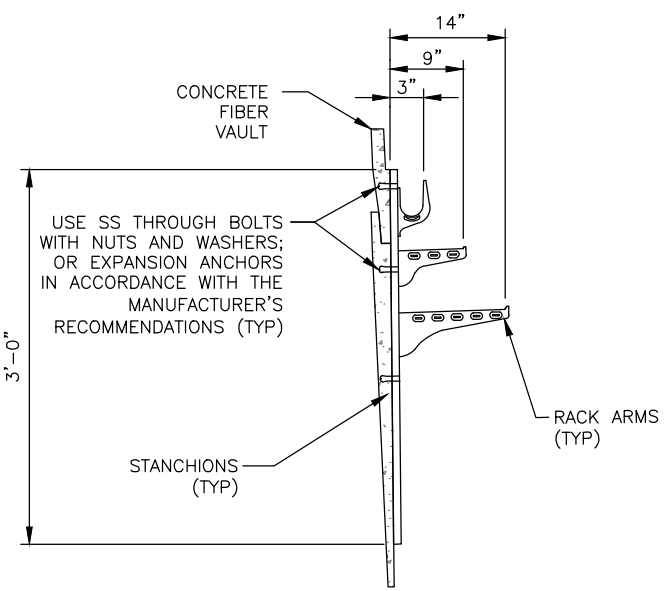
HUBBELL QUAZITE NO. PG3048EA11 OR APPROVED EQUIVALENT



BOTTOM

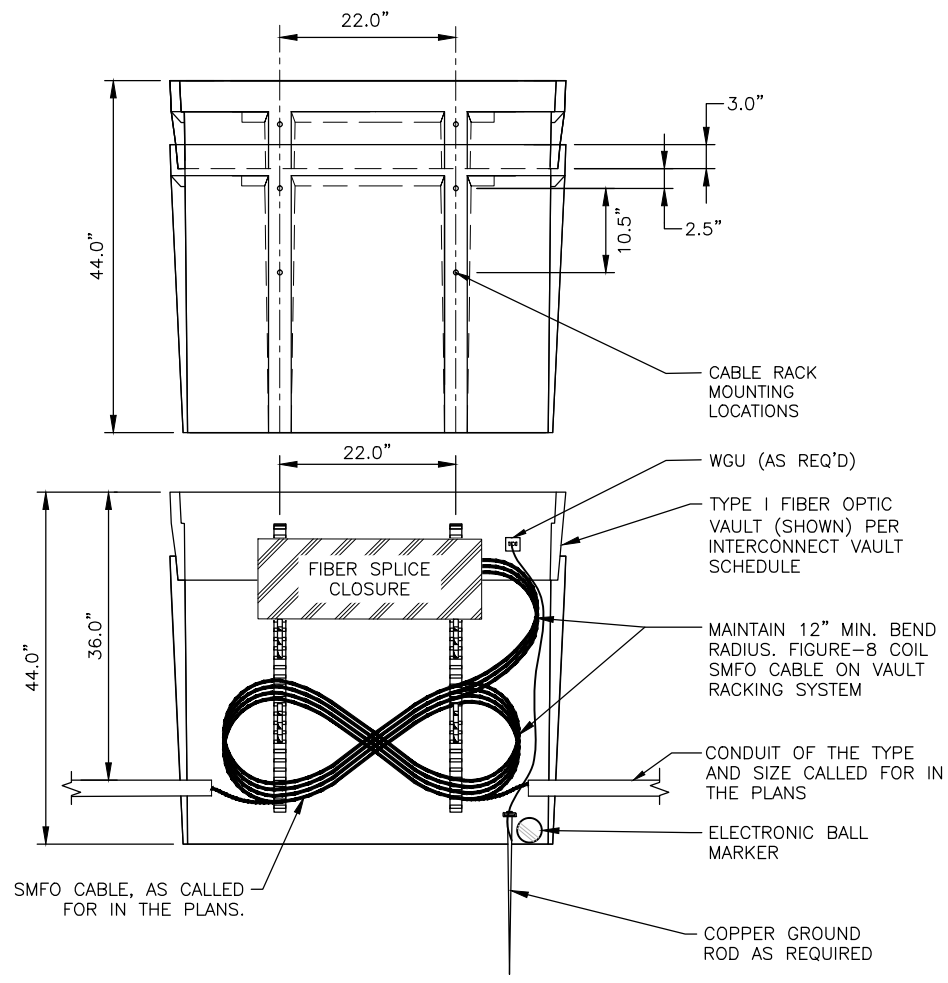
INTERCONNET VAULT, TYPE I

NTS HUBBELL QUAZITE NO. PG3048BA36 OR APPROVED EQUIVALENT



TYPICAL CABLE RACK

NTS



VAULT EQUIPMENT LAYOUT

NTS

NOTES:

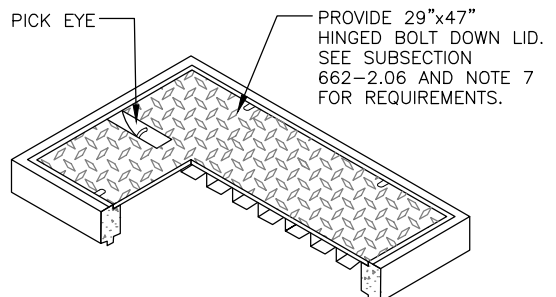
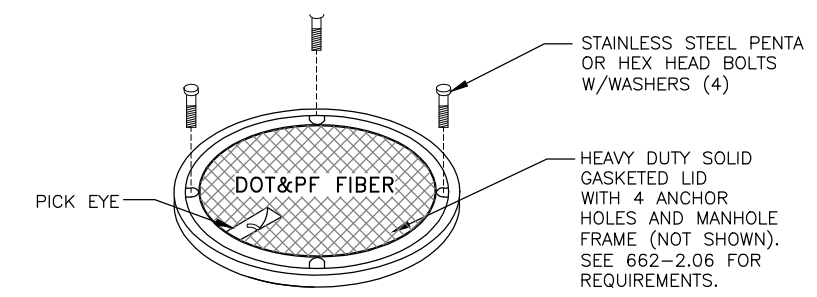
1. FIBER-OPTIC INTERCONNECT VAULTS SHALL BE PRECAST, POLYMER CONCRETE, OPEN BOTTOM, W/FLARED BASE UNLESS OTHERWISE NOTED IN THE PLANS AND CONTRACT SPECIFICATIONS.
2. THE STANDARD FIBER-OPTIC INTERCONNECT VAULT NOMINAL DIMENSIONS SHALL BE AS SHOWN.
3. THE DESIGN/TEST LOAD STRENGTH OF THE BOX SHALL BE MINIMUM OF 22,500/33,750 LBS.
4. THE STANDARD COVER (LID) SHALL HAVE NOMINAL DIMENSIONS OF 30 1/8 in. WIDE X 47 5/8 in. LONG X 3 in. DEEP.
5. THE DESIGN/TEST LOAD STRENGTH OF THE COVER SHALL BE A MINIMUM OF 22,500/33,750 LBS.
6. THE COVER SHALL BE CAPABLE OF BEING SECURED TO THE BOX WITH TWO BOLTS, AND EMBOSSED WITH: "DOT&PF FIBER".
7. UNLESS OTHERWISE NOTED, FIBER-OPTIC INTERCONNECT VAULTS SHALL BE INSTALLED FLUSH WITH ADJACENT SIDEWALK, DRIVEWAY, OR 1.5 INCHES ABOVE FINISHED SOD GRADE.
8. FIBER-OPTIC INTERCONNECT VAULTS SHALL NOT INCLUDE ELECTRICAL CONDUIT OR CONDUCTORS.
9. COMPLY WITH SECTIONS 501, 503, AND 662.

FIBER OPTIC VAULT, TYPE I DETAIL

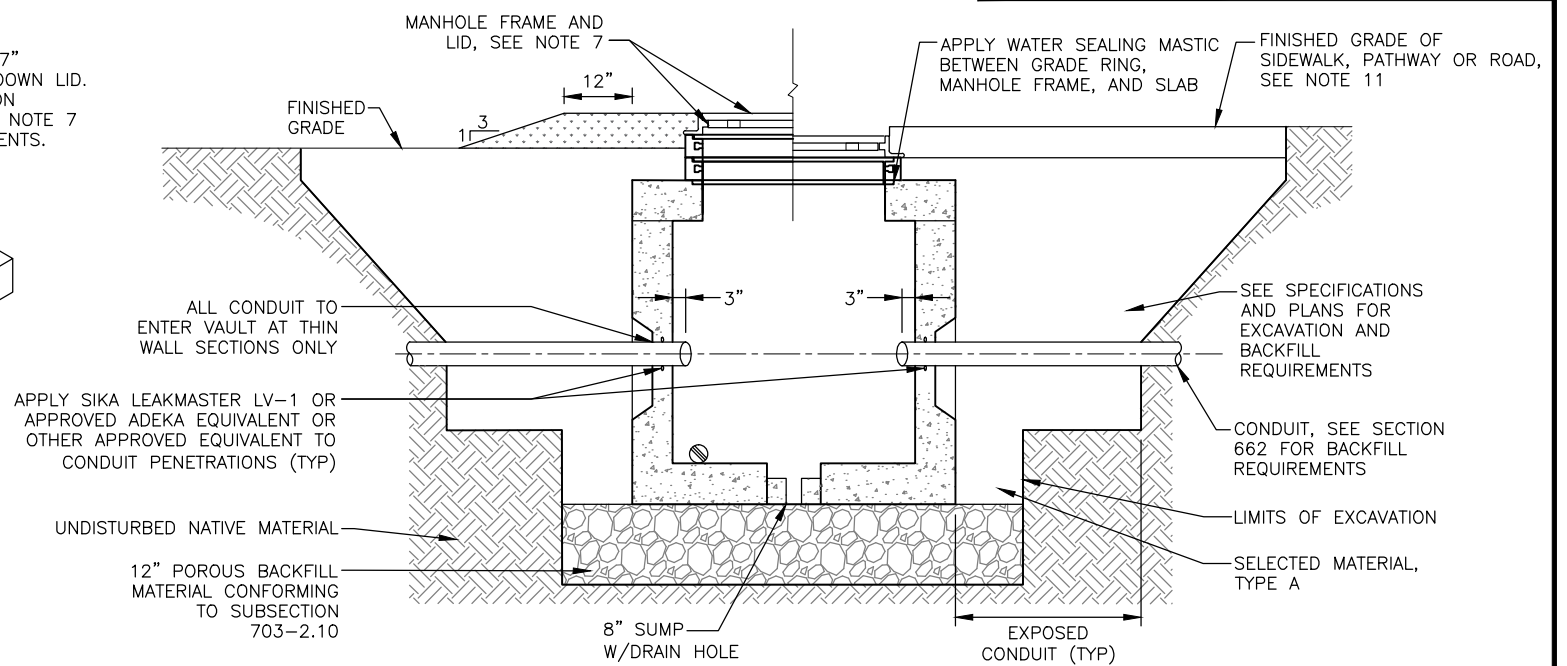
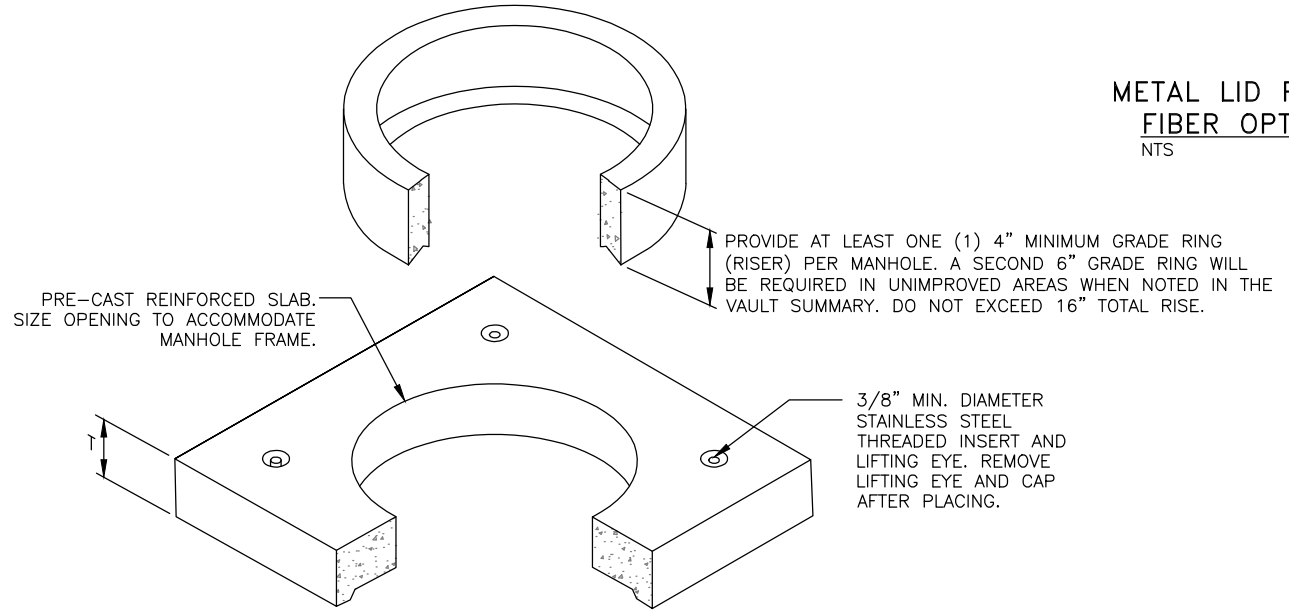


PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC, 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H52	H54

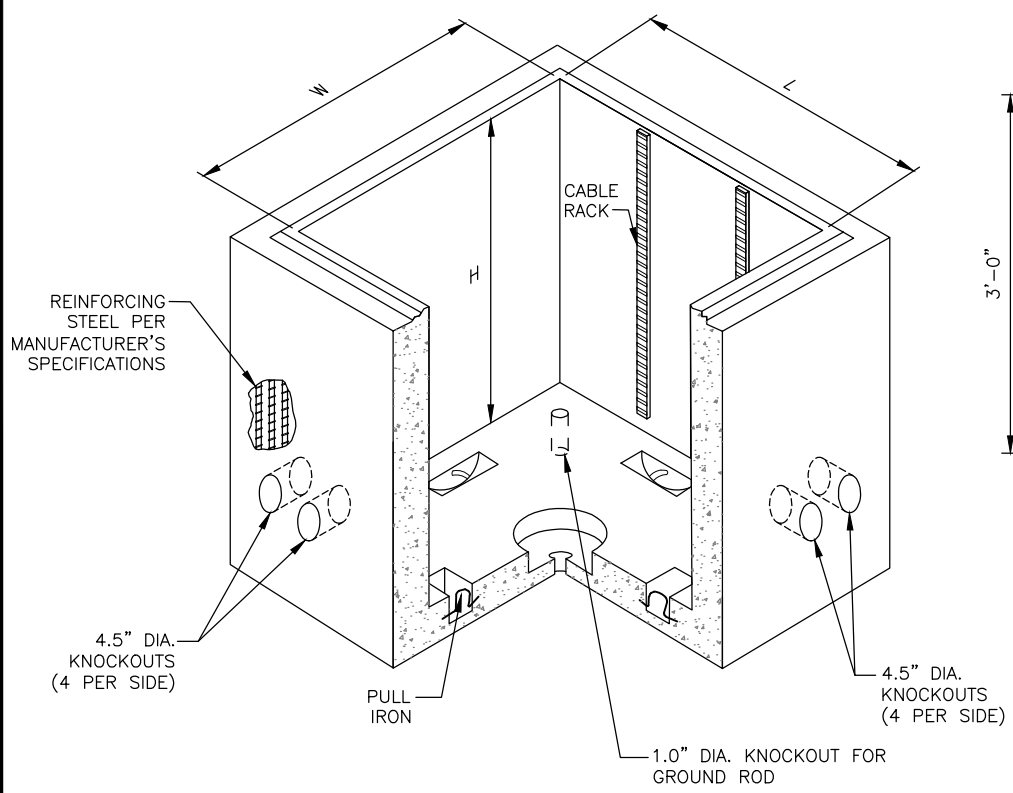


METAL LID FOR TYPE II FIBER OPTIC VAULT
NTS

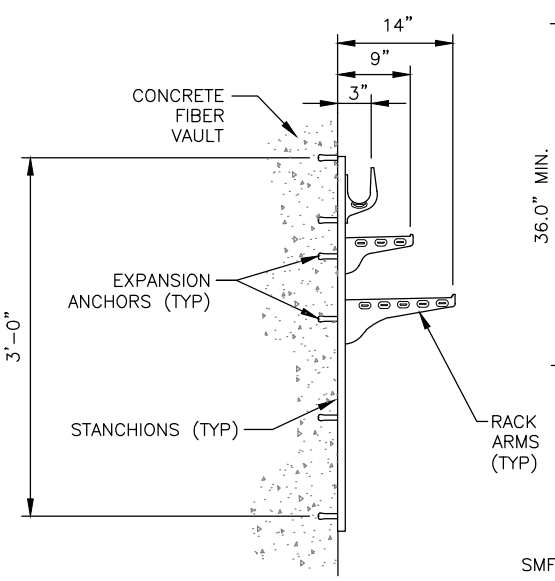


CONDUIT PENETRATION DETAIL
NTS

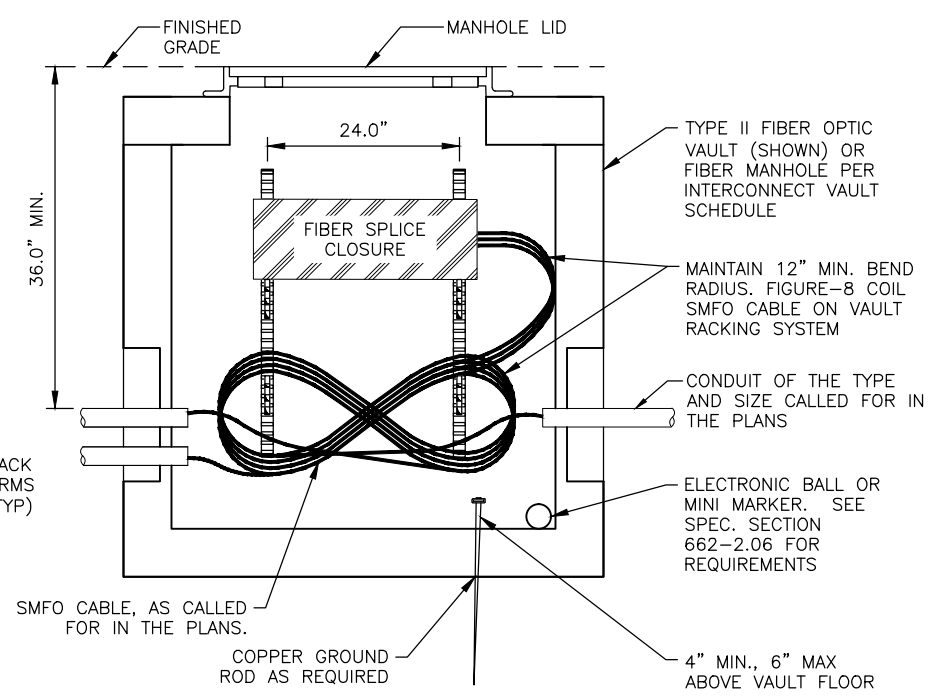
- NOTES:**
- SUPPLY TYPE II FIBER OPTIC VAULTS WITH BOLT DOWN HINGED METAL LID. SUPPLY FIBER VAULTS, LIDS, AND COVERS RATED FOR AASHTO HS-20-44 LOADING.
 - SUPPLY ALL LIDS WITH WITH A HOLE OR SLOT FOR REMOVAL WITH A LEVER OR HOOK.
 - SUPPLY VAULTS AND MANHOLES WITH A PERMANENT INTERNAL LADDER. COMPLY WITH OSHA REQUIREMENTS.
 - PROVIDE FIBER VAULT AND MANHOLE LIDS MARKED, "DOT&PF FIBER".
 - PROVIDE FIBER MANHOLES AND VAULTS WITH A HEAVY-DUTY NON-METALLIC CABLE STORAGE RACK SYSTEM. PROVIDE RACK ARMS OR STANCHIONS CAPABLE OF SUPPORTING A MINIMUM OF 250 LBS. INCLUDE A MINIMUM OF 36 INCH RACK STANCHIONS AND 4 RACK ARMS.
 - ENTER CONDUITS INTO FIBER VAULT AT THINWALL SECTIONS ONLY. CORE DRILL IN THE THINWALL SECTION TO CONDUIT SIZE PLUS 1/4 INCH ALL AROUND. DO NOT "KNOCK OUT" THE THINWALL SECTION.
 - BOND AND GROUND ALL METALLIC COMPONENTS OF THE FIBER VAULT, INCLUDING RACK, FRAME AND LIDS PER STANDARD SPECIFICATION 660-3.06.
 - INSTALL CONDUIT PLUGS PER SECTIONS 660 AND 662.
 - EXTEND GROUND ROD A MINIMUM OF 4 INCHES AND A MAXIMUM OF 6 INCHES ABOVE BOTTOM OF FIBER VAULT.
 - USE A SPLIT BOLT CONNECTOR TO ATTACH GROUND WIRES TO GROUND ROD. ATTACH NOT MORE THAN TWO WIRES PER BOLT.
 - UNLESS OTHERWISE NOTED, TOP OF FIBER OPTIC VAULT / MANHOLE LIDS SHALL BE INSTALLED 0"-3/16" BELOW FINISHED GRADE WHEN IN SIDEWALK OR PATHWAY; 3/8" BELOW FINISHED GRADE WHEN LOCATED IN PAVED PARKING LOT, MEDIAN, OR ROADWAY; AND 4"-8" ABOVE FINISHED GRADE IN UNIMPROVED AREAS, AWAY FROM HARDSCAPED SURFACES; OR AS DIRECTED BY THE ENGINEER. DO NOT PLACE IN BOTTOM OR DRAINAGE COLLECTION AREAS.



FIBER OPTIC MANHOLE WITH MANHOLE LID
NTS (TYPE II FIBER OPTIC VAULT SIMILAR)



TYPICAL CABLE RACK
NTS



VAULT EQUIPMENT LAYOUT
NTS

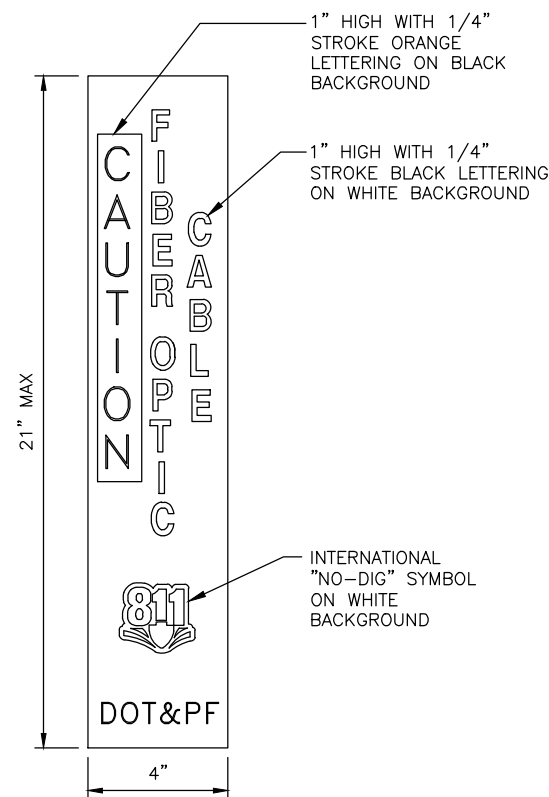
TYPE	"L" INCH	"W" INCH	"H" INCH	"T" INCH	LID
TYPE II FIBER OPTIC VAULT	30	48	48	6 MIN	HINGED METAL
MANHOLE	48	48	48	6 MIN	MANHOLE

TYPE II FIBER OPTIC VAULT AND FIBER OPTIC MANHOLE DETAIL

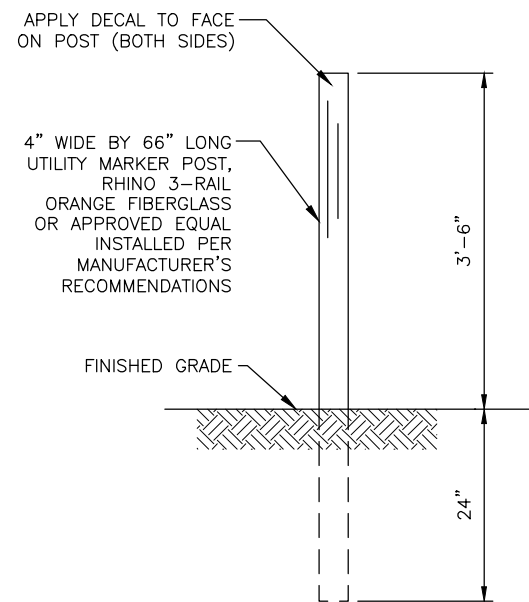


PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design\ST-NORTH\Production\06173_NL_H50-H58-Light&box Details-H52 Fr, Jun/08/18 07:17pm

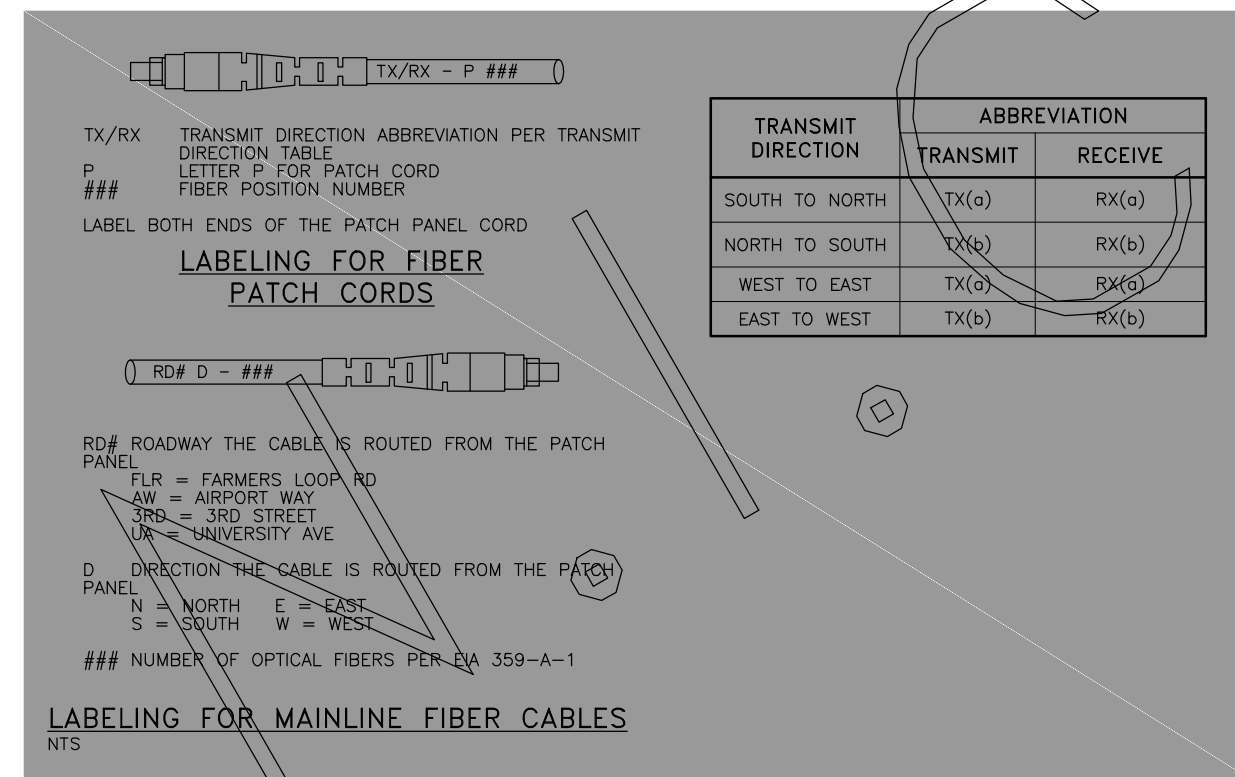
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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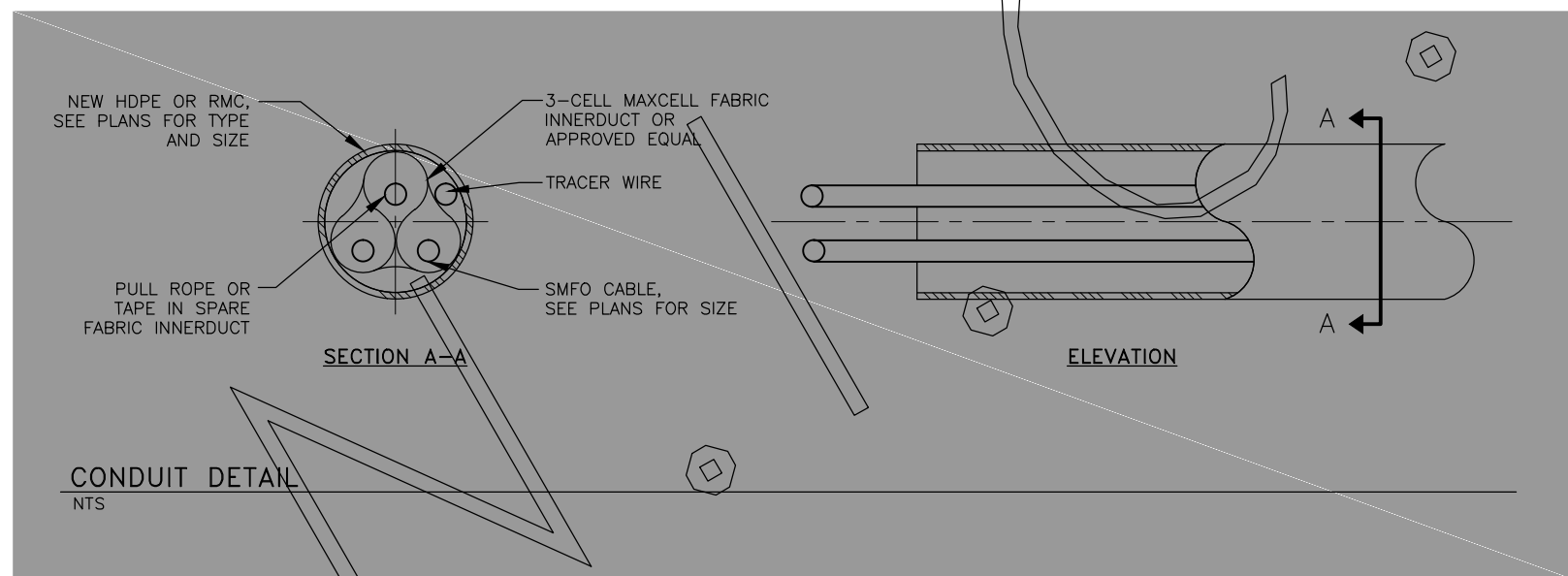
DECAL
NTS



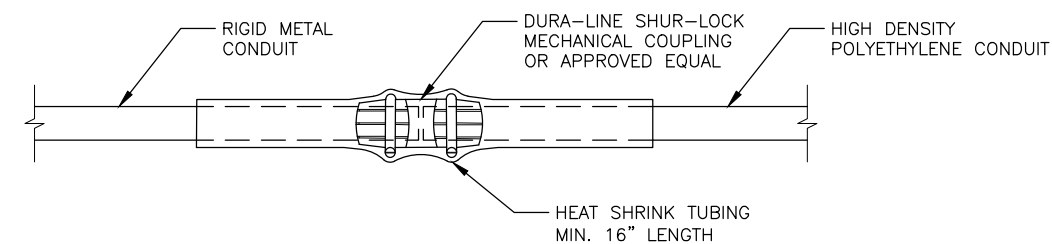
FIBER OPTIC MARKER ELEVATION
NTS



LABELING FOR MAINLINE FIBER CABLES
NTS



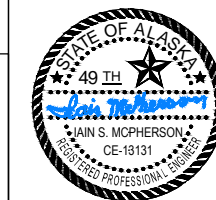
CONDUIT DETAIL
NTS



NOTE:
USE ELECTROFUSION COUPLINGS PER THE HDPE MANUFACTURER'S REQUIREMENTS, WHEN JOINING HDPE TO HDPE.

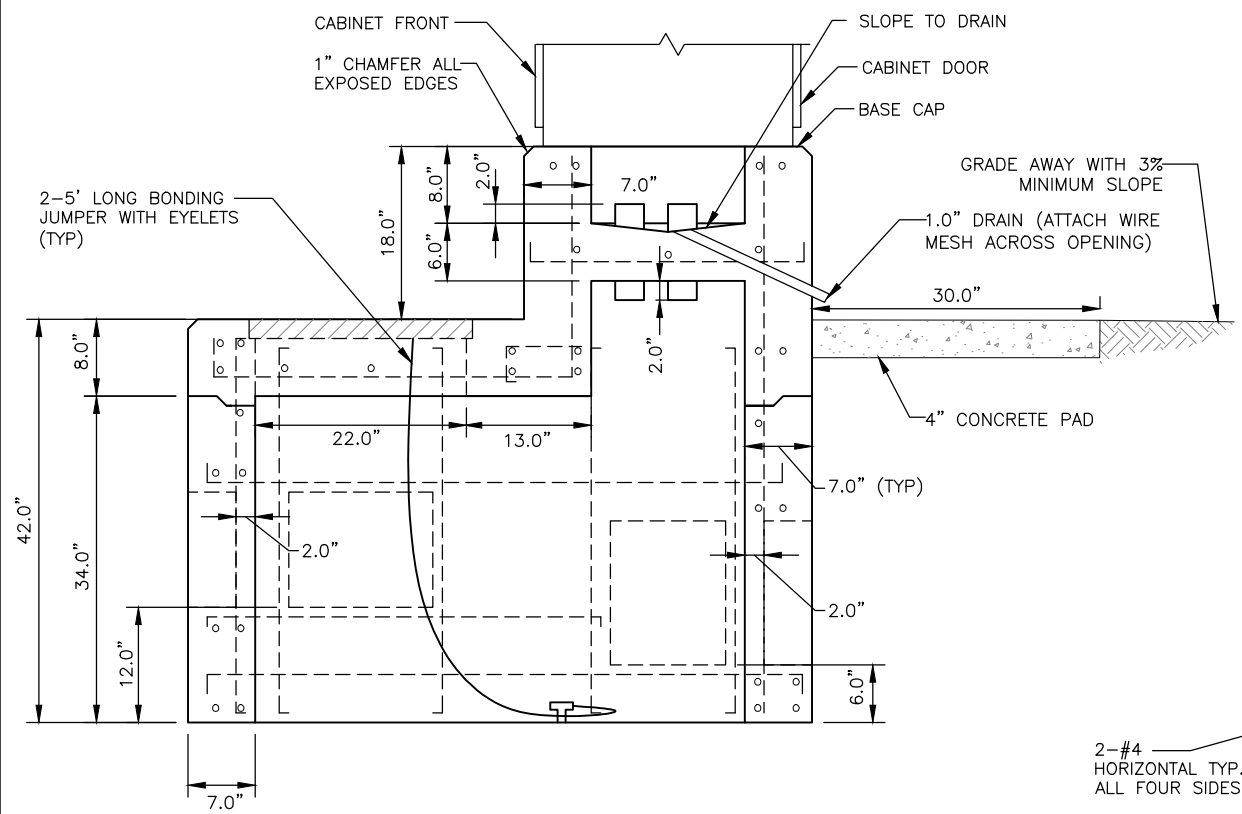
RMC TO HDPE CONDUIT CONNECTION DETAIL
NTS

FIBER OPTIC DETAILS



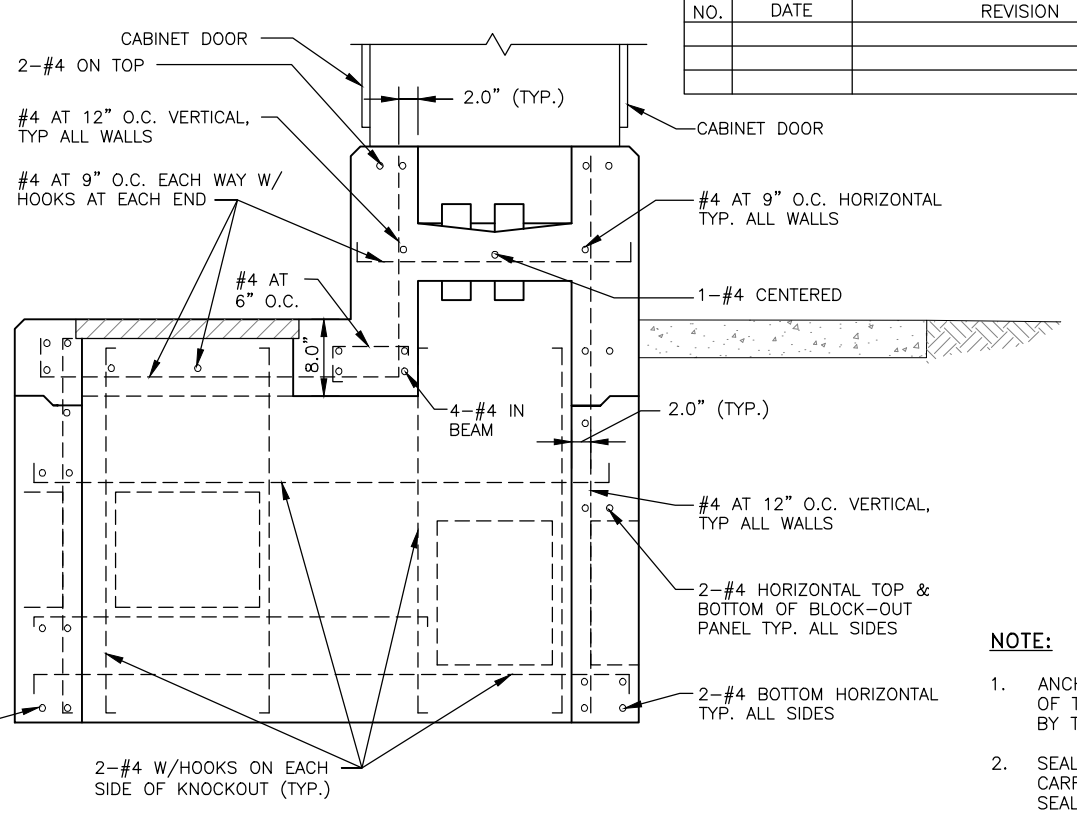
6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	H54	H54



SECTION A-A

NOTE: SEE SECTION B-B FOR REBAR DETAILS

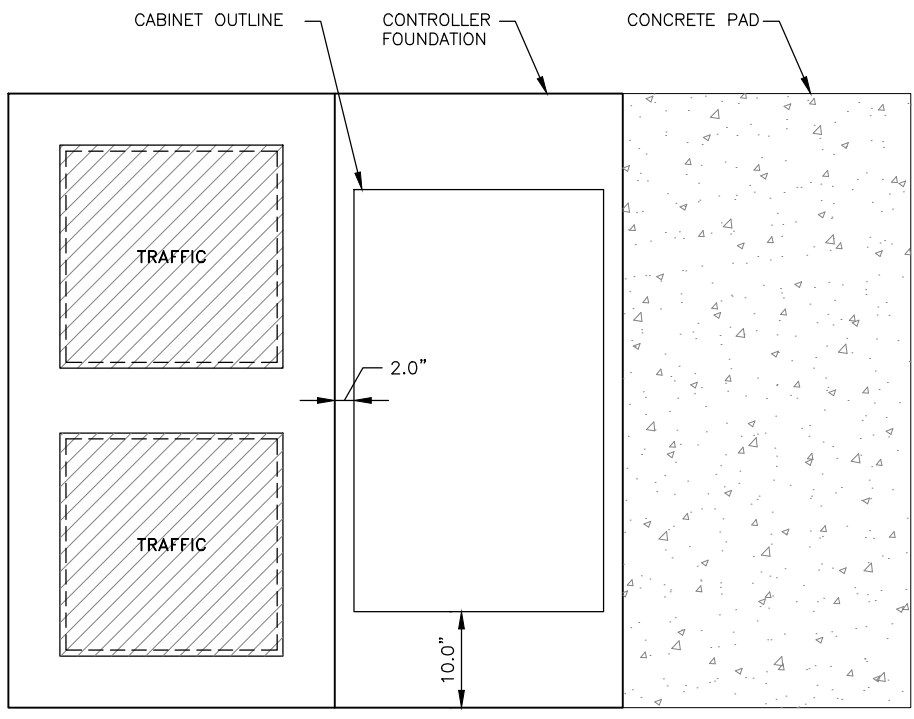
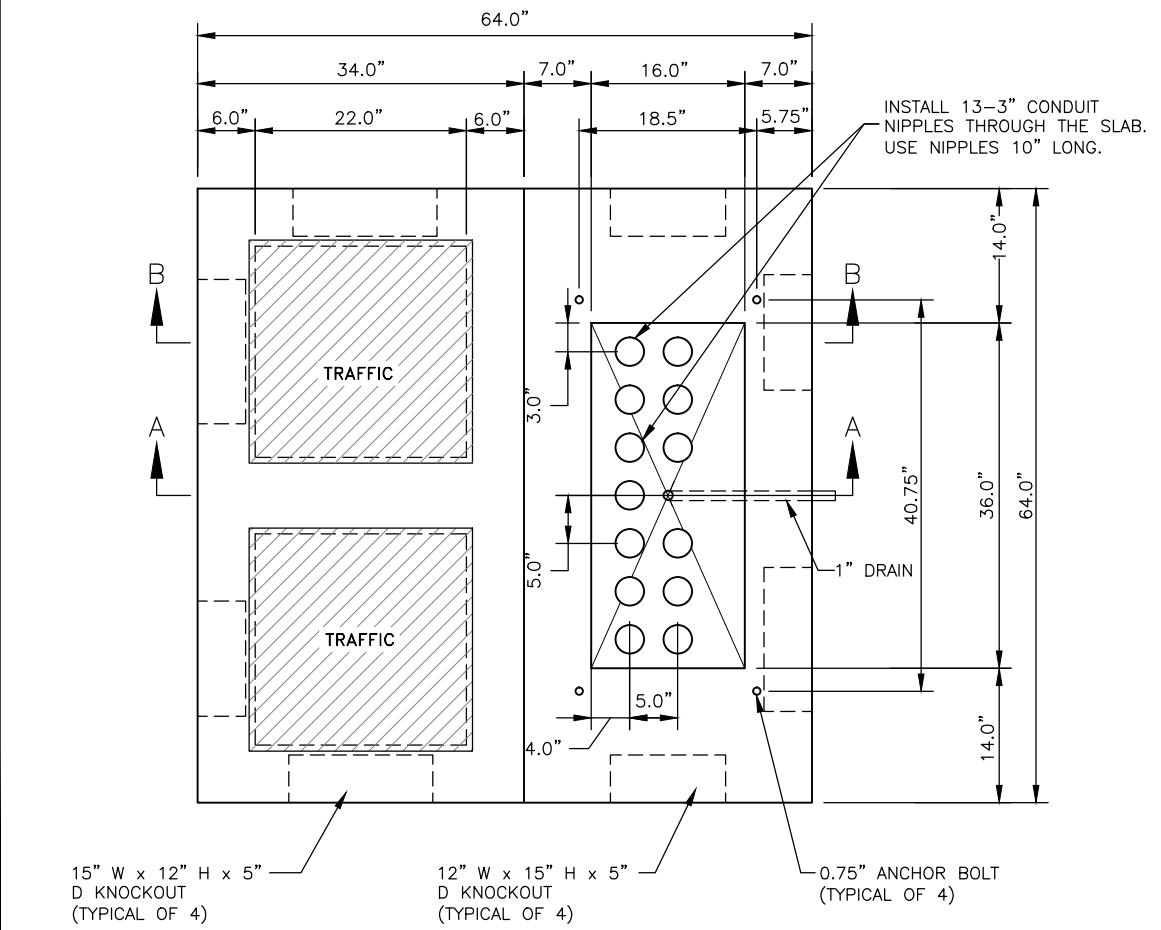


SECTION B-B

NOTE: SEE SECTION A-A FOR DIMENSIONAL DETAILS

NOTE:

- ANCHOR BOLTS SHALL NOT PROTRUDE MORE THAN 1.5" ABOVE THE TOP OF THE FOUNDATION. ANCHOR BOLT DIMENSIONS SHALL BE AS SPECIFIED BY THE CABINET MANUFACTURER.
- SEAL UNUSED CONDUIT STUBS WITH WATERTIGHT CAPS. SEAL STUBS CARRYING CONDUCTORS WITH WATERTIGHT SEALING BUSHINGS DESIGNED TO SEAL AROUND CONDUCTORS AND AGAINST THE CONDUIT WALLS.
- ROUTE THE FIVE FOOT COPPER GROUNDING JUMPER THROUGH THE 2" PIPE NIPPLE AND ATTACH IT TO THE GROUNDING BUSHING ON THE FEEDER CONDUIT.
- STOP HORIZONTAL & VERTICAL STEEL AT THE BLOCK-OUT PANELS & THE JOINT USING 90 DEGREE HOOKS. USE 2 EXTRA #4 HORIZONTAL & VERTICAL BARS. ALL SIDES AS SHOWN.
- INSTALL TRAFFIC CONTROLLER WITHIN 1-DEGREE OF PLUMB.
- CONCRETE PAD SHALL BE SUBSIDIARY TO THE SIGNAL PAY ITEM.



PLAN VIEW

15" W x 12" H x 5" D KNOCKOUT (TYPICAL OF 4)
 12" W x 15" H x 5" D KNOCKOUT (TYPICAL OF 4)
 0.75" ANCHOR BOLT (TYPICAL OF 4)

SIZE 6 OR 7 CONTROLLER CABINET FOUNDATION

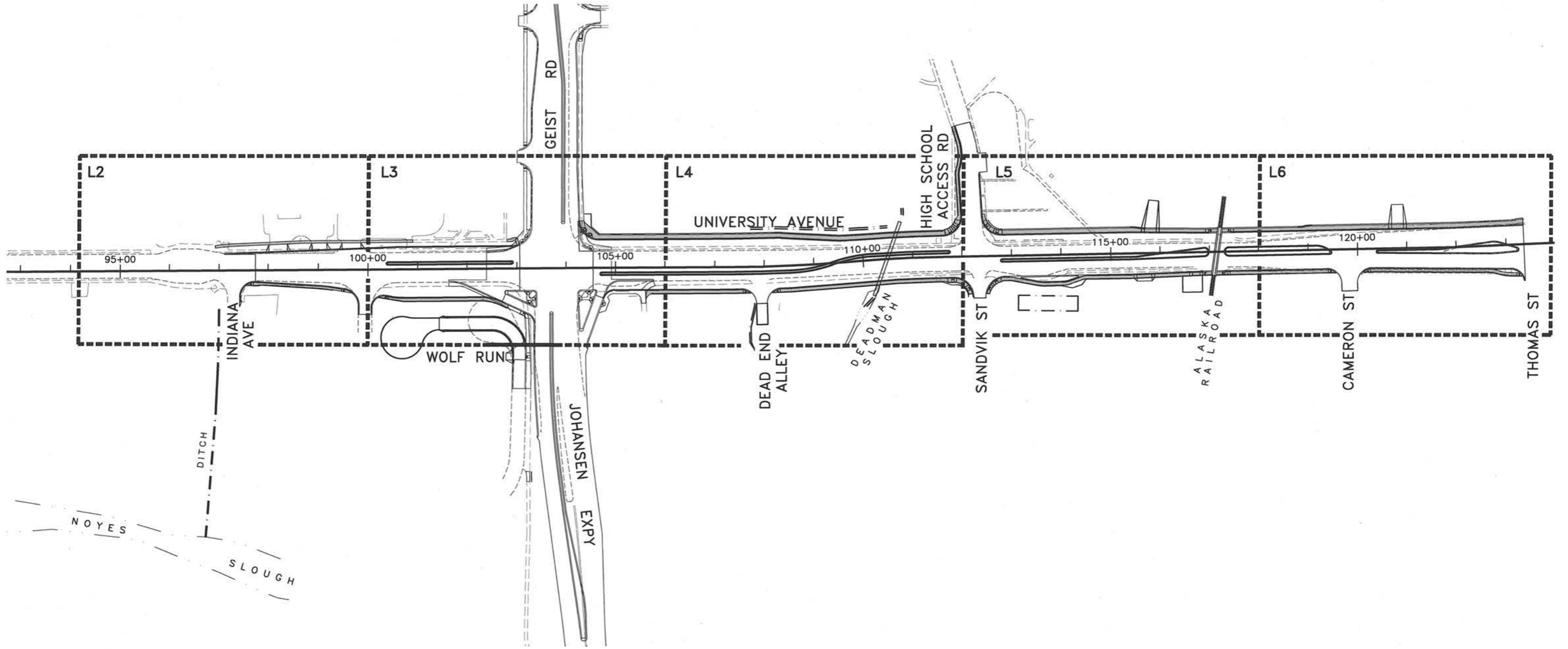
NOTE: BOLT SPACING DIMENSIONS SHOWN FOR TS2 CONTROLLER CABINETS.

SIGNAL CONTROLLER FOUNDATION DETAIL



PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOTPE\University Avenue Traffic Design\S1-NORTH\Production\06173_N_H54_SGNL_CTRL_FDN DETL-H54 Fr. Jun/08/18 06:48pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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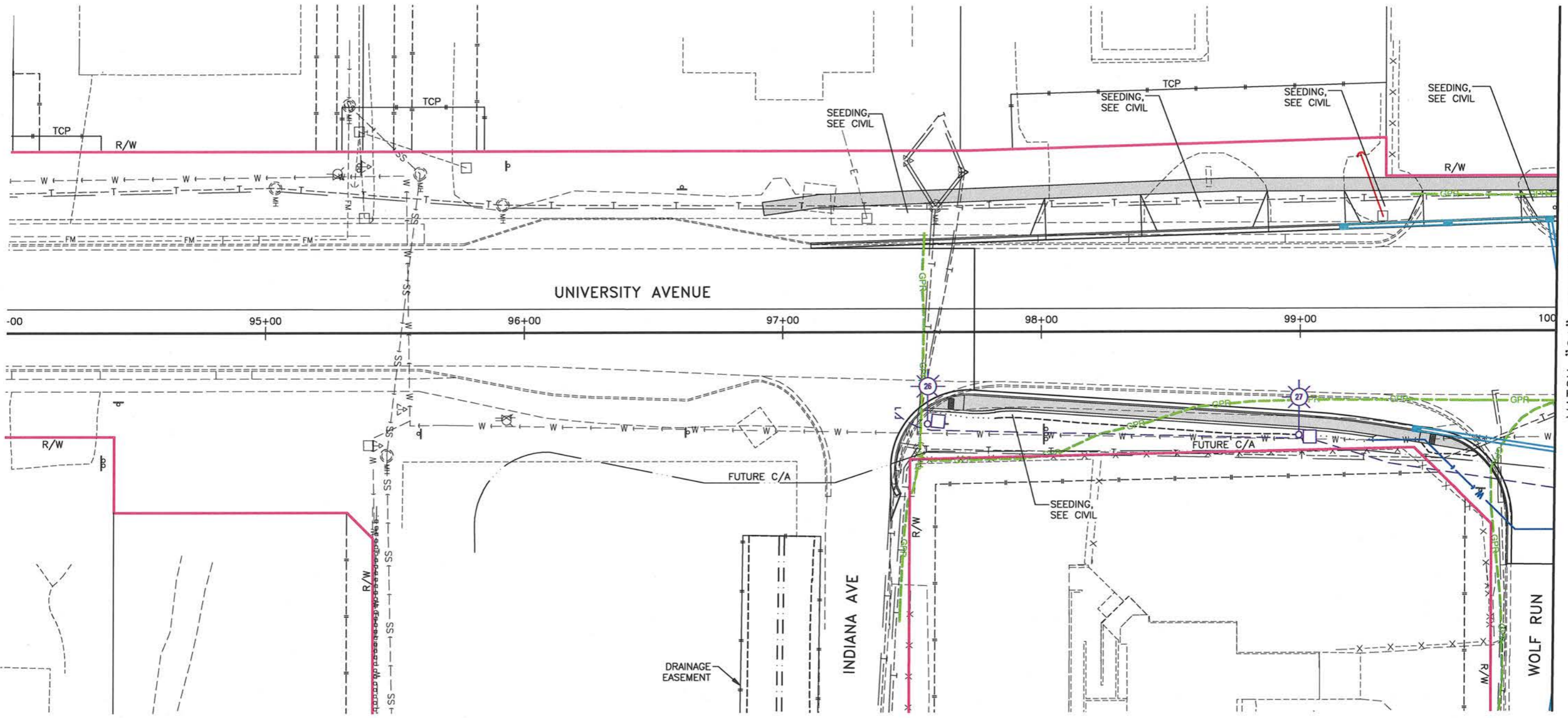


PLANS DEVELOPED BY: EARTHSCAPE, LLC. CERT. OF AUTHORIZATION NO.: AECL 1007, 729 N STREET, ANCHORAGE, AK 99501, (907)279-2688
P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\1B-C\0005const\11147.01\FB-Seg-1B-L1 Fri, Jun/08/18 02:55pm

LANDSCAPE PLAN
SHEET LAYOUT INDEX



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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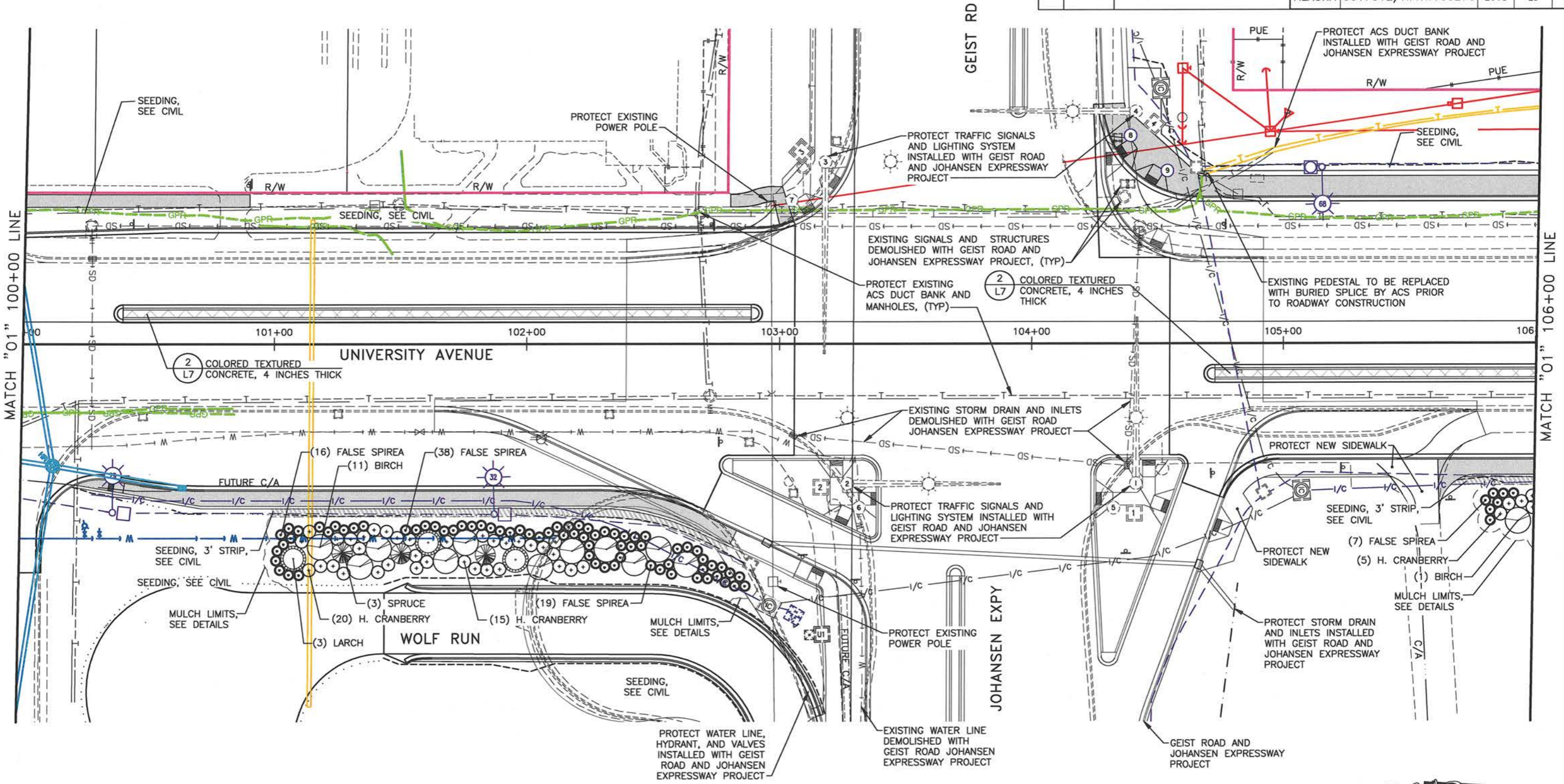


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UNIVERSITY AVE LANDSCAPE
PLAN (1 OF 5)



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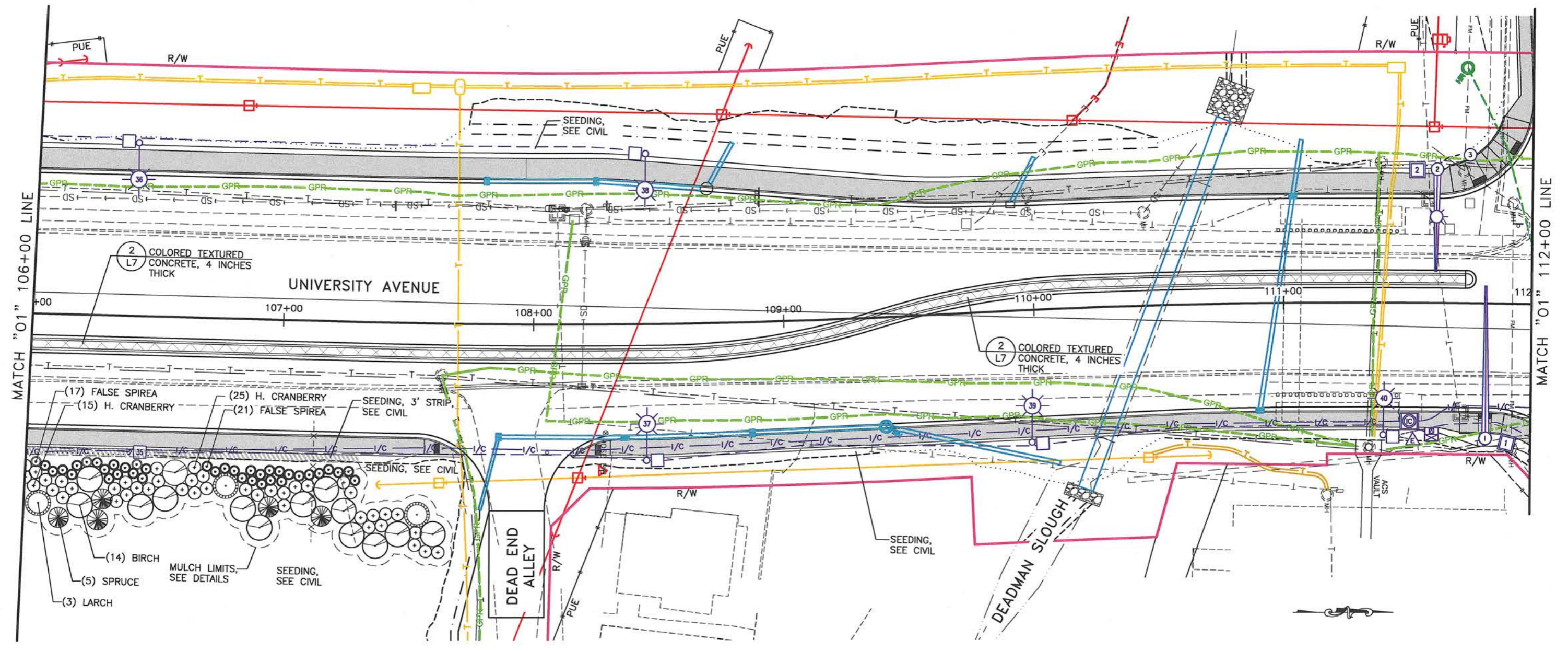


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UNIVERSITY AVE LANDSCAPE
PLAN (2 OF 5)



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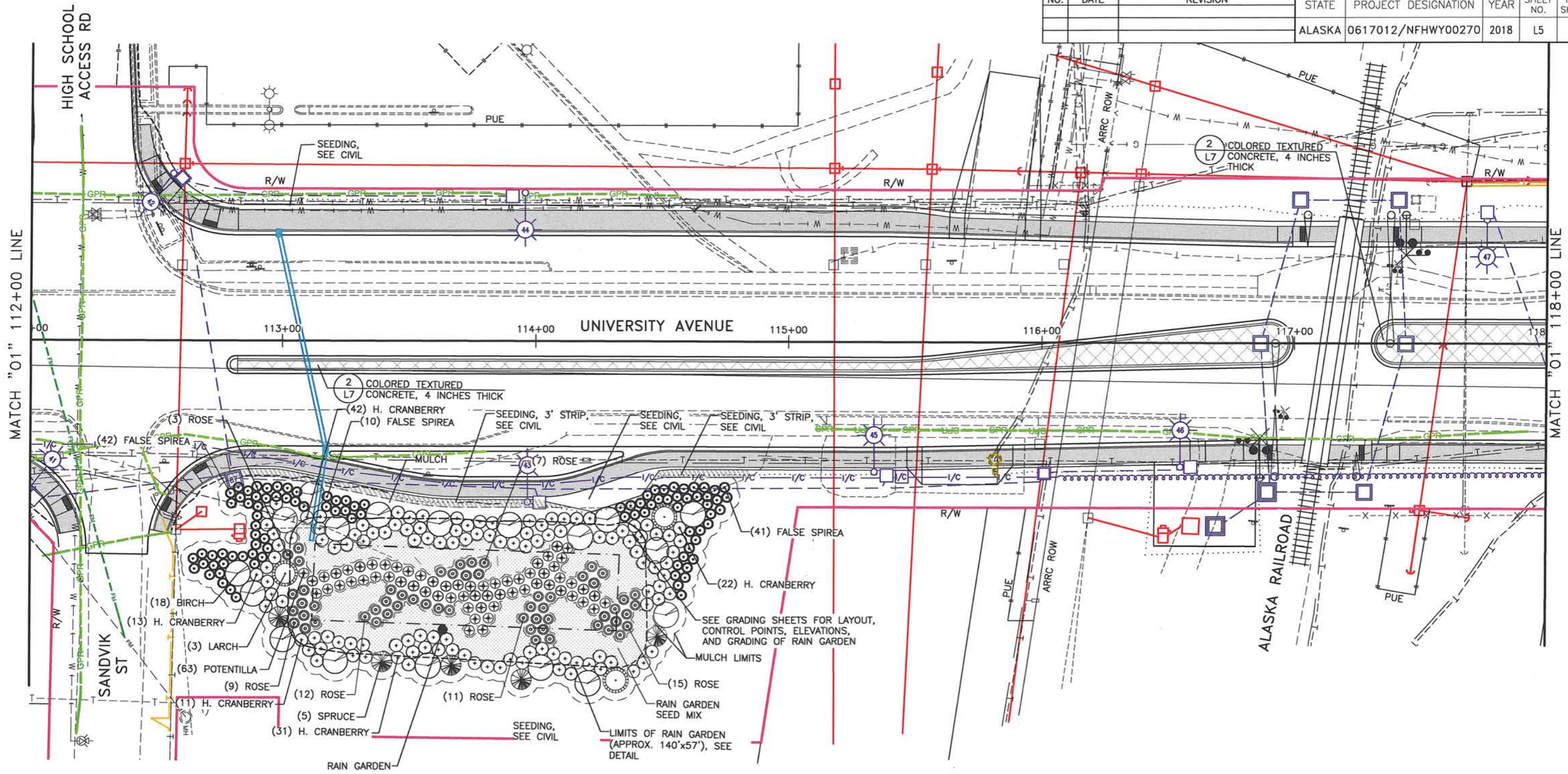


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UNIVERSITY AVE LANDSCAPE
PLAN (3 OF 5)



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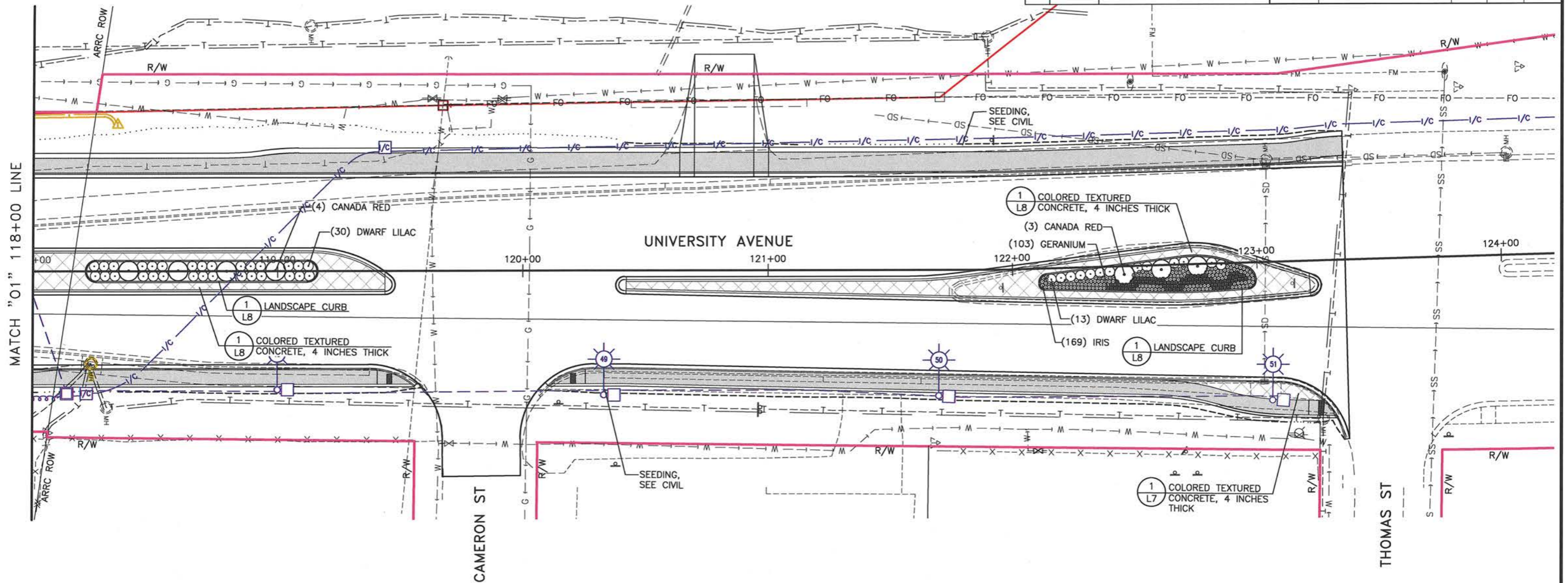


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UNIVERSITY AVE LANDSCAPE
PLAN (4 OF 5)



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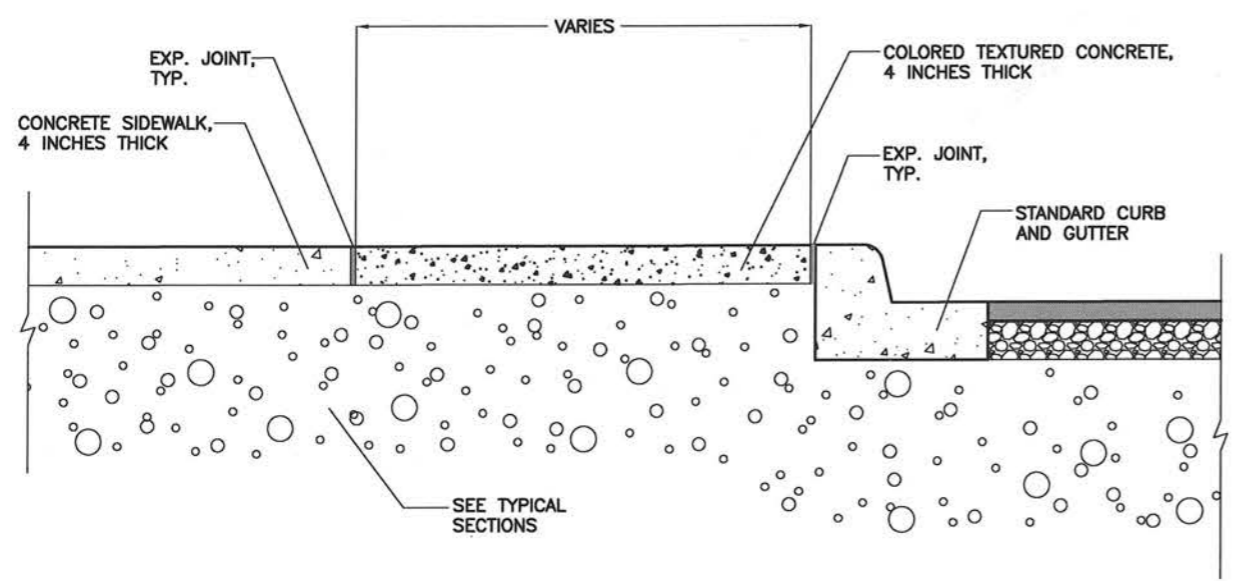


PLANS DEVELOPED BY: EARTHSCAPE, LLC, CERT. OF AUTHORIZATION NO.: AECL 1007, 729 N STREET, ANCHORAGE, AK 99501, (907)279-2688
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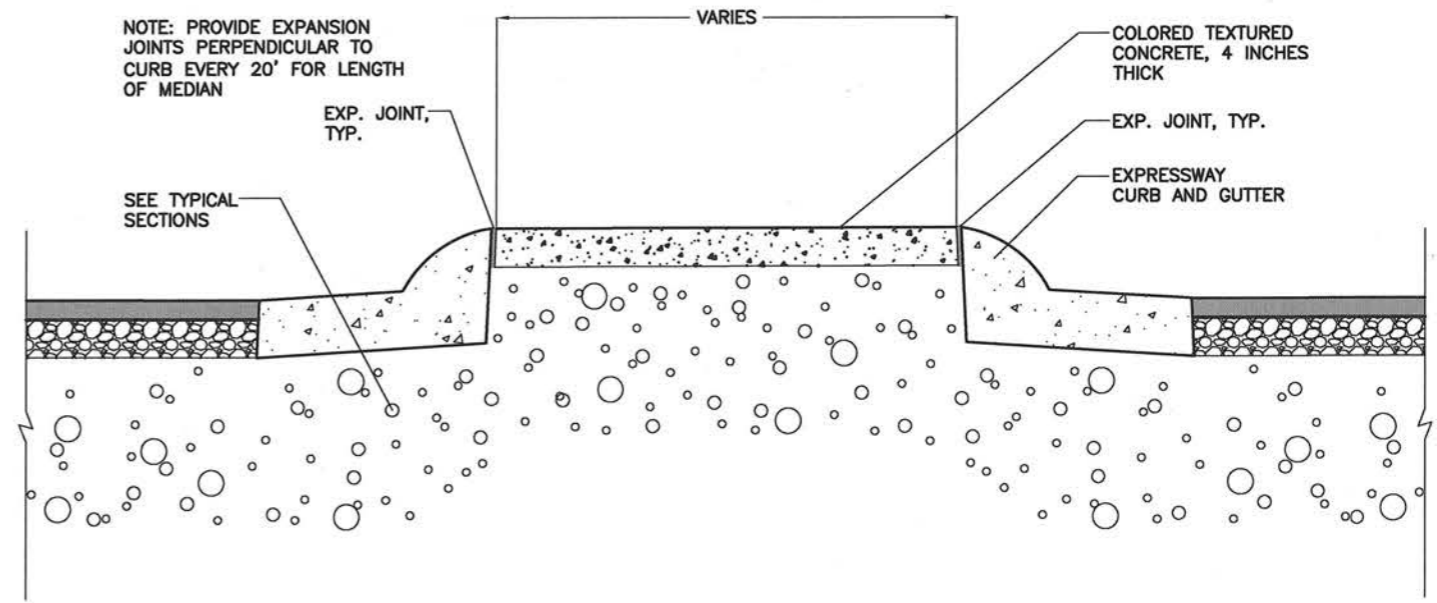
UNIVERSITY AVE LANDSCAPE
PLAN (5 OF 5)



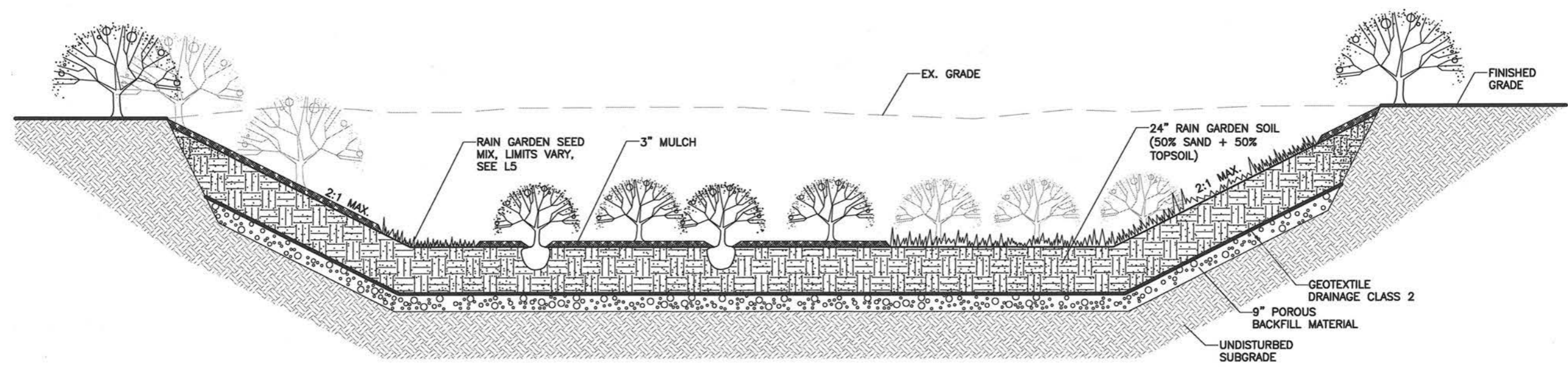
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	PENDING/NFHWO0332	2018	L7	L8



① ROADSIDE APRON AT SEPARATED PATHWAY



② MEDIAN TREATMENT-NARROW



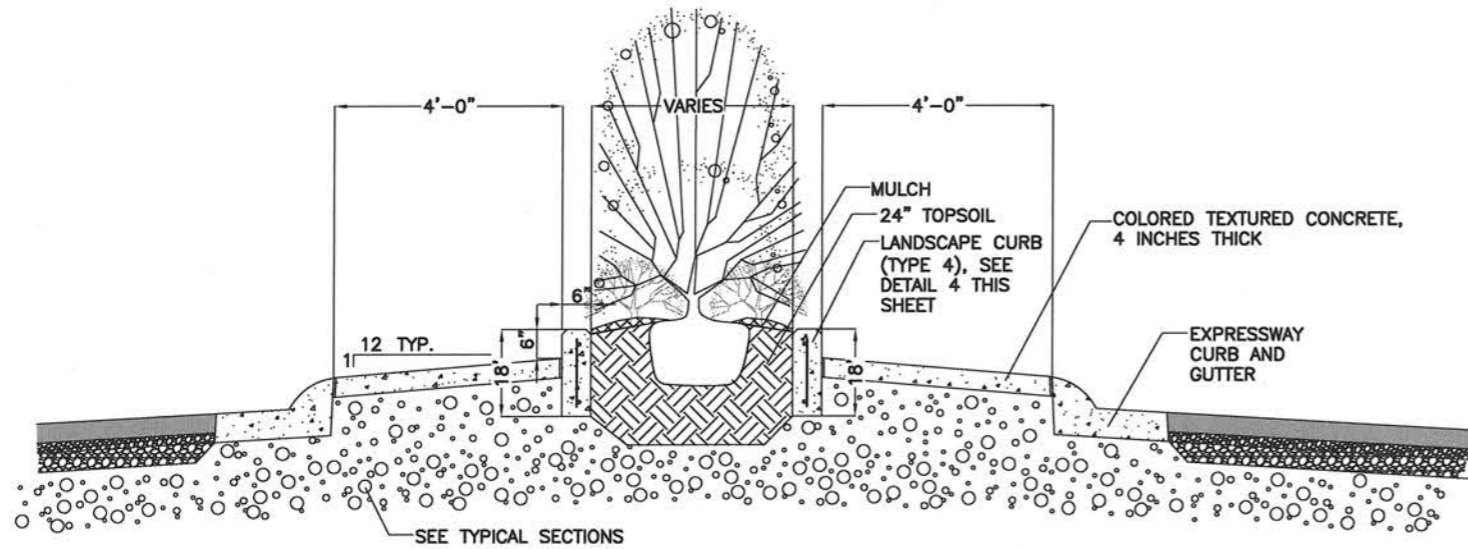
③ RAIN GARDEN

PLANS DEVELOPED BY: EARTHSCAPE, LLC, CERT. OF AUTHORIZATION NO.: AECL1007, 729 N STREET, ANCHORAGE, AK 99501, (907)279-2888
 S:\Projects\University Avenue\University Ave Segment 1 North\100 U Ave\100-L2 Univer Ave-Seg 1 North-Layout1 Tri, Jun/08/18 04:50pm

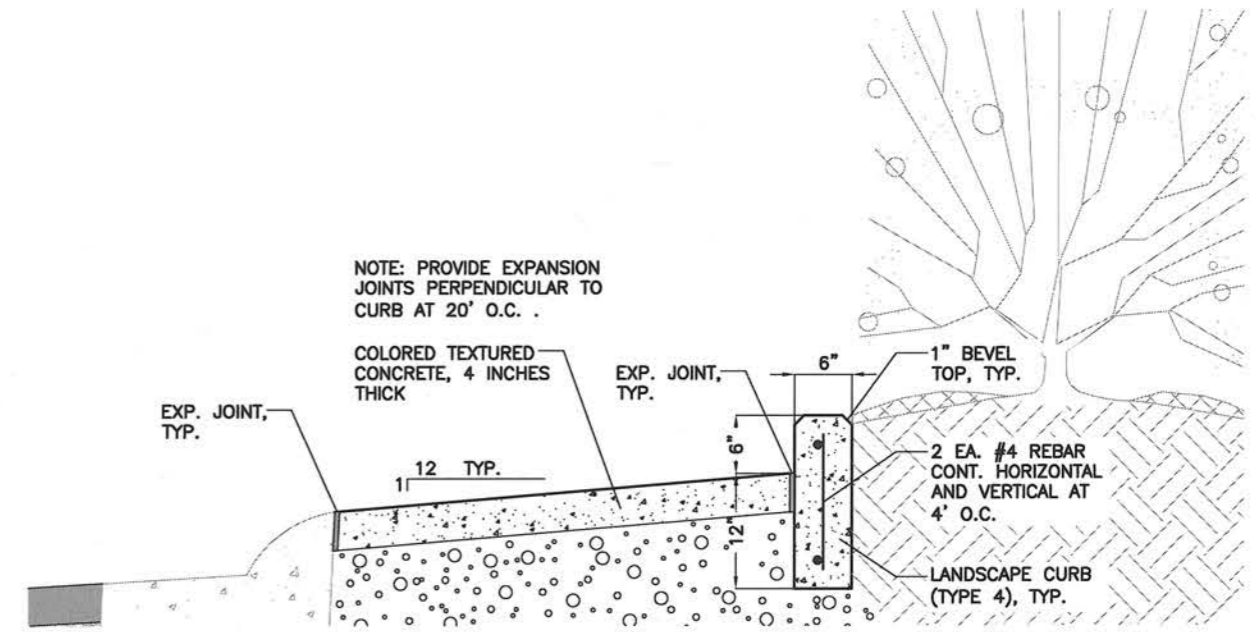
LANDSCAPING
TYPICAL SECTIONS



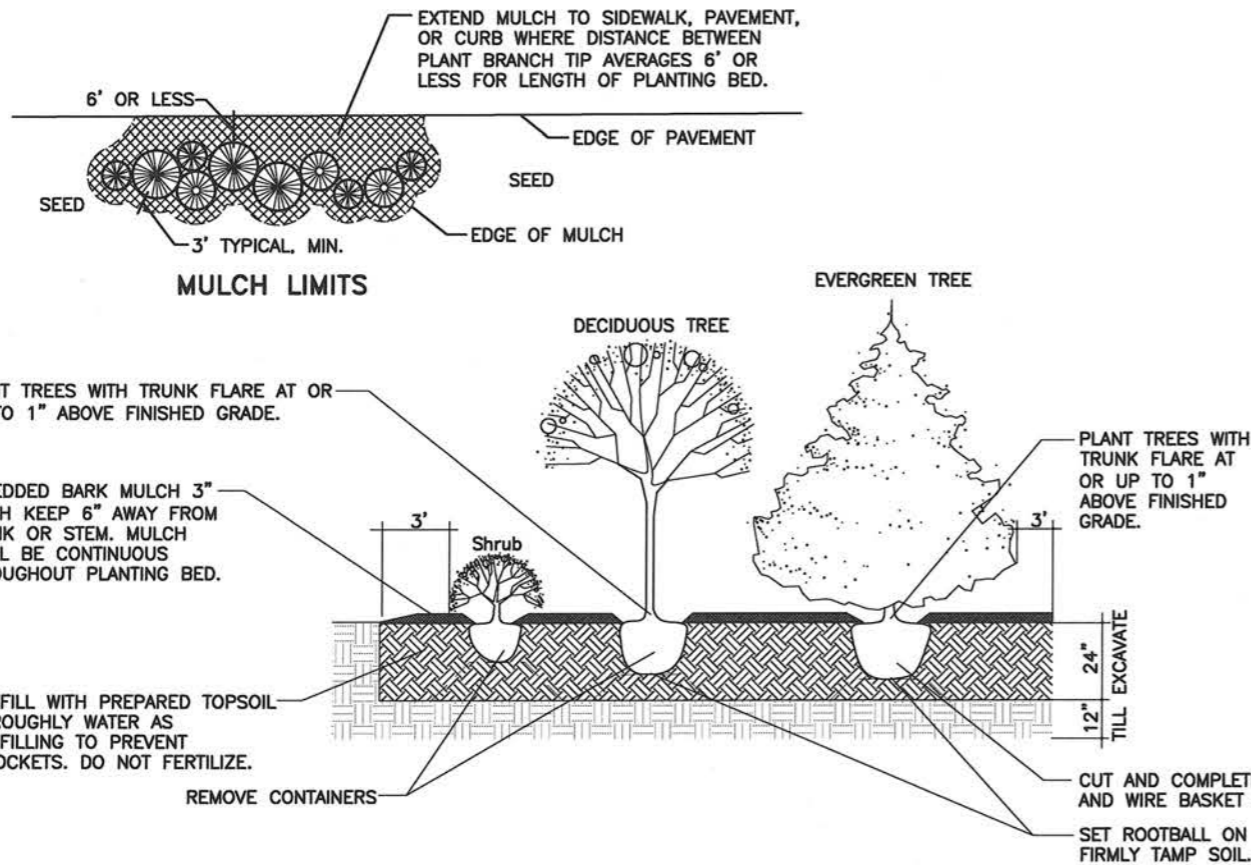
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	PENDING/NFHWHY00332	2018	L8	L8



① **MEDIAN TREATMENT-WIDE**



② **MEDIAN SECTION ENLARGEMENT**



③ **PLANTING BED**

- NOTES:
- PREPARE PLANTING BED AS SHOWN ON PLANS:
 - EXCAVATE AND REMOVE SOIL
 - TILL SUBGRADE
 - BACKFILL WITH TOPSOIL
 - PLANT TREES AND SHRUBS AFTER ENGINEER HAS APPROVED STAKED LOCATIONS
 - CONTRACTOR TO VERIFY LOCATION OF UTILITIES PRIOR TO EXCAVATION.
 - SEVERAL AREAS ON PLANS REQUIRE LARGE AREAS OF MULCH. CONTRACTOR TO PROVIDE MULCH BETWEEN PLANTINGS AND BUILDING, UP TO PROPERTY LINE, EDGING OR EXISTING VEGETATION, WHERE PLANTING BEDS ARE ADJACENT TO EXISTING VEGETATION.

PLANS DEVELOPED BY: EARTHSCAPE, LLC, CERT. OF AUTHORIZATION NO.: AECL1007, 729 N STREET, ANCHORAGE, AK 99501, (907)279-2888
 S:\Projects\University Avenue Segment 1 North\100 U Ave\100-L2 Univer Ave-Seg 1 North-Layout1 Fri, Jun/08/18 04:46pm

LANDSCAPING
TYPICAL SECTIONS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	Q1	Q10

SITE INFORMATION

1. SITE FUNCTION: ROAD
2. 2-YEAR, 24-HOUR RAINFALL EVENT: 1.08 INCHES (SOURCE: http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html) FOR FAIRBANKS
3. AVERAGE ANNUAL PRECIPITATION: 10.53 INCHES (SOURCE: WESTERN REGIONAL CLIMATE CENTER) FOR FAIRBANKS WSO AIRPORT
4. STAGING AND STOCKPILE AREAS: LOCATIONS OF THESE ELEMENTS ARE TO BE DETERMINED BY THE CONTRACTOR AND MUST COMPLY WITH THE CGP, SWPPP, SECTION 641, AND ALL PERMITS.
5. PROJECT AREAS ARE LISTED BELOW (MATERIAL SITES NOT INCLUDED):

PROJECT INFORMATION TABLE	
PROJECT AREA (ACRE)	12 AC
DISTURBED AREA (ACRE)	8.3 AC
PRE-CONSTRUCTION IMPERVIOUS AREA (%)	44%
POST-CONSTRUCTION IMPERVIOUS AREA (%)	56%
PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.54
POST-CONSTRUCTION RUNOFF COEFFICIENT	0.61

6. LANDSCAPE TOPOGRAPHY: RELATIVELY FLAT AND URBANIZED WITH RESIDENTIAL AND COMMERCIAL DEVELOPMENT ALONG THE PROJECT CORRIDOR.
7. DRAINAGE PATTERNS: SURFACE DRAINAGE VIA DITCHES AND STORM DRAINS FLOW TO NOYES SLOUGH AND DEADMAN SLOUGH.
8. SOILS: ALLUVIAL SAND AND GRAVEL OVERLAIN BY SILT AND ORGANIC SILT.
9. EXISTING VEGETATION: PROJECT AREA IS A MIX OF RESIDENTIAL AND COMMERCIAL WITH LAWNS, SHRUBS AND TREES.
10. APPROXIMATE GROWING SEASON: MAY 3 THROUGH OCTOBER 3 (SOURCE: USACE WETLANDS DELINEATION MANUAL: ALASKA REGION (VERSION 2))
11. HISTORIC SITE CONTAMINATION: KNOWN SITES HAVE BEEN OR ARE BEING REMEDIATED. PROBABILITY OF ENCOUNTERING HAZARDOUS MATERIALS DURING CONSTRUCTION IS LOW.
















ENVIRONMENTAL INFORMATION

1. RECEIVING WATERS: NOYES SLOUGH, DEADMAN SLOUGH
2. IMPAIRED WATER BODIES: CHENA RIVER, NOYES SLOUGH
3. TOTAL MAXIMUM DAILY LOAD (TMDL): NONE
4. STORM SEWER/DRAINAGE SYSTEMS: FAIRBANKS NORTH STAR BOROUGH MS4 CONSISTING OF PIPED AND SURFACE WATER DRAINAGE NETWORK. THIS PROJECT INCLUDES MODIFICATIONS TO THIS SYSTEM.
5. THREATENED AND ENDANGERED SPECIES: NONE
6. HISTORICAL & CULTURAL RESOURCE PRESENCE: NONE AFFECTED
7. FISH & WILDLIFE HABITAT PRESENCE: NONE
8. WETLANDS: LIMITED WETLANDS ARE LOCATED WITHIN THE PROJECT AREA. SEE PLAN SHEETS FOR CONSTRUCTION LIMITS.
9. CONTACT THE PROJECT ENGINEER WITH QUESTIONS/CONCERNS REGARDING ENVIRONMENTAL ISSUES OR PERMIT INFORMATION.
10. KNOWN CONTAMINATION AREAS ARE PRESENT IN THE PROJECT AREA AS FOLLOWS: DEC HAZARD ID 550 - TANANA LOOP, UAF PHYSICAL PLANT, DEC HAZARD ID 24247 - 3679 COLLEGE ROAD, TESORO, DEC HAZARD 26489 - 655 UNIVERSITY AVENUE (FORMER HOLIDAY HOUSE APARTMENTS), DEC HAZARD ID 4103 - 685 INDIANA AVENUE, RESIDENCE.

GENERAL NOTES

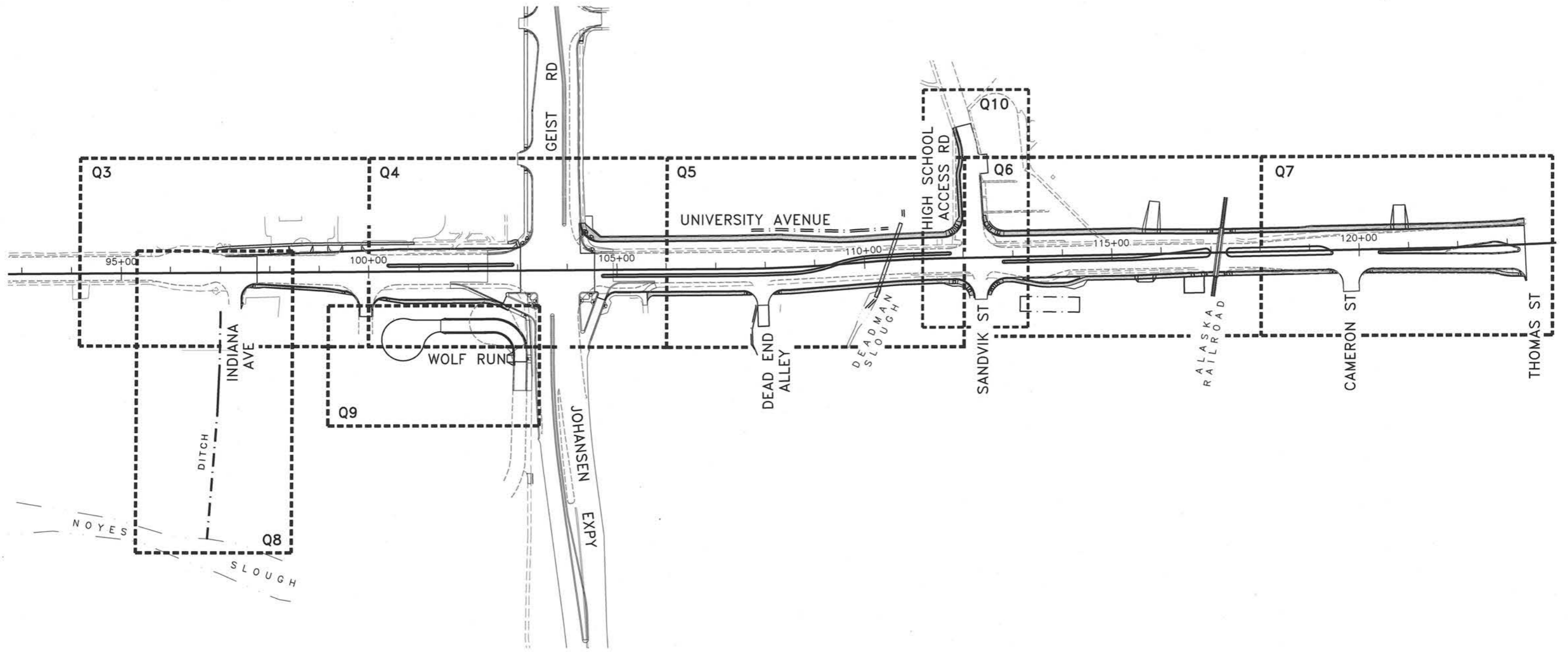
1. READ AND COMPLY WITH THE CONSTRUCTION GENERAL PERMIT (CGP) AND SECTION 641 OF THE PROJECT SPECIFICATIONS.
2. A SWPPP AND HMCP ARE REQUIRED FOR THIS PROJECT.
3. EROSION AND SEDIMENT CONTROL FEATURES MUST BE BASED ON THE DOT&PF MANUAL ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE (OCTOBER 2016 OR LATEST VERSION) AND LATEST BMPs.
4. INITIATE EROSION AND SEDIMENT CONTROLS PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
5. DEVICES MAY NEED TO BE REMOVED AND REINSTALLED TO ALLOW CONSTRUCTION ACTIVITIES TO PROCEED. MAINTAIN ALL DEVICES DAILY INCLUDING, BUT NOT LIMITED TO REMOVAL AND DISPOSAL OF ACCUMULATED SOILS, CLEANING DEVICES AND REPLACEMENT OF DAMAGED DEVICES.
6. STOCKPILE AND STAGING LOCATIONS MUST BE RECLAIMED TO THEIR ORIGINAL CONDITION. STOCKPILES AND/OR STAGING AREAS ARE NOT ALLOWED IN WETLANDS.
7. ENSURE LOADS ARE STABLE OR COVERED SO THAT NO MATERIAL ESCAPES DURING HAULING ACTIVITIES.
8. PROVIDE CONCRETE WASHOUT FACILITIES.
9. PROVIDE VEHICLE CLEANING EQUIPMENT OR OTHER APPROVED CONTROLS TO PREVENT TRACKING OF DIRT AND GRAVEL ONTO PAVED SURFACES.
10. PROVIDE INLET PROTECTION AT ALL INLETS IN AND ADJACENT TO WORK AREAS (SEE BMP 25.00 - 29.00 DOT&PF SWPPP GUIDE).
11. COMPLETE ALL BRUSH/TREE CLEARING ACTIVITIES PRIOR TO MAY 1ST TO RENDER AREAS UNSUITABLE FOR BREEDING BIRDS IN ORDER TO FACILITATE CONSTRUCTION DURING THE BREEDING SEASON WITHOUT IMPACTS TO BIRDS. OTHERWISE WORK MAY BE COMPLETED AFTER THE BREEDING WINDOW CLOSES AROUND JULY 15TH.
12. AVOID UNNECESSARY GROUND DISTURBANCE AND MAINTAIN NATIVE VEGETATION WHERE PRACTICABLE THROUGH THE USE OF BMPs AND DOT&PF REVIEW OF PROPOSED SWPPP.
13. FOLLOW BMPs, SOPs, AND THE SWPPP TO AVOID IMPACTS TO A CONTAMINATED SITE IF THE AREA MUST BE USED FOR CONSTRUCTION STAGING. DEVELOP A CONTINGENCY PLAN IN THE EVENT THAT CONTAMINATION IS UNEXPECTEDLY ENCOUNTERED, AND PHASE UNDERGROUND CONSTRUCTION WORK IN KNOWN GROUNDWATER-CONTAMINATED AREAS DURING PERIODS OF LOW GROUNDWATER.

ESCP LEGEND:

-  RIGHT OF WAY
-  SURFACE WATER FLOW DIRECTION
-  TEMPORARY PERIMETER CONTROL - VEGETATIVE BUFFER OR FIBER FILLED TUBE BERMS (SEE BMP 38.00 OR BMP 10.00, DOT&PF SWPPP GUIDE) OR FUNCTIONAL EQUIVALENT TO MANUFACTURER'S SPECIFICATIONS
-  OUTLET PROTECTION (SEE RIPRAP OUTLETS AT STORM DRAIN OUTLETS DETAIL SHEET G12.)
-  CULVERT INLET PROTECTION (SEE BMP 08.00 DOT&PF SWPPP GUIDE)
-  VELOCITY DISSIPATOR (RIPRAP CLASS II OR FUNCTIONAL EQUIVALENT)
-  VEHICLE TRACKING ENTRANCE/EXIT
-  CONCRETE CLEAN-OUT
-  WETLANDS
-  UPLANDS
-  TEMPORARY CHECK DAM (SEE BMP 31.00-33.00 DOT&PF SWPPP GUIDE)
-  PROPOSED TOP OF EMBANKMENT
-  PROPOSED TOE OF EMBANKMENT
-  DITCH LINE
-  EXISTING EMBANKMENT CATCHLINE (CUT OR FILL)

EROSION CONTROL NOTES
& DETAILS

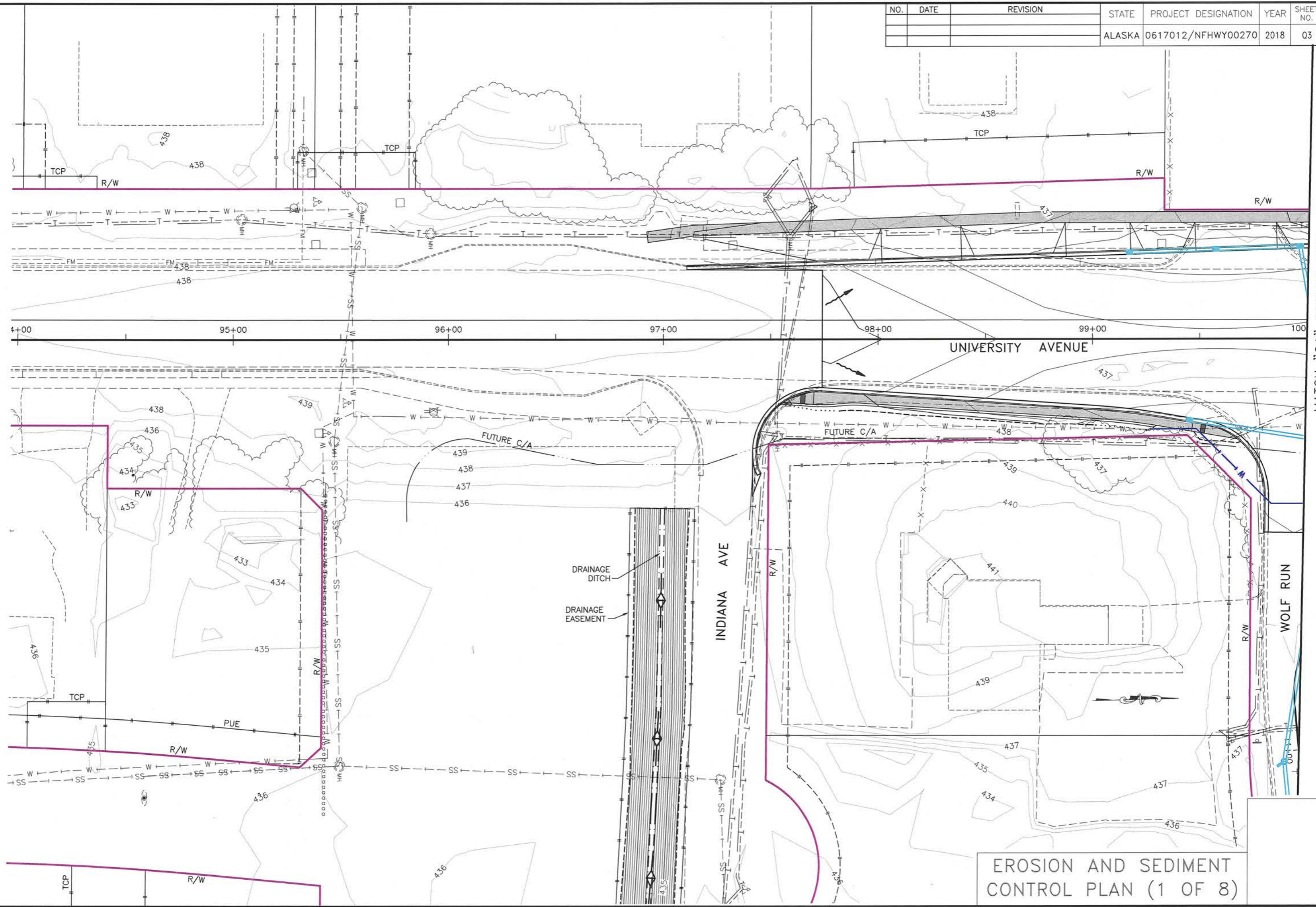
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	Q2	Q10



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\1B-C\0005const11147.01\FB-Seg-1B-Q2.Fri, Jun/08/18 12:20pm

EROSION AND SEDIMENT CONTROL SHEET LAYOUT INDEX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	03	010

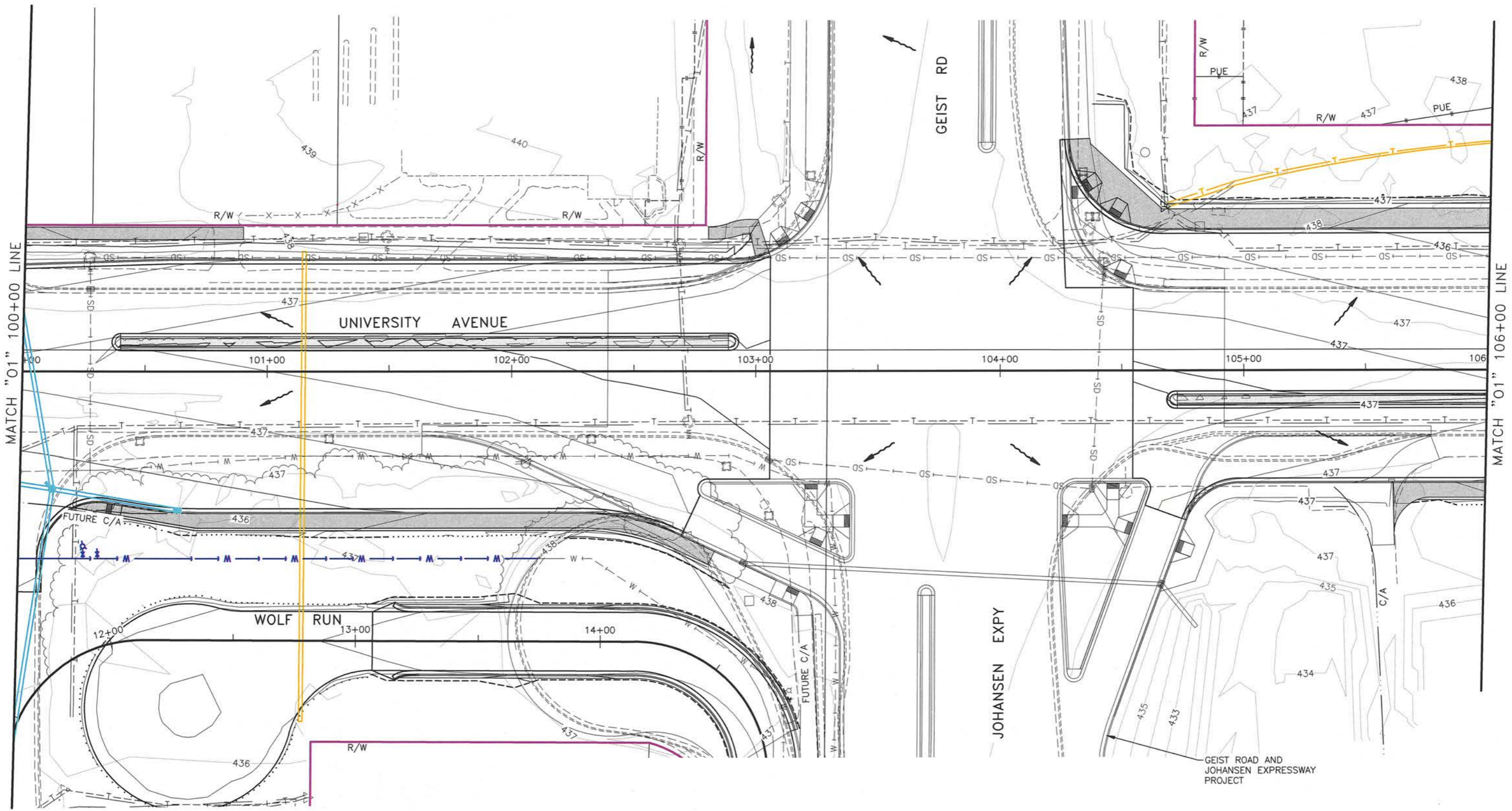


MATCH "01" 100+00 LINE

EROSION AND SEDIMENT CONTROL PLAN (1 OF 8)

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 CAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	04	Q10

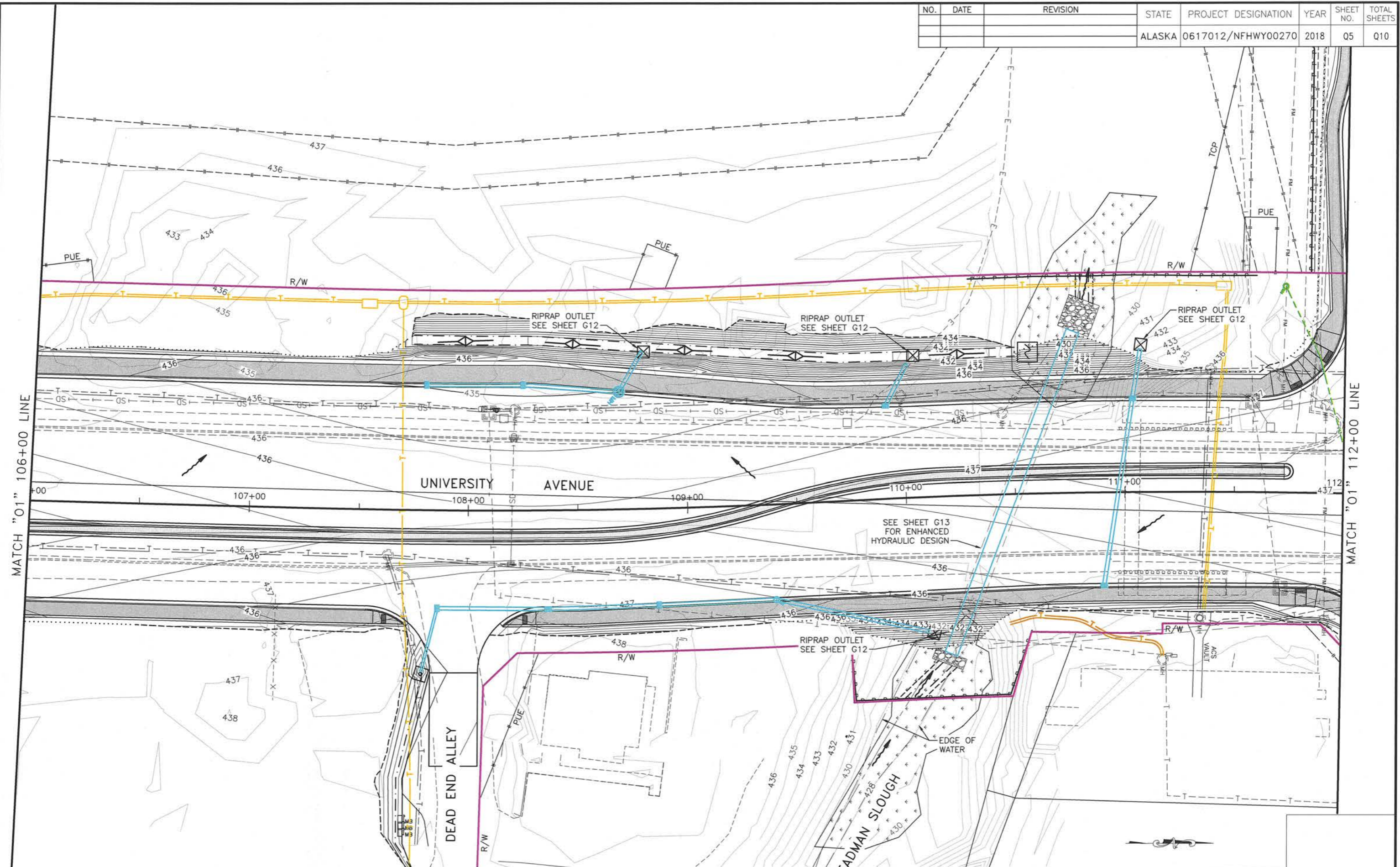


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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EROSION AND SEDIMENT CONTROL PLAN (2 OF 8)

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			ALASKA	0617012/NFHwy00270	2018	Q5	Q10

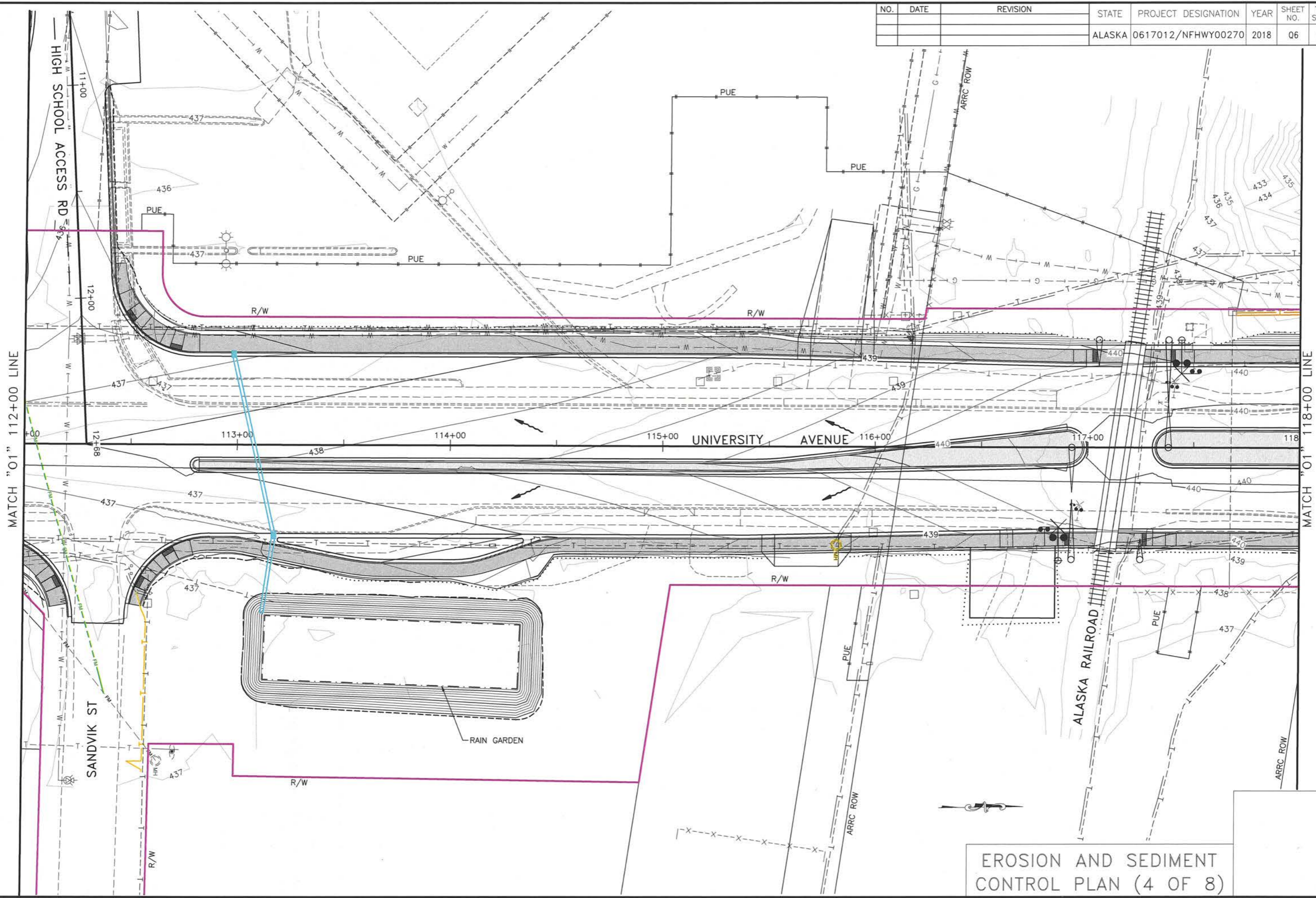
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EROSION AND SEDIMENT CONTROL PLAN (3 OF 8)

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	06	010

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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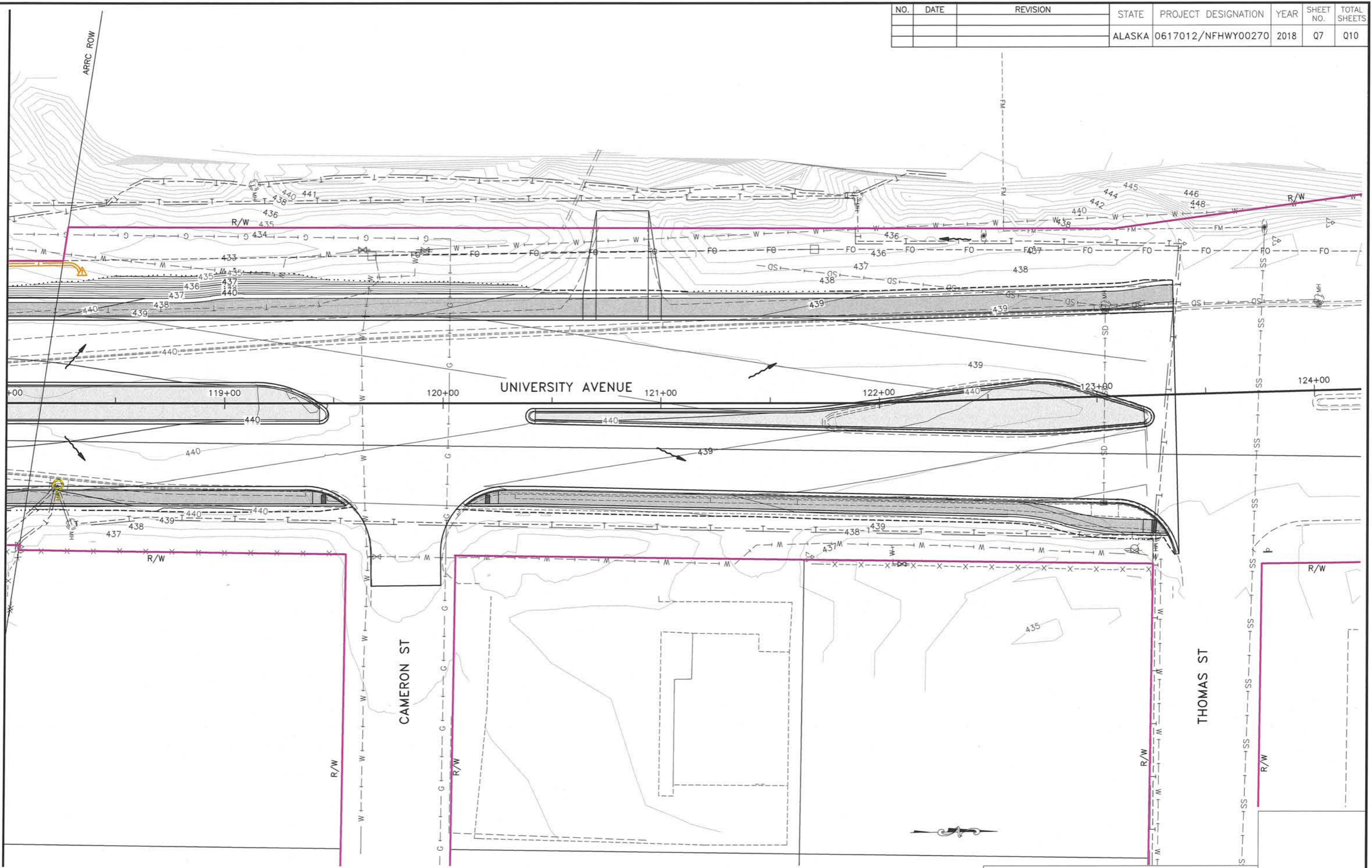


EROSION AND SEDIMENT CONTROL PLAN (4 OF 8)

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	Q7	Q10

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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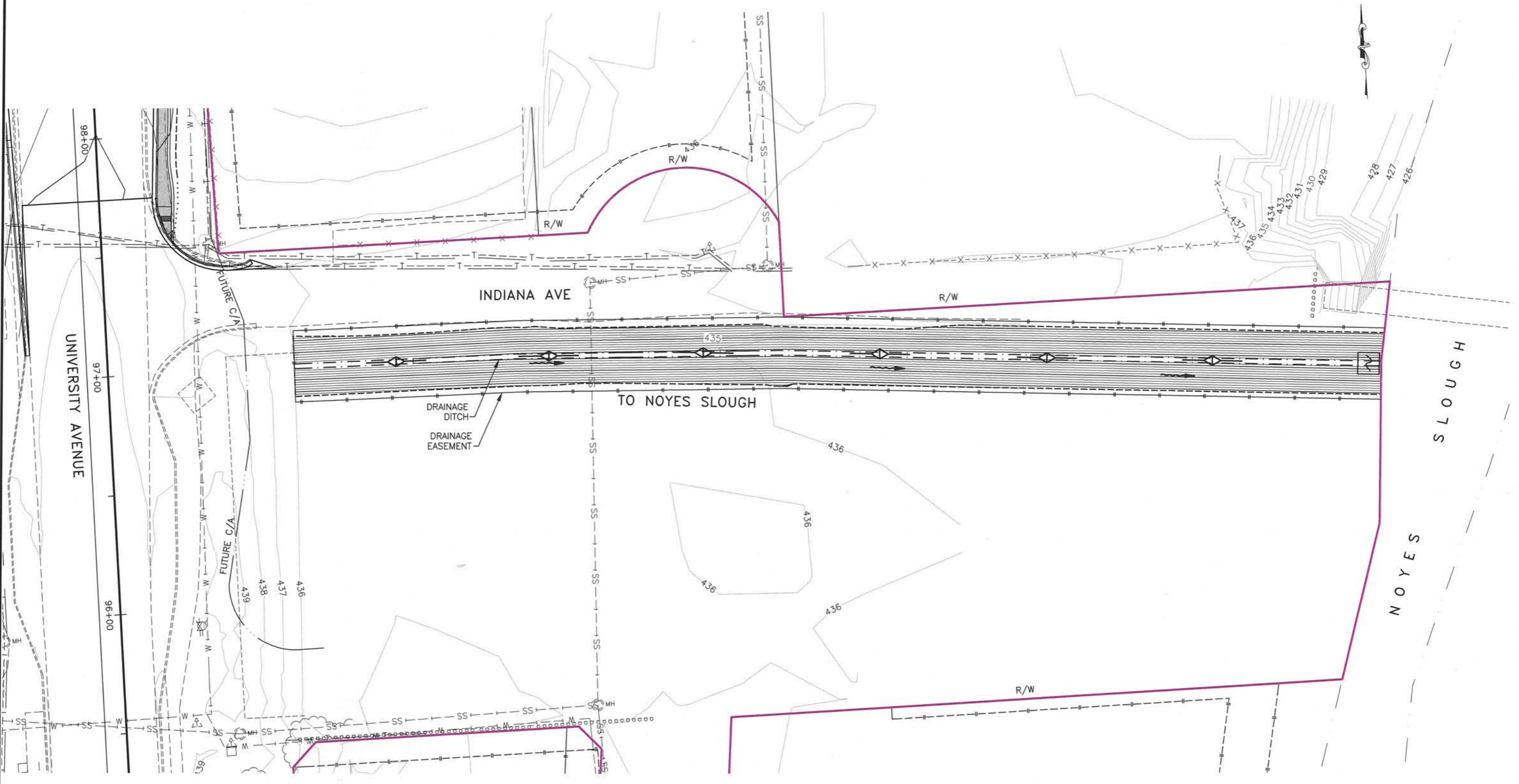
MATCH "01" 118+00 LINE



EROSION AND SEDIMENT CONTROL PLAN (5 OF 8)

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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EROSION AND SEDIMENT CONTROL PLAN (6 OF 8)

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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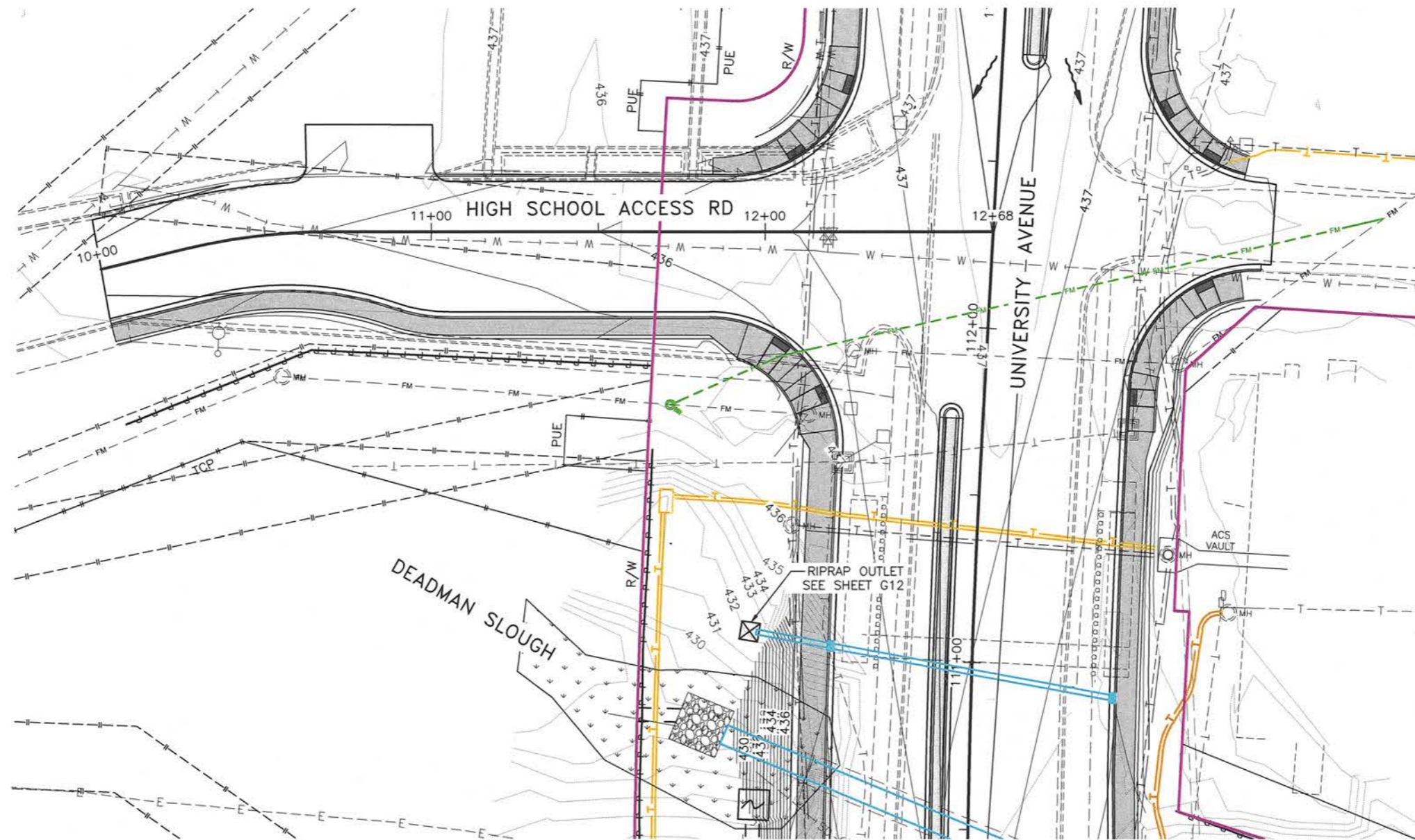
UNIVERSITY AVENUE



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AFCC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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EROSION AND SEDIMENT CONTROL PLAN (7 OF 8)


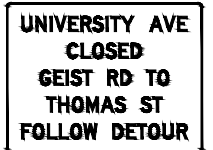





NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	Q10	Q10



EROSION AND SEDIMENT
CONTROL PLAN (8 OF 8)

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	T1	T2



- ①  LOCAL TRAFFIC ONLY SPECIAL
- ②  UNIVERSITY AVE CLOSED
GEIST RD TO THOMAS ST
FOLLOW DETOUR SPECIAL
- ③  DETOUR M4-9L
- ④  DETOUR M4-9R
- ⑤  DETOUR M4-103
- ⑥  END DETOUR M4-100
- ⑦  University Ave D3-1

LEGEND:
 UNDER CONSTRUCTION-CLOSED TO THRU TRAFFIC

NOTES:
 1. ALL TRAFFIC CONTROL DEVICES MUST BE IN ACCORDANCE WITH THE CURRENT ALASKA TRAFFIC MANUAL (ATM).
 2. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED AND APPROVED PRIOR TO IMPLEMENTATION.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
 Z:\PROJECTS\DOTPE\University Avenue Traffic Design_S1-NORTH\Production\06173_11-12_Traffic Ctrl-T1 Fri, Jun/06/18 07:29pm

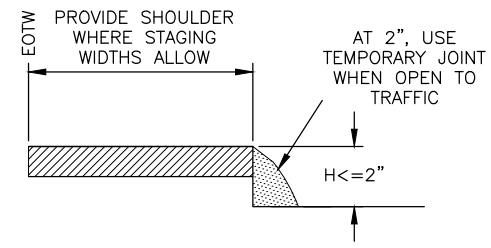
TRAFFIC CONTROL



6/8/2018

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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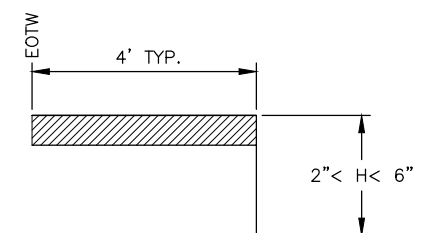
VERTICAL DROP-OFFS



CASE A

DROP-OFFS ≤ 2 INCHES
(PAVED SURFACES ONLY)

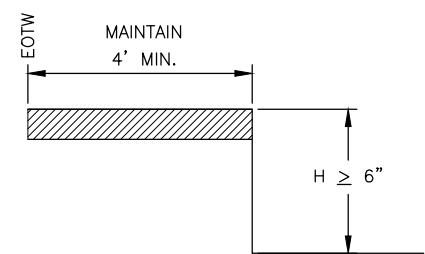
1. USE "UNEVEN LANES" (CW8-11) SIGNS FOR ALL DROP-OFFS IN BETWEEN TRAFFIC LANES.
2. LEAVE NO DROP-OFFS > 1.5 " IN THE TRAFFIC LANE OR ACTIVE WHEEL TRACK.



CASE B

$2" < \text{DROP-OFFS} < 6"$
(ALL ROADWAY SURFACES)

1. PLACE CONES OR CANDLES FOR DROP-OFFS ≥ 4 FEET AND ≤ 30 FEET FROM THE EOTW.
2. USE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS < 4 FEET FROM THE EOTW.



CASE C

DROP-OFFS $\geq 6"$
(ALL ROADWAY SURFACES AND ROADSIDE SLOPES)

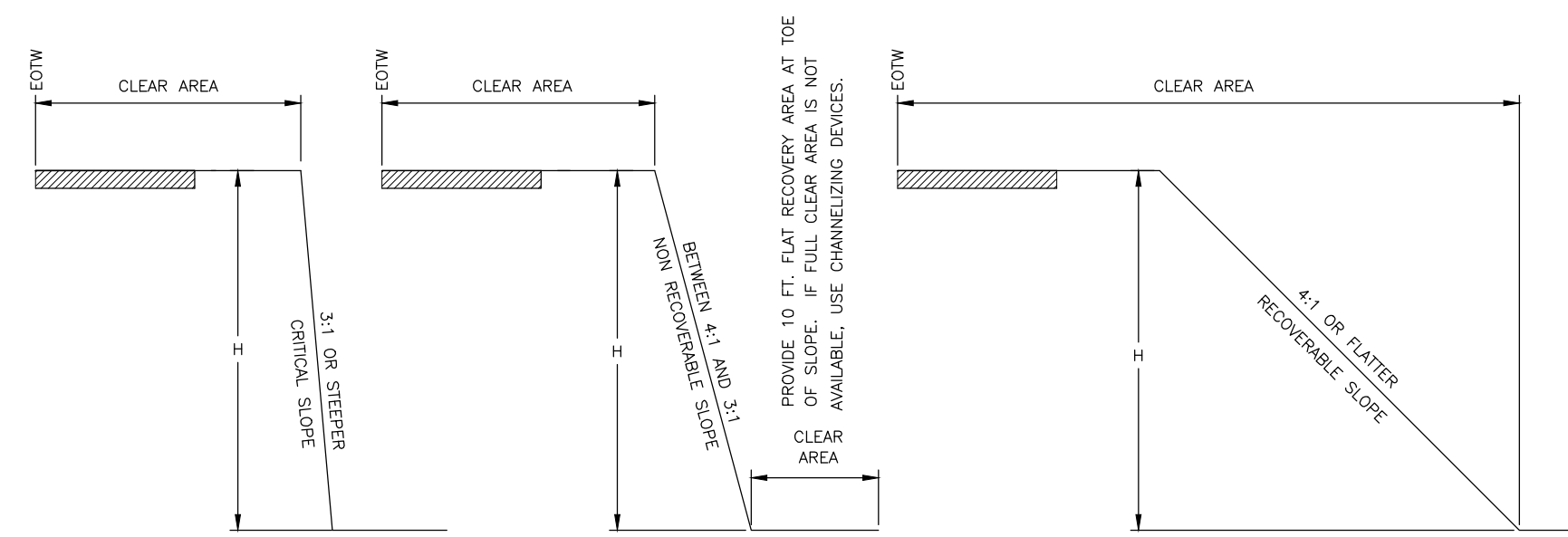
1. PLACE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS ≤ 24 " WITHIN THE CLEAR AREA.
2. PROVIDE PORTABLE CONCRETE BARRIER FOR DROP-OFFS > 24 " WITHIN 15 FEET OF THE EOTW. USE DRUMS OR TYPE II BARRICADES IF BEYOND 15 FEET.

FILL SLOPES

STEEPER THAN OR EQUAL TO 3:1

BETWEEN 4:1 AND 3:1

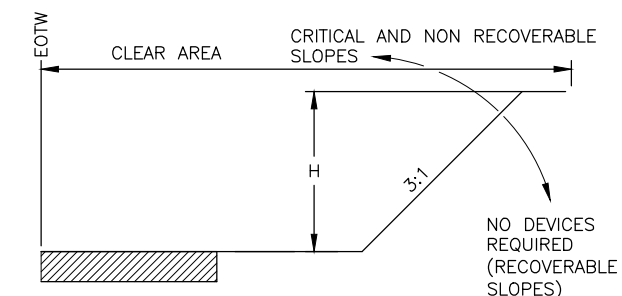
FLATTER THAN OR EQUAL TO 4:1



CLEAR AREA REQUIREMENTS			
	LOW SPEED $< = 35$ MPH	INTERMEDIATE SPEED 40 MPH TO 45 MPH	HIGH SPEED ≥ 50 MPH
RURAL	15'	24'	30'
URBAN	10' DITCH SECTIONS, OR 2' BEHIND CURB	15' DITCH CONDITIONS, OR 2' BEHIND CURB	15' DITCH CONDITIONS, OR 2' BEHIND CURB

CHANNELIZING DEVICE REQUIREMENTS FOR SLOPES 3:1 OR STEEPER WITHIN THE CLEAR AREA		
	$H \leq 15'$	$H > 15'$
< 2000 VPD LOW VOLUME	CANDLES OR CONES	TYPE II BARRICADES OR DRUMS
> 2000 VPD	TYPE II BARRICADE OR DRUMS	PORTABLE CONCRETE BARRIER OR TEMPORARY GUARDRAIL

CUT SLOPES



TRAFFIC CONTROL NOTES:

1. USE THE EXISTING CROSS-SECTION (PRIOR TO CONSTRUCTION) AS A BASIS FOR DETERMINING WHEN CHANNELIZING DEVICES ARE NEEDED.
2. INSTALL CHANNELIZING DEVICES WHEN THE HORIZONTAL OR VERTICAL CURVATURE IS MADE MORE SEVERE.
3. INSTALL FLEXIBLE DELINEATORS WHEN ALL VEGETATION OVER 4 FEET HIGH IS CLEARED FROM FILL SLOPES THAT ARE 3:1 OR STEEPER IN THE CLEAR AREA.
4. USE PORTABLE CONCRETE BARRIER FOR WARRANTING CONDITIONS WHICH LAST LONGER THAN 3 DAYS. FOR CONDITIONS LASTING LESS THAN 3 DAYS, OTHER CHANNELIZING DEVICES MAY BE INSTALLED.
5. TERMINATE RUNS OF PORTABLE CONCRETE BARRIER USING THE FOLLOWING METHODS:
 - A) CONNECT TO A PORTABLE CRASH CUSHION, OR
 - B) PROVIDE A CONCRETE BARRIER WITH THREE BEAM TRANSITION TO W-BEAM GUARDRAIL, TREATED WITH A PARALLEL TERMINAL (SEE SECTION 710).
 - C) FLARE THE ENDS OF THE PORTABLE CONCRETE BARRIER AWAY FROM THE ROADWAY AT A RATE OF 7:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER, OUTSIDE OF THE CLEAR AREA. INSTALL A SLOPING PORTABLE CONCRETE BARRIER END TREATMENT, OR
 - D) BURY IN THE BACKSLOPE.

6. TERMINATE THE RUNS OF TEMPORARY W-BEAM GUARDRAIL USING THE FOLLOWING METHODS:
 - A) PROVIDE A PARALLEL TERMINAL (SEE SECTION 710)
 - B) FLARE THE ENDS OF THE TEMPORARY GUARDRAIL AWAY FROM THE ROADWAY AT A RATE OF 6:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER OUTSIDE OF THE CLEAR AREA, TERMINATE WITH A STANDARD W-BEAM END SECTION, OR
 - C) BURY IN THE BACKSLOPE.

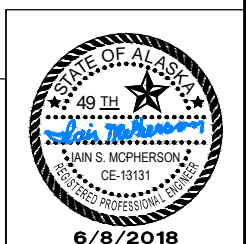
EQUIPMENT NOTES:

1. WHEN THERE IS ACTIVE, NONMOBILE CONSTRUCTION EQUIPMENT WITHIN THE CLEAR AREA, DELINEATE THE ROADSIDE WITH TRAFFIC CONES.
2. SEPARATE PROCEDURES ARE REQUIRED FOR MOBILE WORK ZONE OPERATIONS AND SHORT DURATION WORK OF LESS THAN 12 HOURS.

WINTER SHUTDOWN NOTES:

1. WHEN REQUIRED, USE CHANNELIZING DEVICES WHICH CAN BE MAINTAINED OVER WINTER.
2. NO CHANNELIZING DEVICES ARE REQUIRED IF:
 - A) CONSTRUCTION SLOPES ARE RECOVERABLE, AND
 - B) SLOPES ARE SMOOTH AND COMPACTED, AND
 - C) REQUIRED CLEAR AREA IS PROVIDED

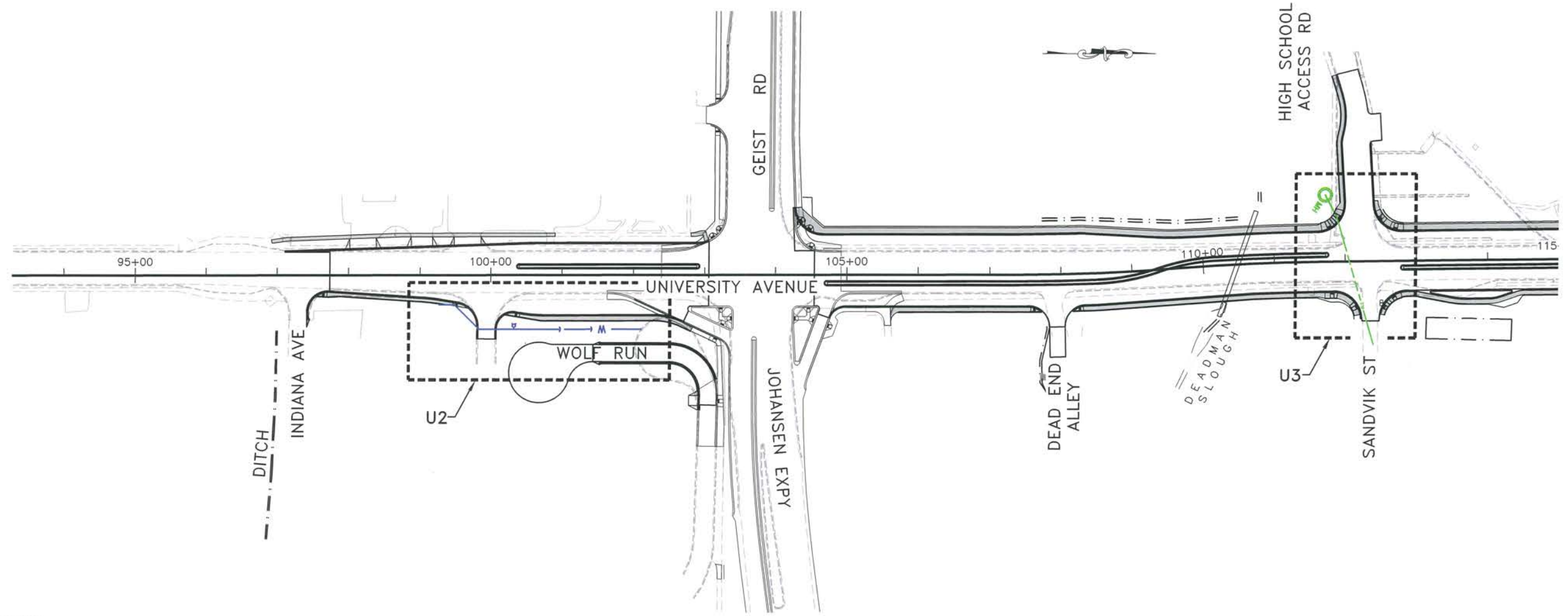
TRAFFIC CONTROL



6/8/2018

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	U1	U24



WATER AND SEWER NOTES:

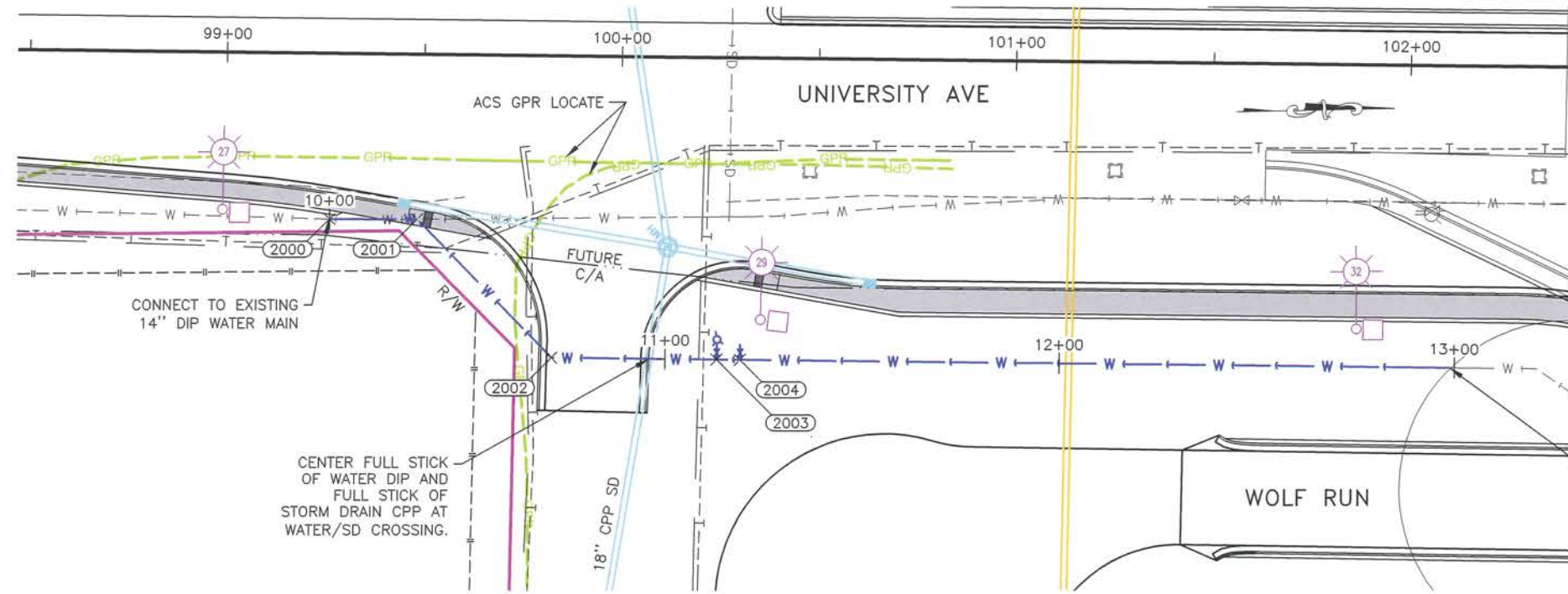
- PROFILES SHOWN ARE BASED ON PIPE CENTERLINE.
- ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF UTILITY SERVICES OF ALASKA STANDARDS OF DESIGN AND CONSTRUCTION AND SERVICE LINE STANDARDS.

REFER TO STANDARD DETAIL SHEETS:
WD1- WATER SYSTEM DETAILS FIRE HYDRANT INSTALLATION
WD2- WATER SYSTEM DETAILS PIPE, JOINTS, AND THRUST RESTRAINT
WD3- WATER SYSTEM DETAILS VALVES AND SERVICES
WD4- WATER AND SEWER TRENCH AND CROSSING DETAILS
SS1- SANITARY SEWER SYSTEM MANHOLES
- LOCATIONS OF EXISTING WATER AND SEWER UTILITIES ARE BASED ON SURVEYED LOCATES. LOCATE ALL NEAR UTILITIES AND REPORT TO ENGINEER IF LOCATIONS VARY FROM PLANS. VERTICAL ELEVATIONS ARE GENERALLY BASED ON ASSUMING MINIMUM COVER DEPTH.
- WHERE WATER MAIN OR SERVICE LINES CROSS STORM DRAIN PIPE OR ARE WITHIN 7 FEET OF CATCH BASINS, PROVIDE ADDITIONAL 2" OF INSULATION TO WATER MAIN OR SERVICE FOR 7 FEET EACH SIDE OF CROSSING. FIELD INSULATE ALL FITTINGS, VALVES, FIRE HYDRANTS, MANHOLES, AND OTHER APPURTENANCES WITH A MIN OF 2" OF INSULATION.
- DEFLECT WATER MAIN AS DIRECTED. DO NOT EXCEED HALF OF MANUFACTURER'S MAXIMUM RECOMMENDED DEFLECTION PER JOINT. DEFLECTION MAY OCCUR OVER MULTIPLE JOINTS.
- ADJUST EXISTING VALVES, VALVE BOXES, AND MANHOLES WHICH ARE TO REMAIN TO FINAL GRADE.
- CONTRACTOR MUST SUBMIT WRITTEN SHUTDOWN AND COMMISSIONING PLAN TO COLLEGE UTILITY CORPORATION PRIOR TO BEGINNING WORK, SEE SPECIFICATION 627 FOR DETAILS.

WATER AND SEWER
LAYOUT INDEX



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	U2	U24



WATER NOTES

1. THRUST BLOCKS ARE REQUIRED AT ALL BENDS IN ADDITION TO RESTRAINED JOINT LENGTHS AS SPECIFIED IN UTILITY SERVICES OF ALASKA STANDARDS OF DESIGN AND CONSTRUCTION.

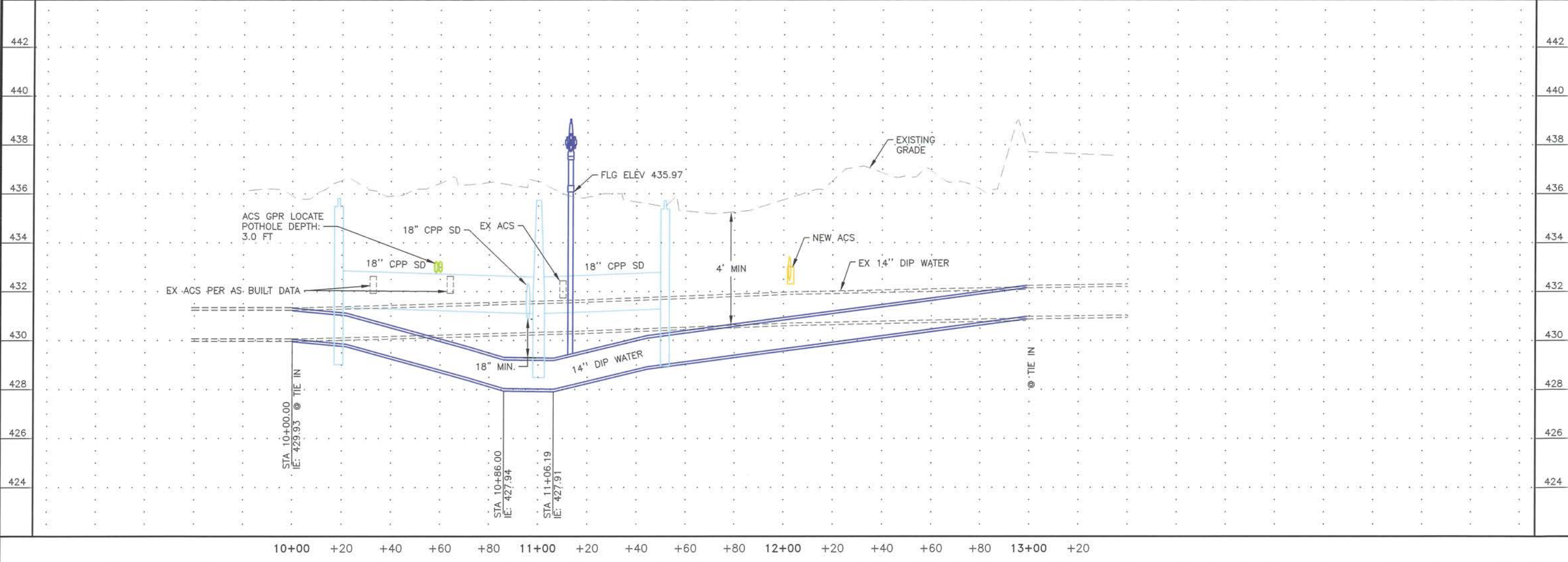
POINT TABLE

POINT #	NORTHING	EASTING	STATION	DESCRIPTION
2000	68662.12	18330.96	10+00.00	TIE IN TO EXISTING 14" DIP
2001	68684.25	18331.32	10+22.13	45 DEGREE BEND
2002	68718.01	18366.81	10+71.12	45 DEGREE BEND
2003	68759.88	18367.84	11+13.01	FIRE HYDRANT TEE
2004	68765.82	18368.01	11+18.94	14" BUTTERFLY VALVE

CONNECT TO 14" DIP AT POINT 702 AS SHOWN ON SHEET U1, UNIVERSITY AVENUE REHAB SECTION 1A, GEIST ROAD TO JOHANSEN EXPRESSWAY



WATER AND SEWER PLAN AND PROFILE (1 OF 2)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FV\C\Segment Improvement Pochaneg\Segment 1B\B-C\C4001const11147.01B-seg-1B-U2_Proposed W P&P (2).dgn, Fri, Jul 08/18 11:13am

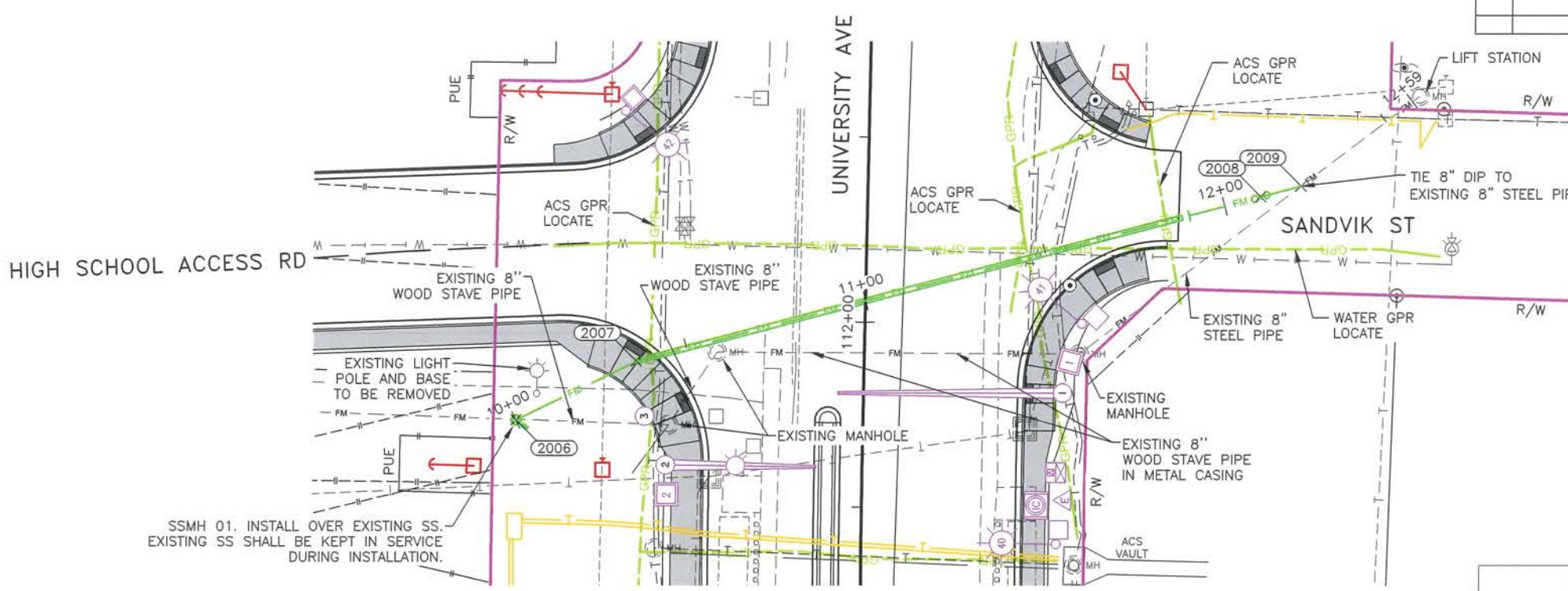
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	U3	U24

NOTES

- EXISTING SANITARY SEWER FORCE MAIN MANHOLES TAKEN OUT OF SERVICE WITH NEW WORK SHALL BE ABANDONED IN PLACE. EXCAVATE BELOW AND REMOVE EXISTING CONE SECTION. FILL VOID WITH CLEAN GRAVEL OR SAND SLURRY, THEN BACKFILL OVER TOP AS SHOWN IN TRENCH DETAIL ON SHEET U4. THIS WORK SHALL BE SUBSIDIARY TO 202(1) REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
- EXISTING SANITARY SEWER FORCE MAIN PIPE SHALL BE REMOVED FROM SITE OR FILLED WITH SAND SLURRY. EXISTING WOOD STAVE UNDER EXISTING UNIVERSITY AVE PAVED SECTION IS CASED WITH METAL PIPE AS LABELED. IF NOT REMOVED FROM SITE, CASING VOID SHALL BE FILLED WITH SAND SLURRY OR ENDS OF CASING GROUTED SHUT. THIS WORK SHALL BE SUBSIDIARY TO 202(1) STRUCTURES AND OBSTRUCTIONS.

POINT TABLE

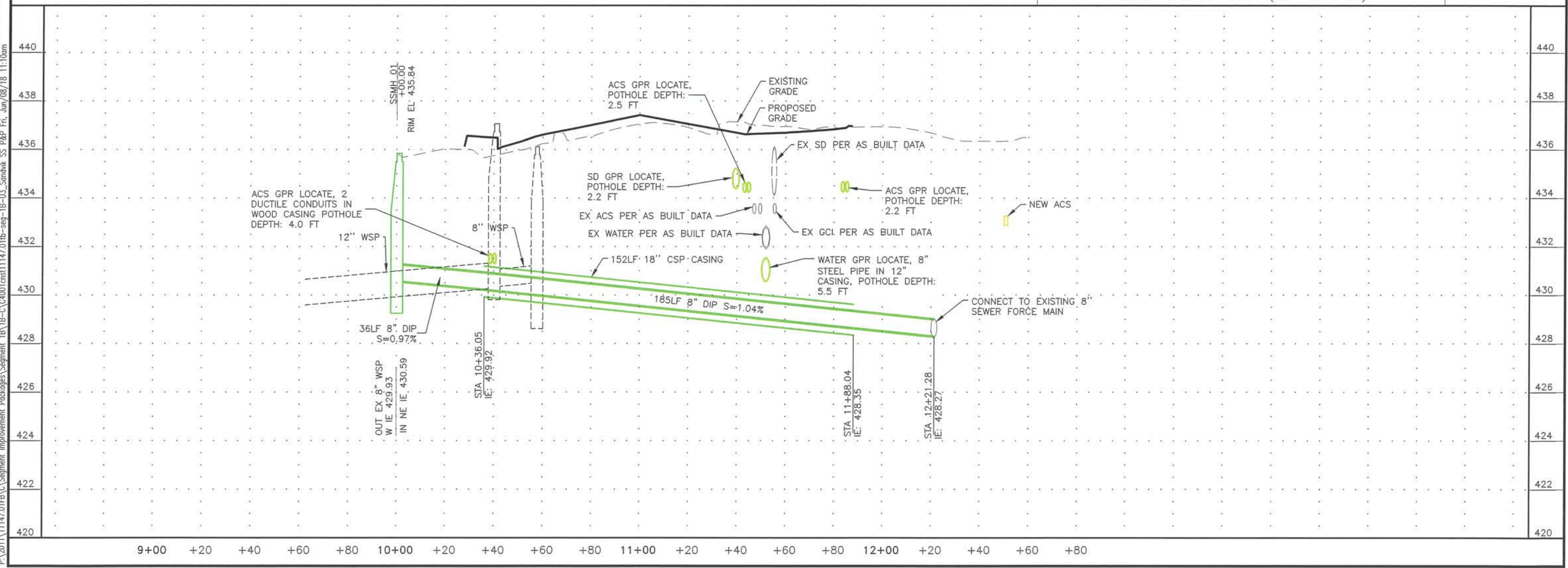
POINT #	NORTHING	EASTING	STATION	DESCRIPTION
2006	69909.71	18208.35	10+00.00	SSMH 01
2007	69925.55	18240.73	10+36.05	11.25 DEGREE BEND
2008	69970.02	18408.90	12+10.00	DOUBLE 6" CLEANOUT
2009	69972.90	18419.81	12+21.28	TIE IN TO EX. 8" STEEL PIPE W/ 22.5 DEGREE BEND



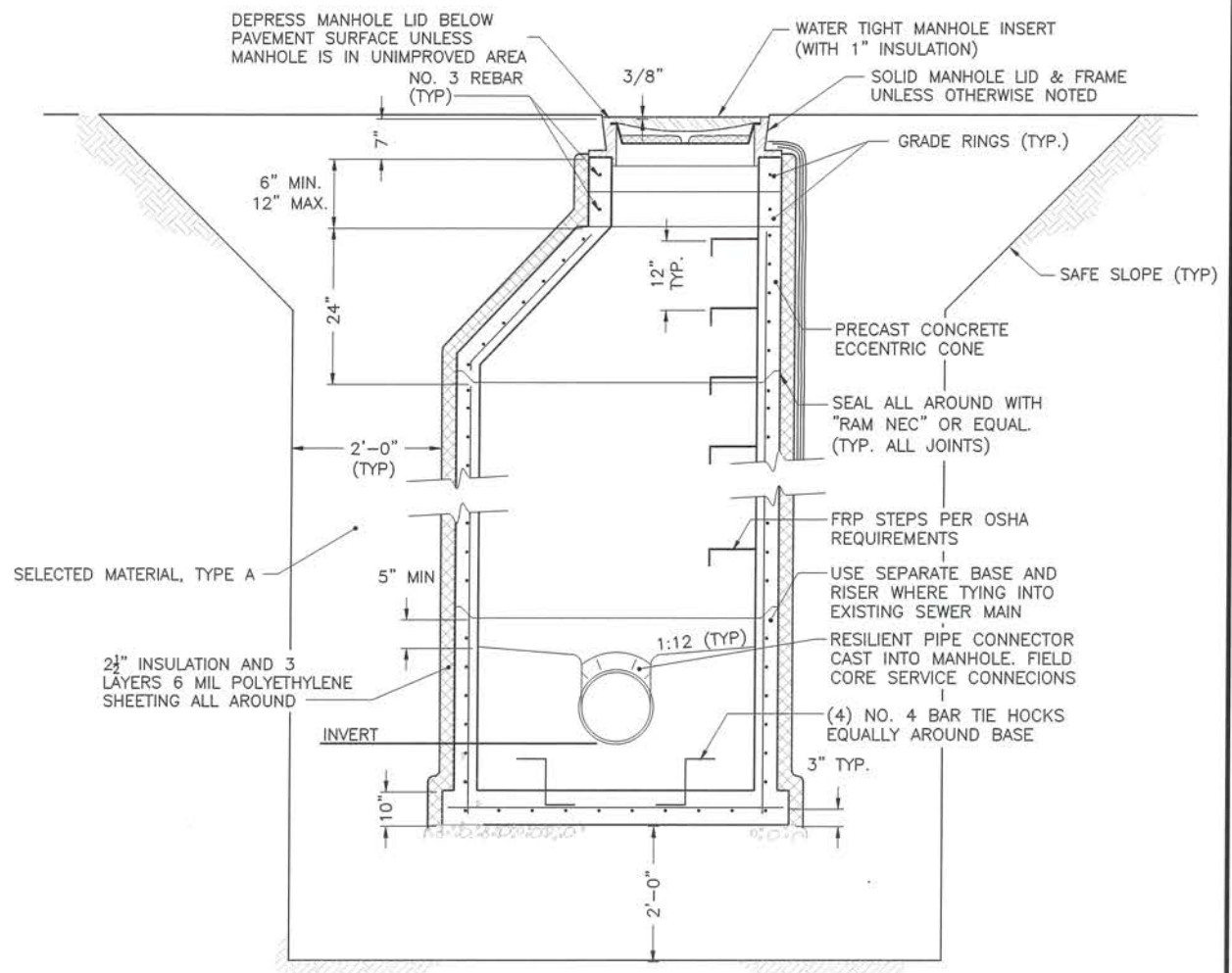
WATER AND SEWER PLAN AND PROFILE (2 OF 2)



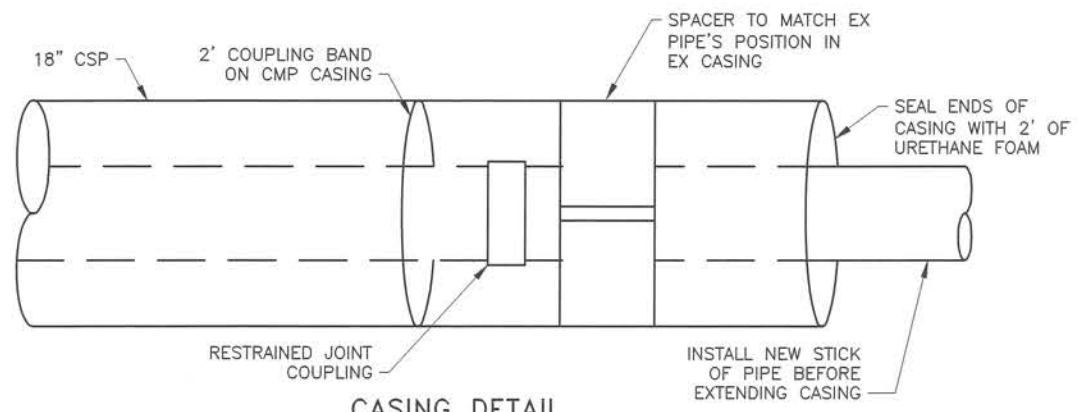
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200



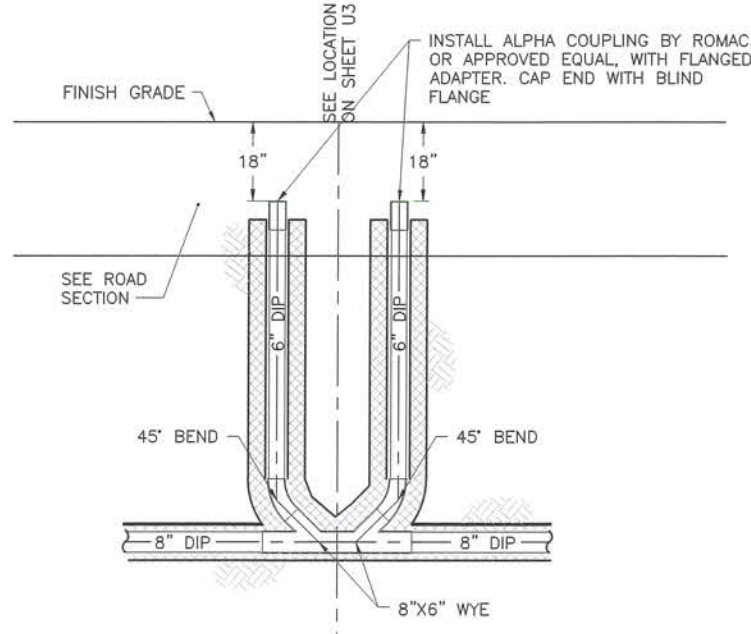
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	U4	U24



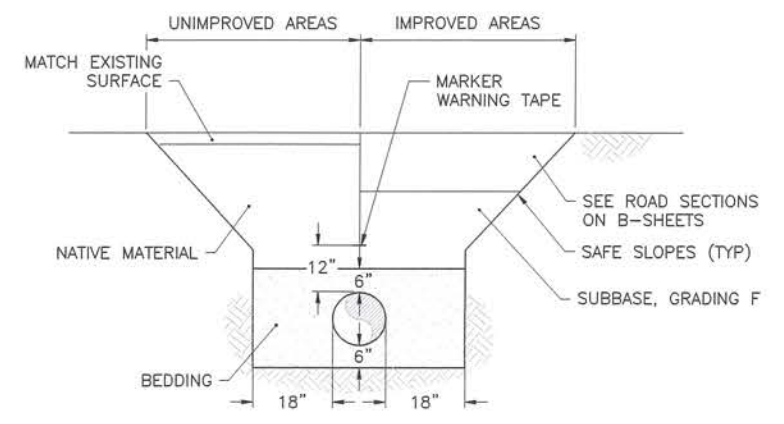
MANHOLE DETAIL
NTS



CASING DETAIL
* CASING SHALL BE PLACED ON 8" PEA GRAVEL



TWO-WAY SEWER LINE CLEANOUT
* INSULATE ALL PIPE AND FITTINGS WITH 3" SPRAY FOAM



TYPICAL TRENCH SECTION

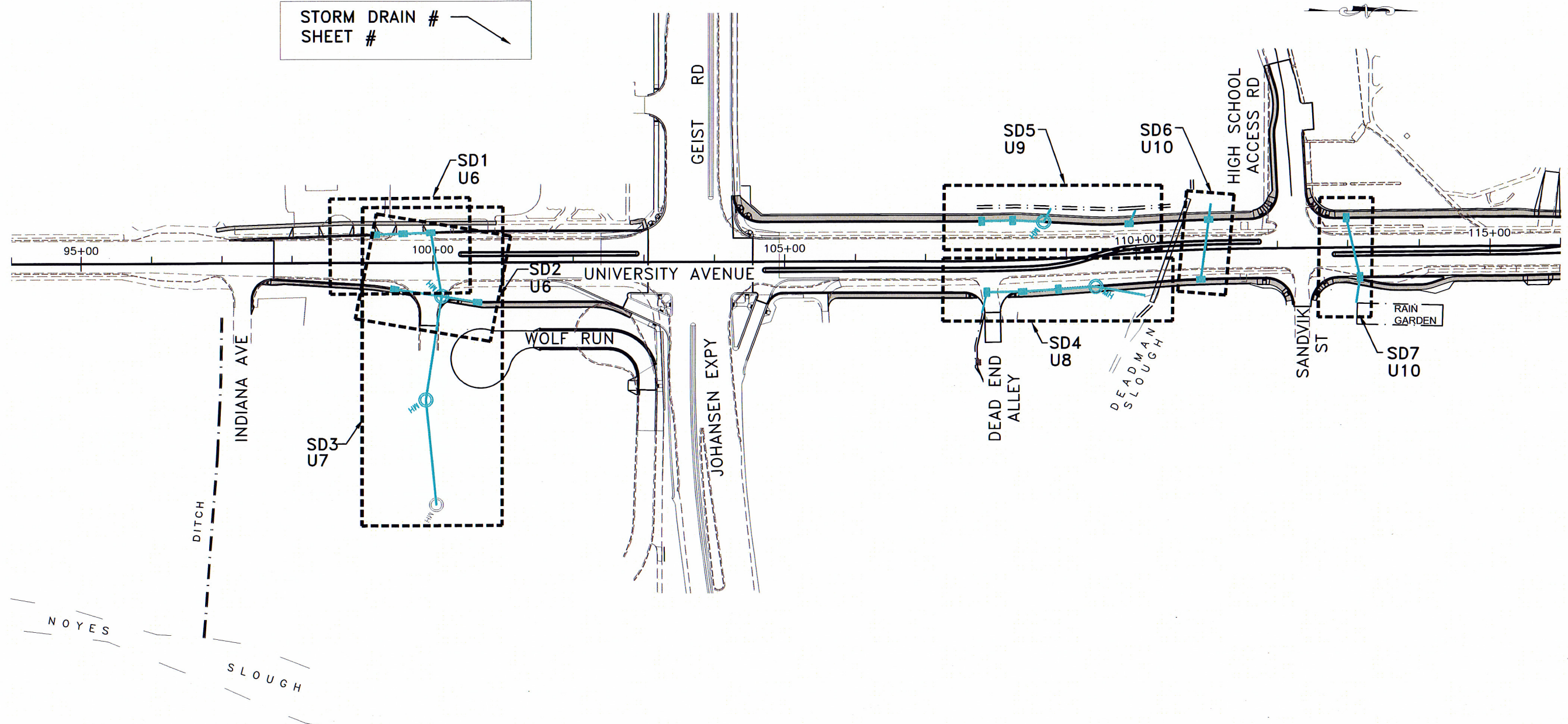
WATER AND SEWER DETAILS



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\C400\const\11147.01fb-seg-1B-U4_DTL5 Frn Jun/08/18 11:14am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	U5	U24

LEGEND

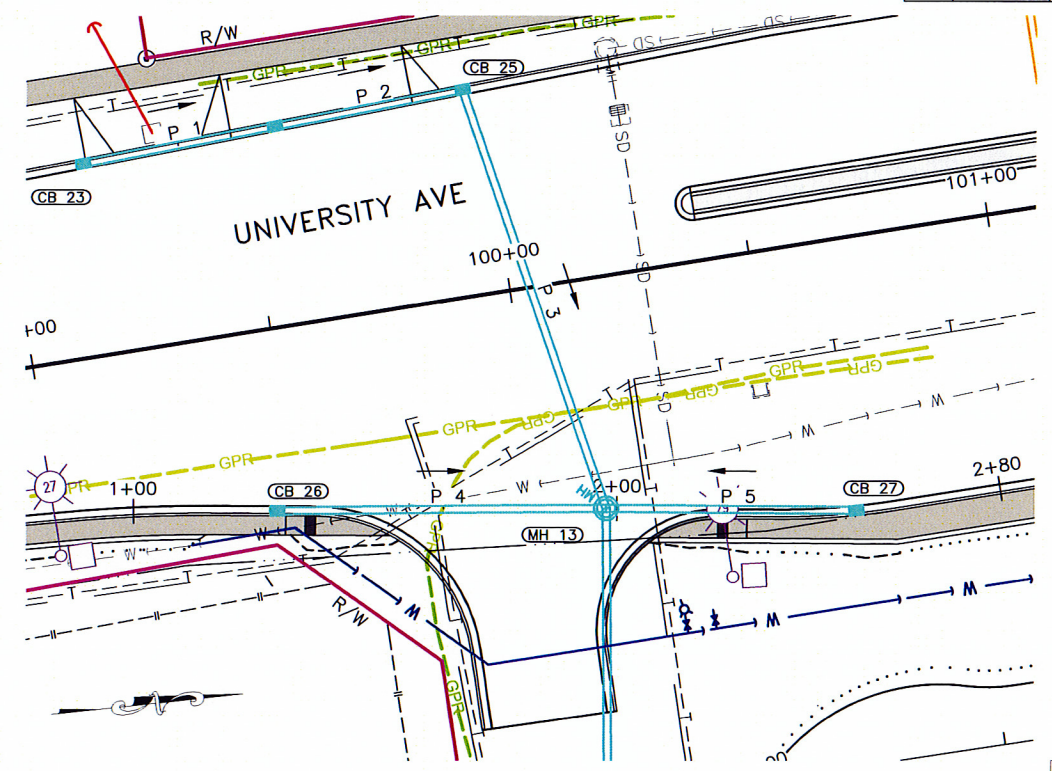
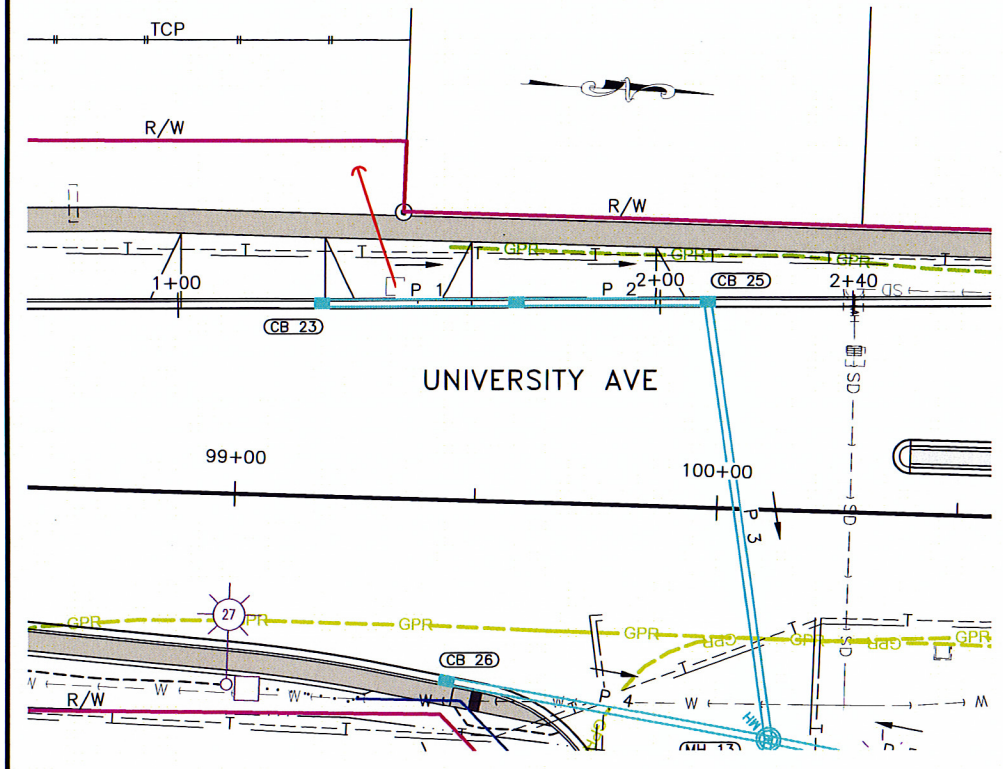


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0805, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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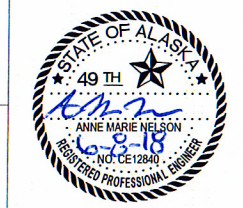
STORM DRAIN SHEET
LAYOUT INDEX



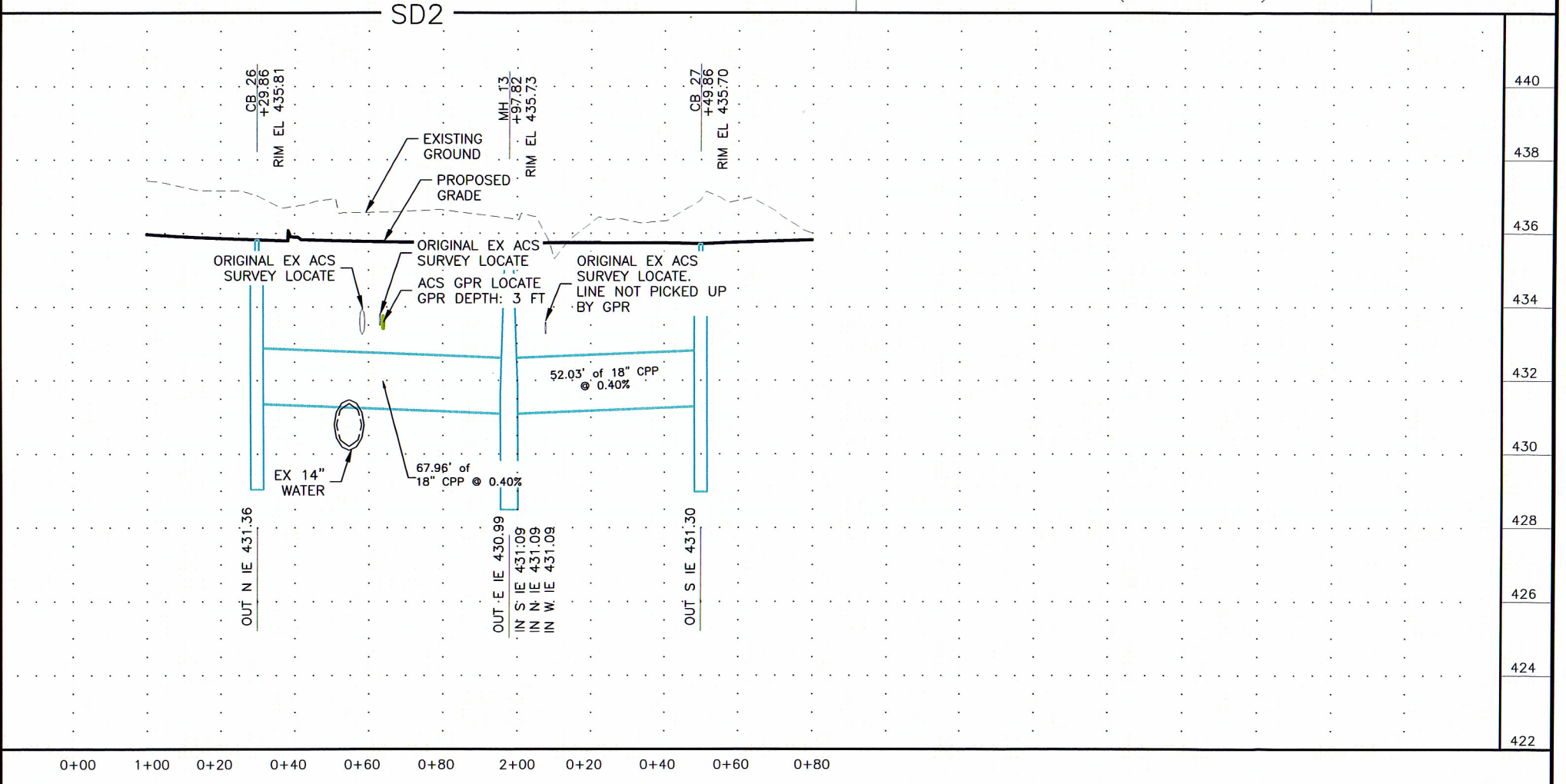
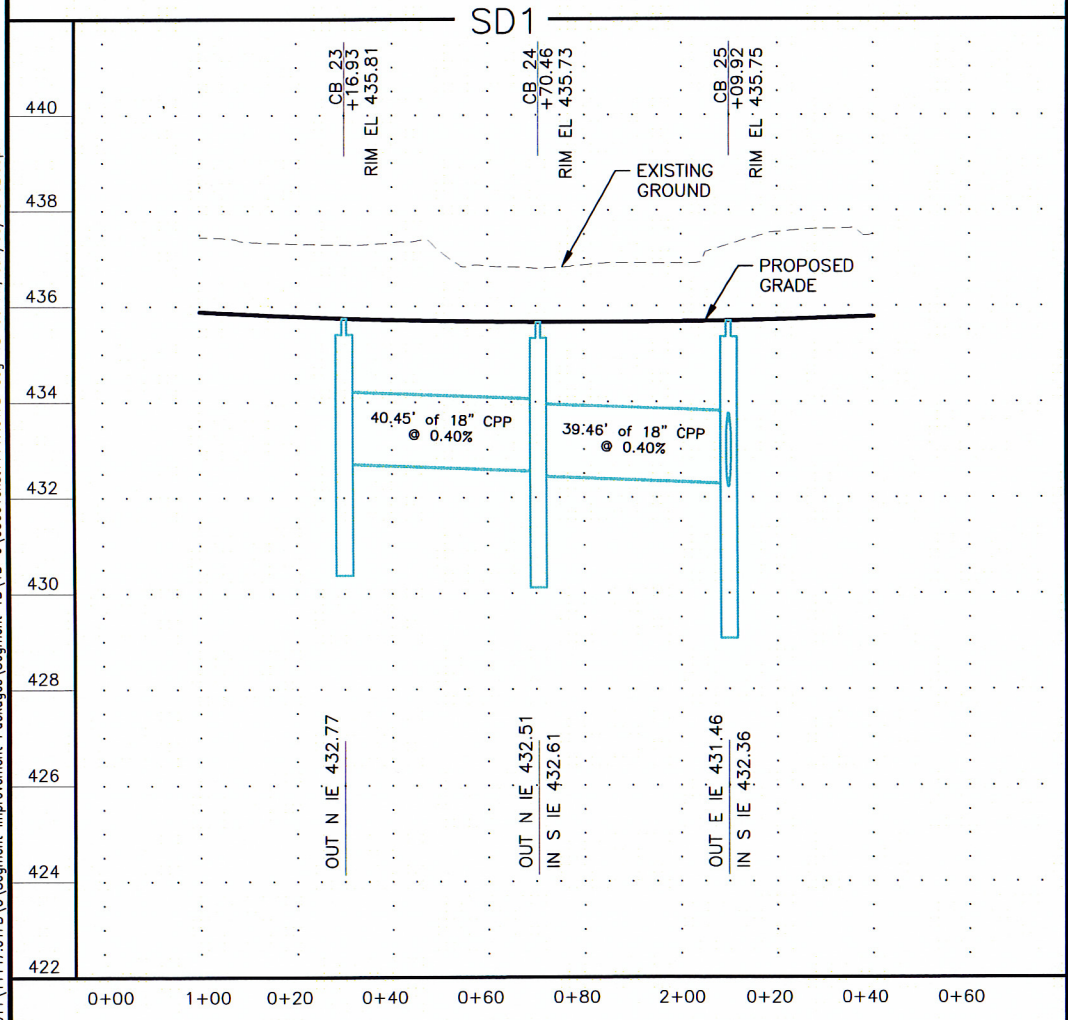
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	U6	U24



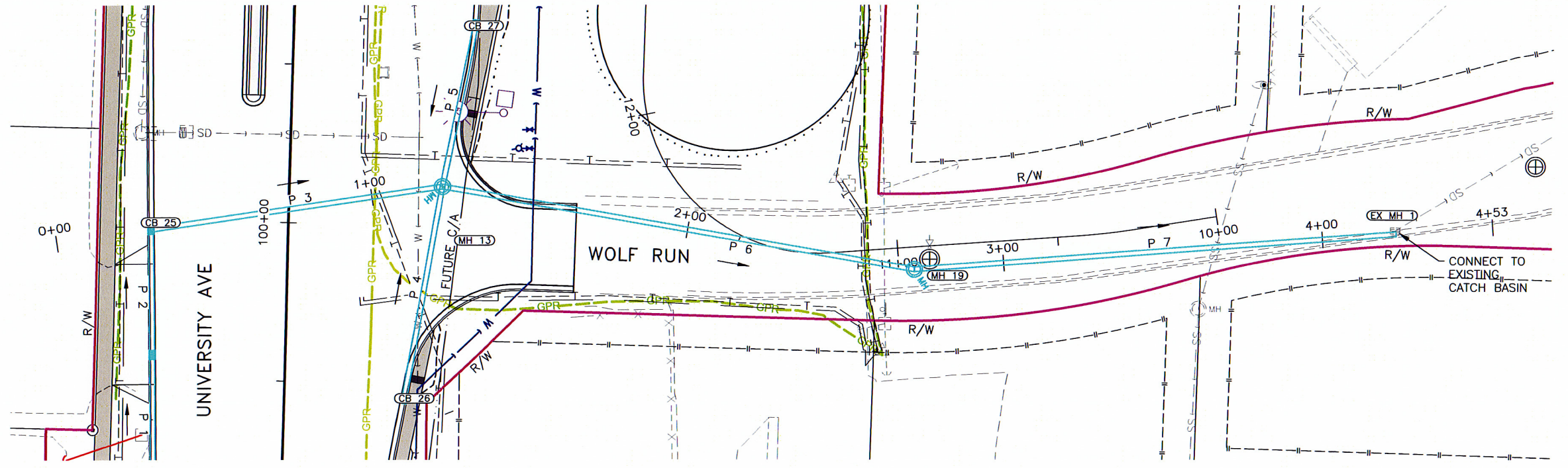
STORM DRAIN PLAN AND PROFILE (1 OF 5)



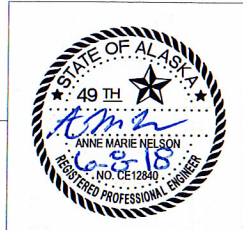
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 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\1B-C\5001\cnsf11147.01\FB-Seg-1B-U6 Err, Jun/08/18 02:53pm



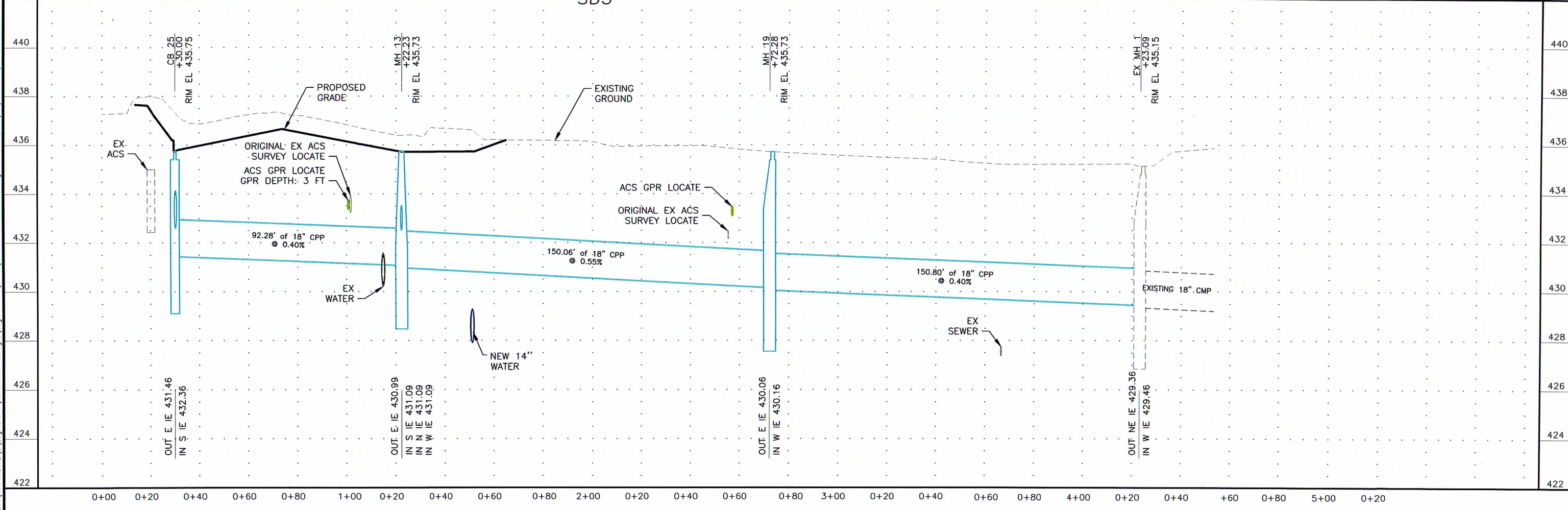
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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STORM DRAIN PLAN AND PROFILE (2 OF 5)

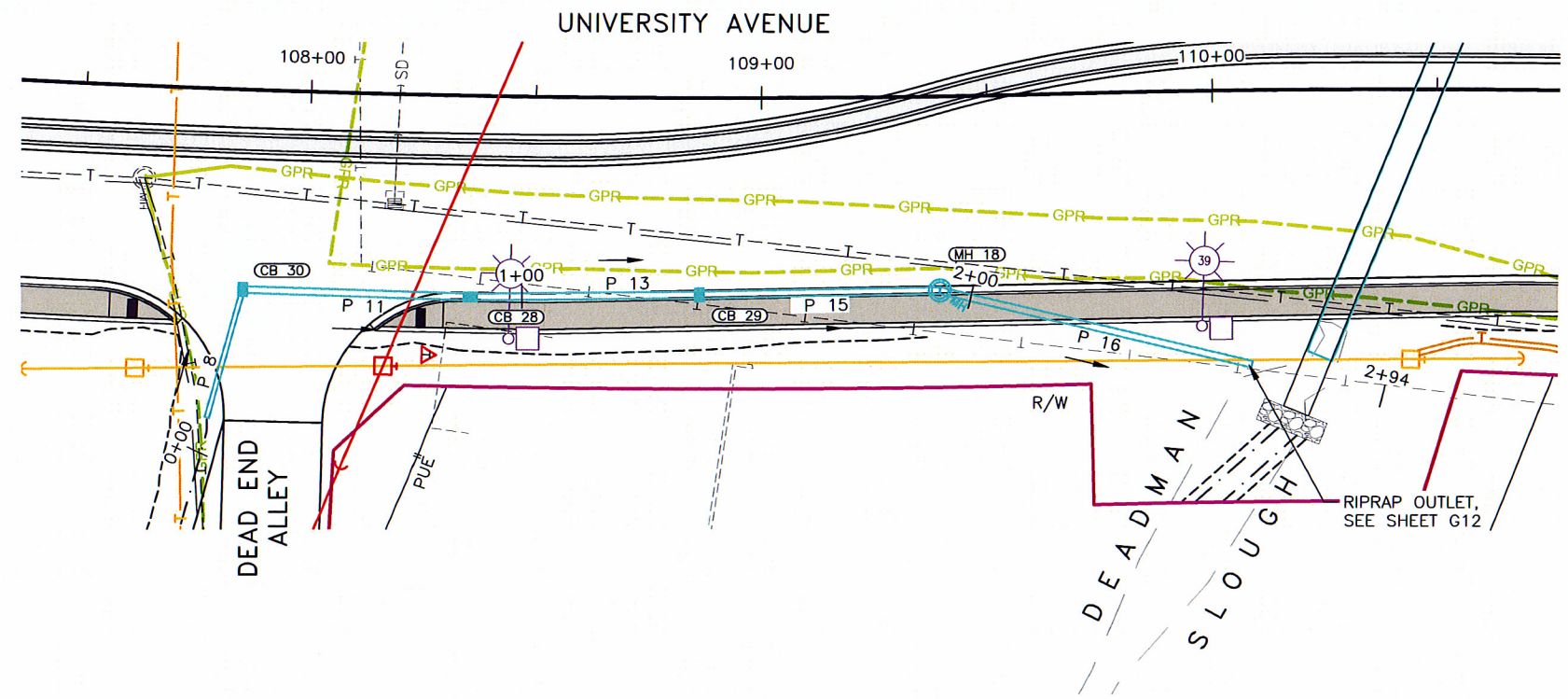


SD3

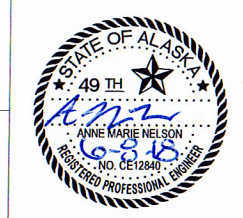


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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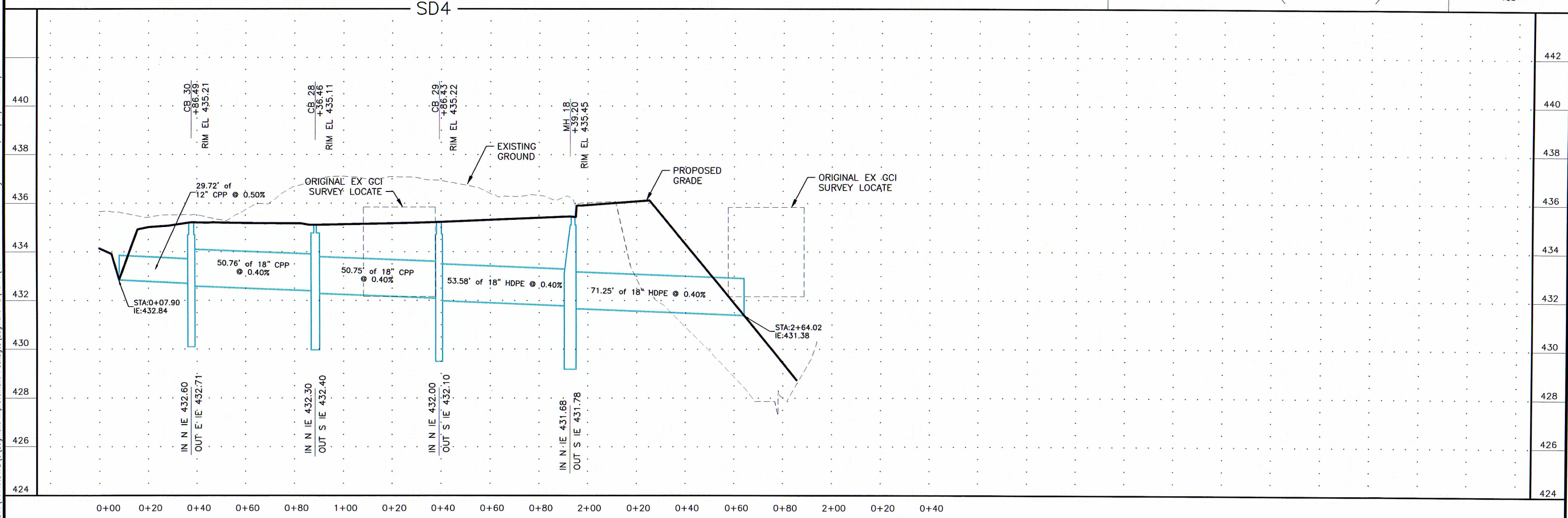
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			ALASKA	0617012/NFHWY00270	2018	U8	U24



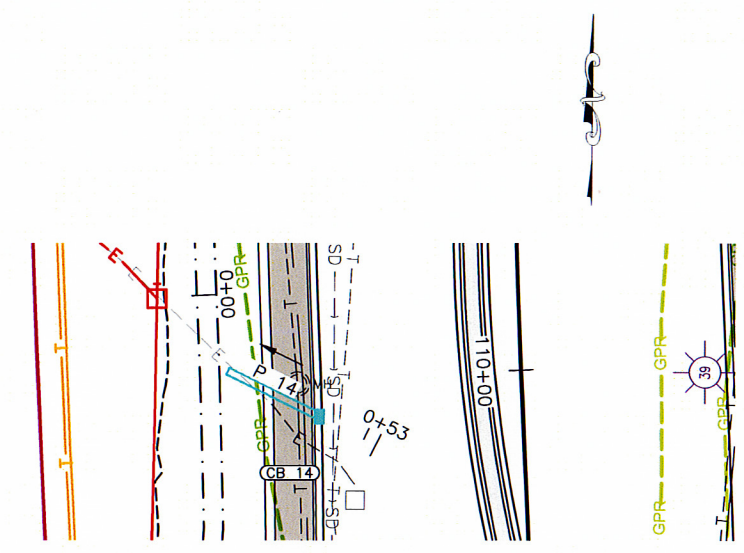
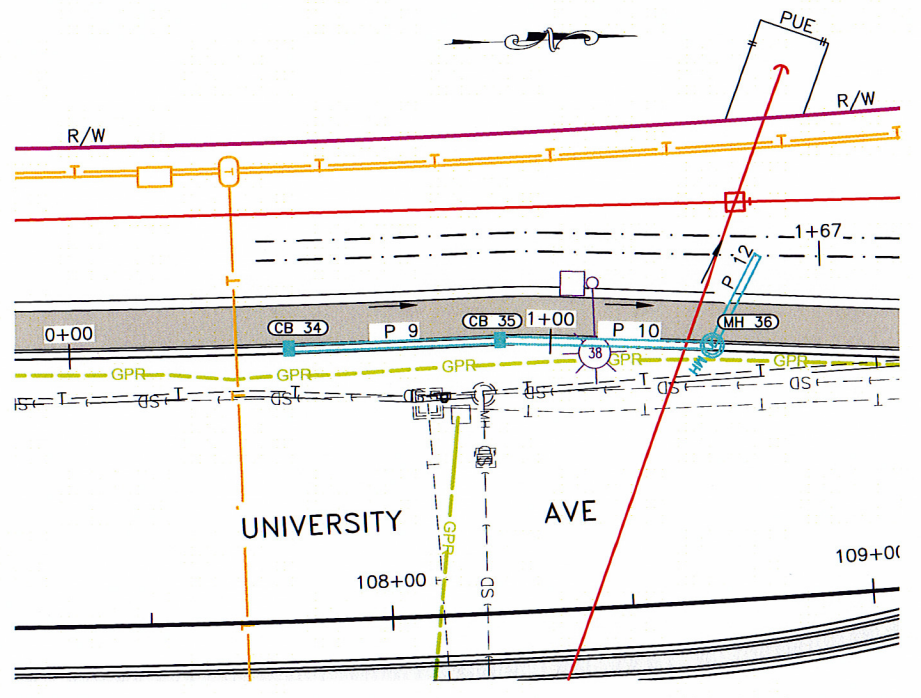
STORM DRAIN PLAN AND PROFILE (3 OF 5)



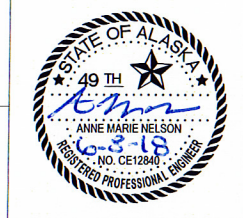
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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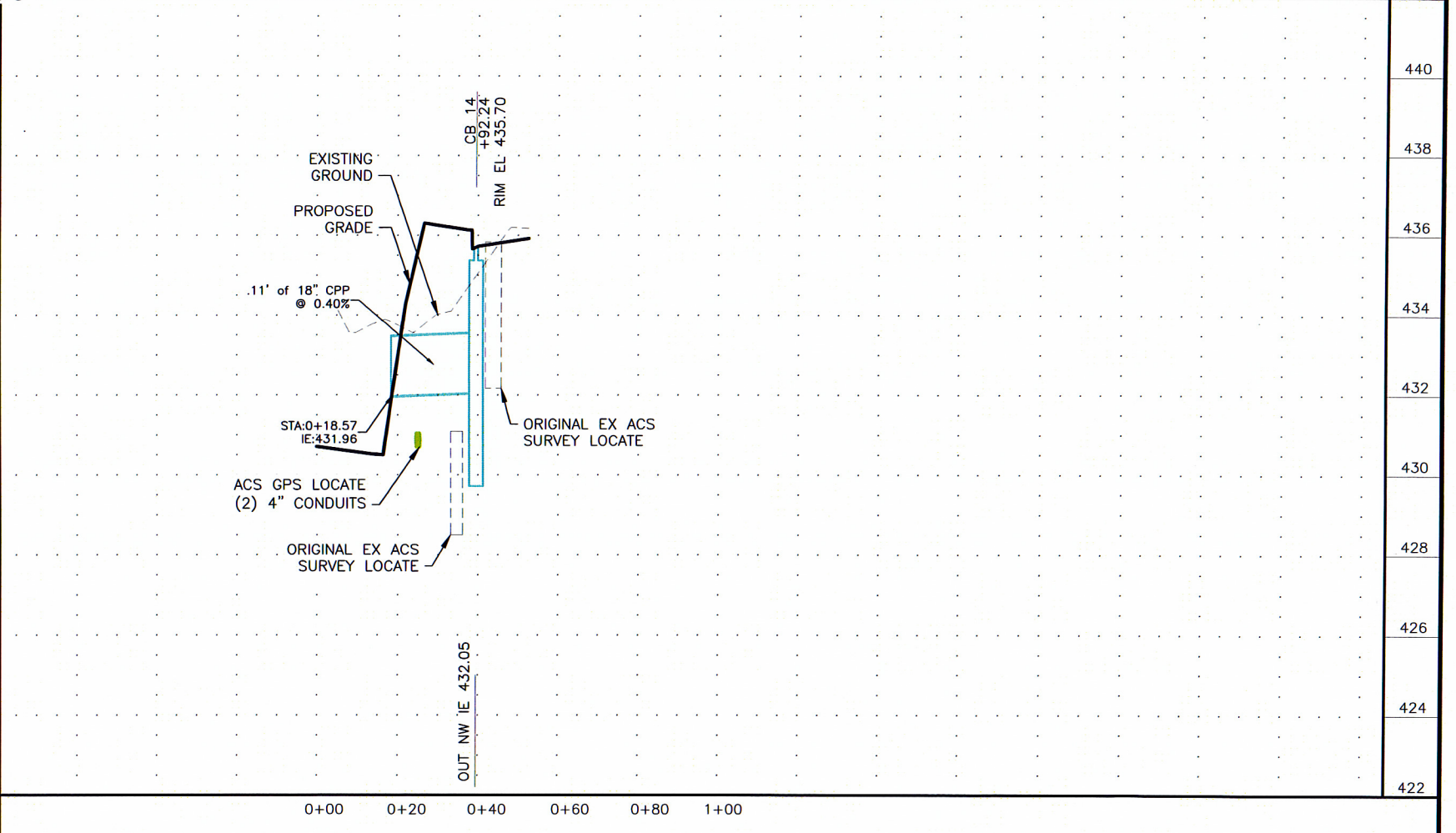
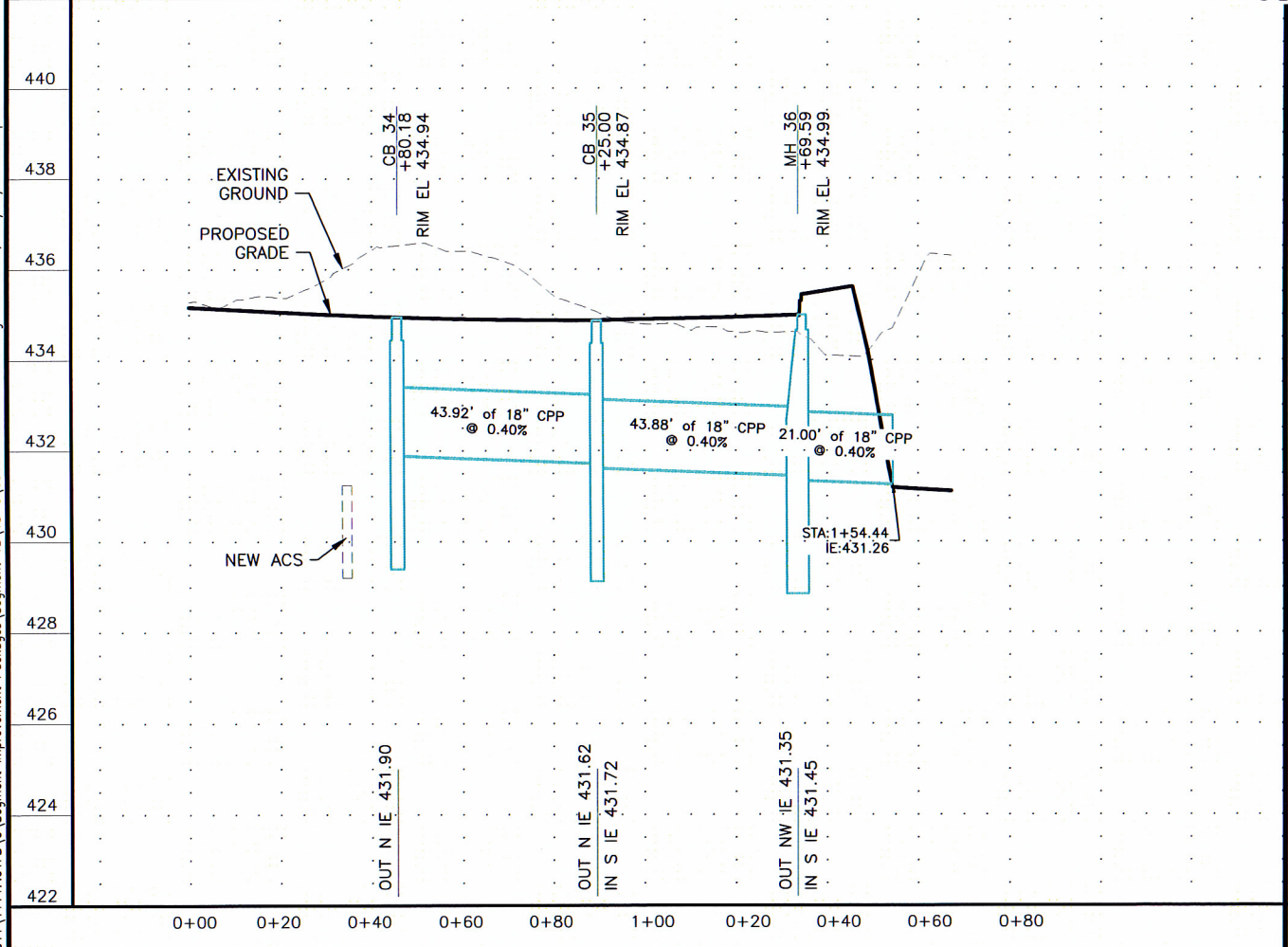
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	U9	U24



STORM DRAIN PLAN AND PROFILE (4 OF 5)

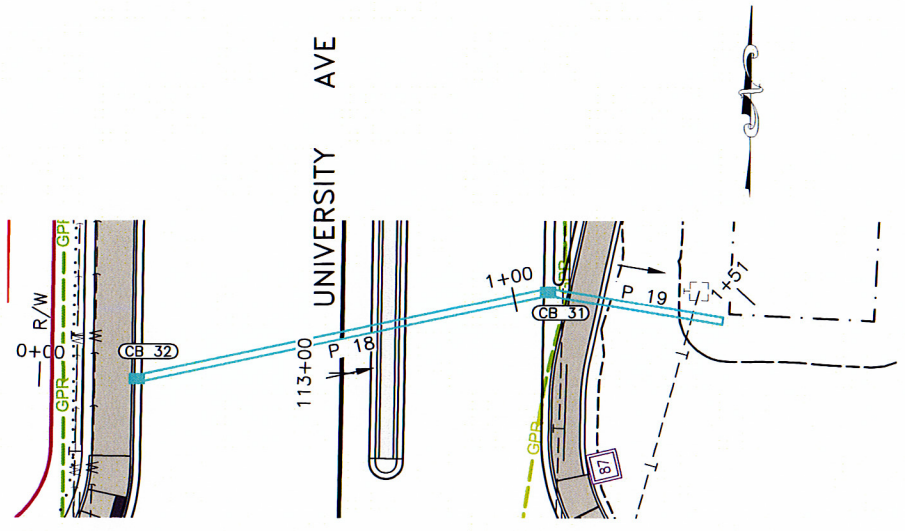
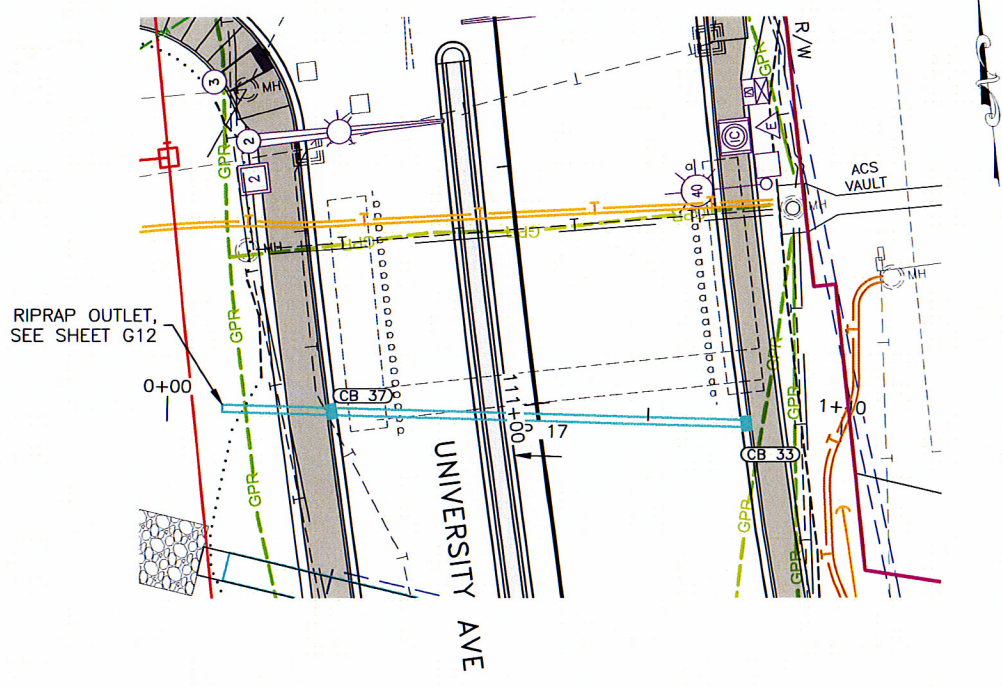


SD5

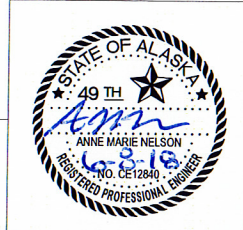


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)7743-3200

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	U10	U24

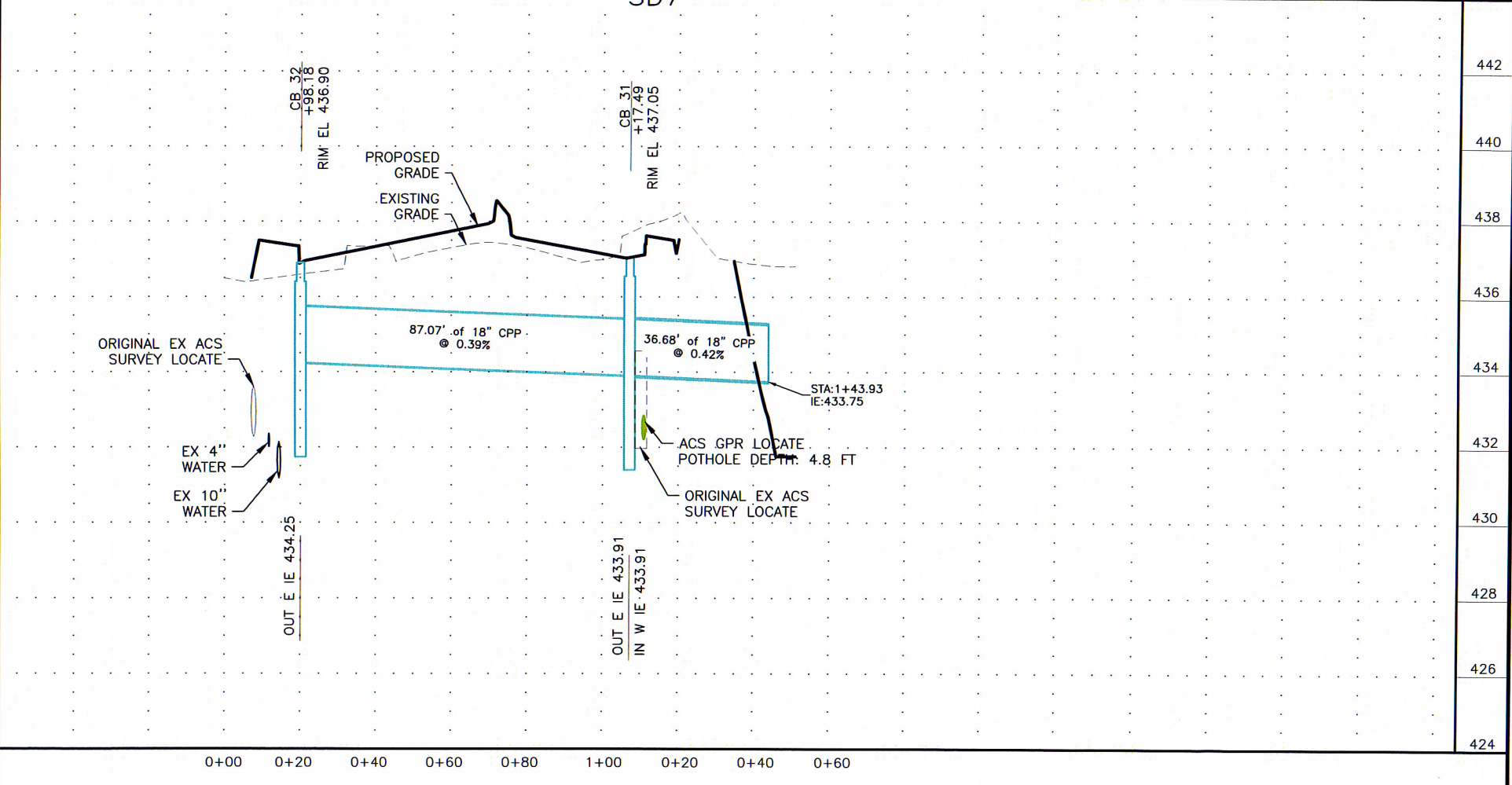
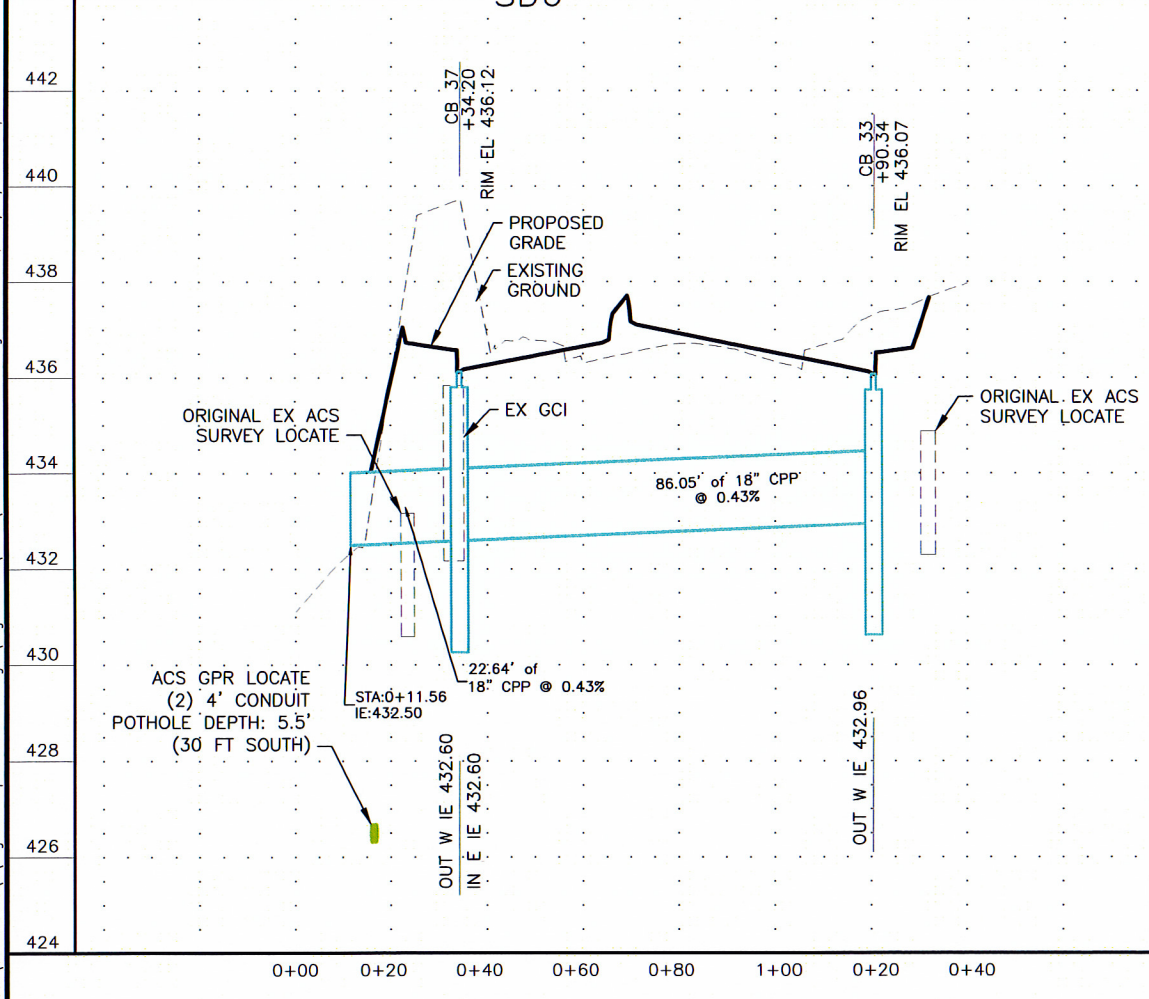


STORM DRAIN PLAN AND PROFILE (5 OF 5)



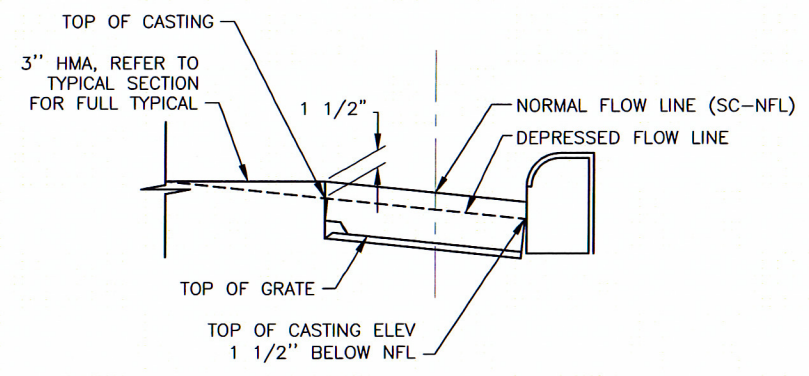
SD6

SD7



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147.01FB\C\Segment Improvement Packages\Segment 1B\1B-C\5001const\1147.01FB-Seg-1B-U10 Trl_Jun/08/18 02:57pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	U11	U24



CURB INLET DETAIL

SHEET NOTES

1. SC-NFL REPRESENTS CENTER OF STRUCTURE AT NORMAL FLOW LINE. SEE CURB INLET DETAIL.
2. TOP OF CASTING 1 1/2" BELOW NORMAL FLOW LINE
3. SEE STANDARD DRAWING D-22.01, D-23.01 AND D-25.00 FOR INLET CONSTRUCTION DETAILS.
4. ALL TYPE "A" INLETS REQUIRE AN 18" SUMP. SEE STANDARD DRAWING D-26.03 FOR TYPE "A" INLET BOX DETAILS.

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1B\B-C\C5001crst11147.01FB-Seg-1B-U11 Fr. Jun/08/18 03:30pm

STORM DRAIN DETAILS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	U12	U24

STRUCTURE SUMMARY

NAME:	TYPE	STATION	OFFSET	SC-NFL	TOC	PIPES IN INVERTS	PIPES OUT INVERTS	COVER	REMARKS
CB 14	INLET, TYPE A	109+92.24	42.19 L	435.70	436.12		(P 14) 432.05' NW	STD CURB INLET AND GRATE	
CB 23	INLET, TYPE A	99+16.93	40.23 L	435.81	436.26		(P 1) 432.77' N	HIGH CAPACITY FIELD INLET	
CB 24	INLET, TYPE A	99+57.36	41.58 L	435.73	436.18	(P 1) 432.61' S	(P 2) 432.51' N	HIGH CAPACITY FIELD INLET	
CB 25	INLET, TYPE A	99+96.79	42.89 L	435.75	436.2	(P 2) 432.36' S	(P 3) 431.46' E	STD CURB INLET AND GRATE	
CB 26	INLET, TYPE A	99+45.32	37.78 R	435.81	436.26		(P 4) 431.36' N	STD CURB INLET AND GRATE	
CB 27	INLET, TYPE A	100+63.80	56.73 R	435.70	436.15		(P 5) 431.30' S	STD CURB INLET AND GRATE	
CB 28	INLET, TYPE A	108+36.46	45.00 R	435.11	435.56	(P 11) 432.40' S	(P 13) 432.30' N	STD CURB INLET AND GRATE	
CB 29	INLET, TYPE A	108+86.43	44.06 R	435.22	435.67	(P 13) 432.10' S	(P 15) 432.00' N	STD CURB INLET AND GRATE	
CB 30	INLET, TYPE A	107+86.49	44.70 R	435.21	NA	(P 8) 432.71' E	(P 11) 432.60' N	HIGH CAPACITY FIELD INLET	
CB 31	INLET, TYPE A	113+17.49	42.41 R	437.05	437.35	(P 18) 433.91' W	(P 19) 433.91' E	STD CURB INLET AND GRATE	
CB 32	INLET, TYPE A	112+98.18	42.50 L	436.90	437.35		(P 18) 434.25' E	STD CURB INLET AND GRATE	
CB 33	INLET, TYPE A	110+90.34	42.50 R	436.07	436.52		(P 17) 432.96' W	STD INLET GRATE AND FRAME	
CB 34	INLET, TYPE A	107+80.18	57.00 L	434.94	435.39		(P 9) 431.90' N	STD CURB INLET AND GRATE	
CB 35	INLET, TYPE A	108+25.00	56.98 L	434.87	435.32	(P 9) 431.72' S	(P 10) 431.62' N	STD CURB INLET AND GRATE	
CB 37	INLET, TYPE A	111+03.74	42.50 L	436.12	436.57	(P 17) 432.60' E	(P 20) 432.60' W	STD CURB INLET AND GRATE	
EX MH 1	RECONSTRUCT MANHOLE	100+05.15	346.45 R	435.15	435.66	(P 7) 429.46' W	(EX Pipe 2) 429.36' NE	STD CURB INLET AND GRATE	
MH 13	STORM SEWER MANHOLE, 48 INCH	100+12.50	48.04 R	435.73	NA	(P 4) 431.09' S (P 5) 431.09' N (P 3) 431.09' W	(P 6) 430.99' E	HIGH CAPACITY FIELD INLET	
MH 18	STORM SEWER MANHOLE, 48 INCH	109+39.20	43.41 R	435.45	435.90	(P 15) 431.78' S	(P 16) 431.68' N	STD CURB INLET AND GRATE	
MH 19	STORM SEWER MANHOLE, 48 INCH	99+90.06	196.41 R	435.73	NA	(P 6) 430.16' W	(P 7) 430.06' E	SOLID LID	
MH 36	STOMR SEWER MANHOLE, 48 INCH	108+69.59	53.41 L	434.99	435.44	(P 10) 431.45' S	(P 12) 431.35' NW	STD CURB INLET AND GRATE	

PIPE SUMMARY

NAME	SIZE (IN)	MATERIAL	SLOPE	START INVERT	END INVERT	LENGTH (FT)	REMARKS
P 1	18	CPP	0.40%	432.77'	432.61'	40.45	
P 2	18	CPP	0.40%	432.51'	432.36'	39.46	
P 3	18	CPP	0.40%	431.46'	431.09'	92.28	
P 4	18	CPP	0.40%	431.36'	431.09'	67.96	
P 5	18	CPP	0.40%	431.09'	431.30'	52.03	
P 6	18	CPP	0.55%	430.99'	430.16'	150.06	
P 7	18	CPP	0.40%	430.06'	429.46'	150.81	
P 8	12	CPP	0.50%	432.85'	432.71'	29.72	
P 9	18	CPP	0.40%	431.90'	431.72'	43.92	
P 10	18	CPP	0.40%	431.62'	431.45'	43.88	
P 11	18	CPP	0.40%	432.40'	432.60'	50.76	
P 12	18	CPP	0.40%	431.35'	431.26'	21.01	
P 13	18	CPP	0.40%	432.10'	432.30'	50.75	
P 14	18	CPP	0.40%	432.05'	431.96'	21.11	
P 15	18	CPP	0.40%	431.78'	432.00'	53.58	
P 16	18	CPP	0.40%	431.68'	431.40'	71.25	RIPRAP OUTFALL, SEE SHEET G12
P 17	18	CPP	0.43%	432.96'	432.60'	86.05	
P 18	18	CPP	0.39%	433.91'	434.25'	87.08	
P 19	18	CPP	0.42%	433.91'	433.75'	36.68	
P 20	18	CPP	0.43%	432.60'	432.50'	22.64	RIPRAP OUTFALL, SEE SHEET G12

SHEET NOTES

1. STATIONS AND OFFSETS MEASURED FROM UNIVERSITY AVENUE ALIGNMENT.
2. SC-NFL REPRESENTS CENTER OF STRUCTURE AT NORMAL FLOW LINE. SEE CURB INLET DETAIL.

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)7743-3200
P:\2011\1147\01FB\C\Segment Improvement Packages\Segment 1B\1B-C\5001cnst1147\01FB-Seg-1B-UT2 Fr. Jun/08/18 02:58pm

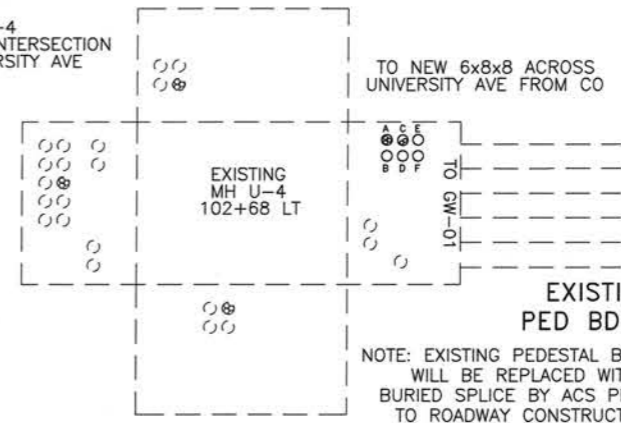
STORM DRAIN SUMMARY



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	U13	U24

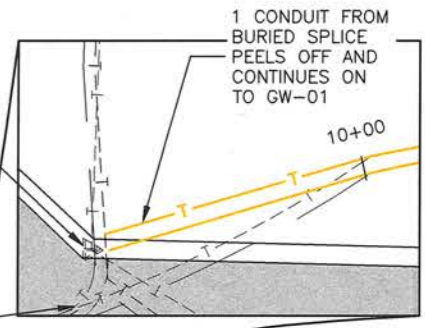
- NOTES:**
1. CABLE INSTALLATION NOT IN CONTRACT (NIC).
 2. DB2 AND DB5 NOT IN CONTRACT (NIC).
 3. INSTALL CASING FOR FUTURE DB2.

EXISTING MH U-4
SOUTHWEST CORNER OF INTERSECTION
OF GEIST RD & UNIVERSITY AVE
PRM 4939



EXISTING
PED BD-7

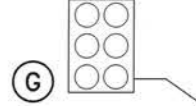
NOTE: EXISTING PEDESTAL BD-7
WILL BE REPLACED WITH A
BURIED SPLICE BY ACS PRIOR
TO ROADWAY CONSTRUCTION.



1 CONDUIT FROM 1A
STUB OUT PEELS
OFF INTO BURIED
SPLICE

EXISTING
PED BD-7

(6) 4" HDPE



11+00

12+00

DB3

EXISTING
MH U-4

GEIST RD

JOHANSEN EXPY

UNIVERSITY AVENUE

CASING FOR
FUTURE DB2

WOLF RUN

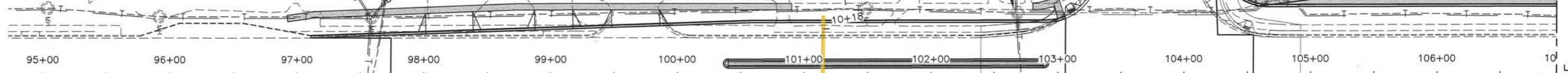
INDIANA AVE

DUCT BANK LAYOUT
(1 OF 2)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECG605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment_Improvement_Packages\Segment_1B-C\7001\cost11147.01FB-Seg_1B-U13_ALGN_1.rvt, Jun 08/18 12:51pm

MATCH "01" 107+00 LINE



10+18

10+11

10+21

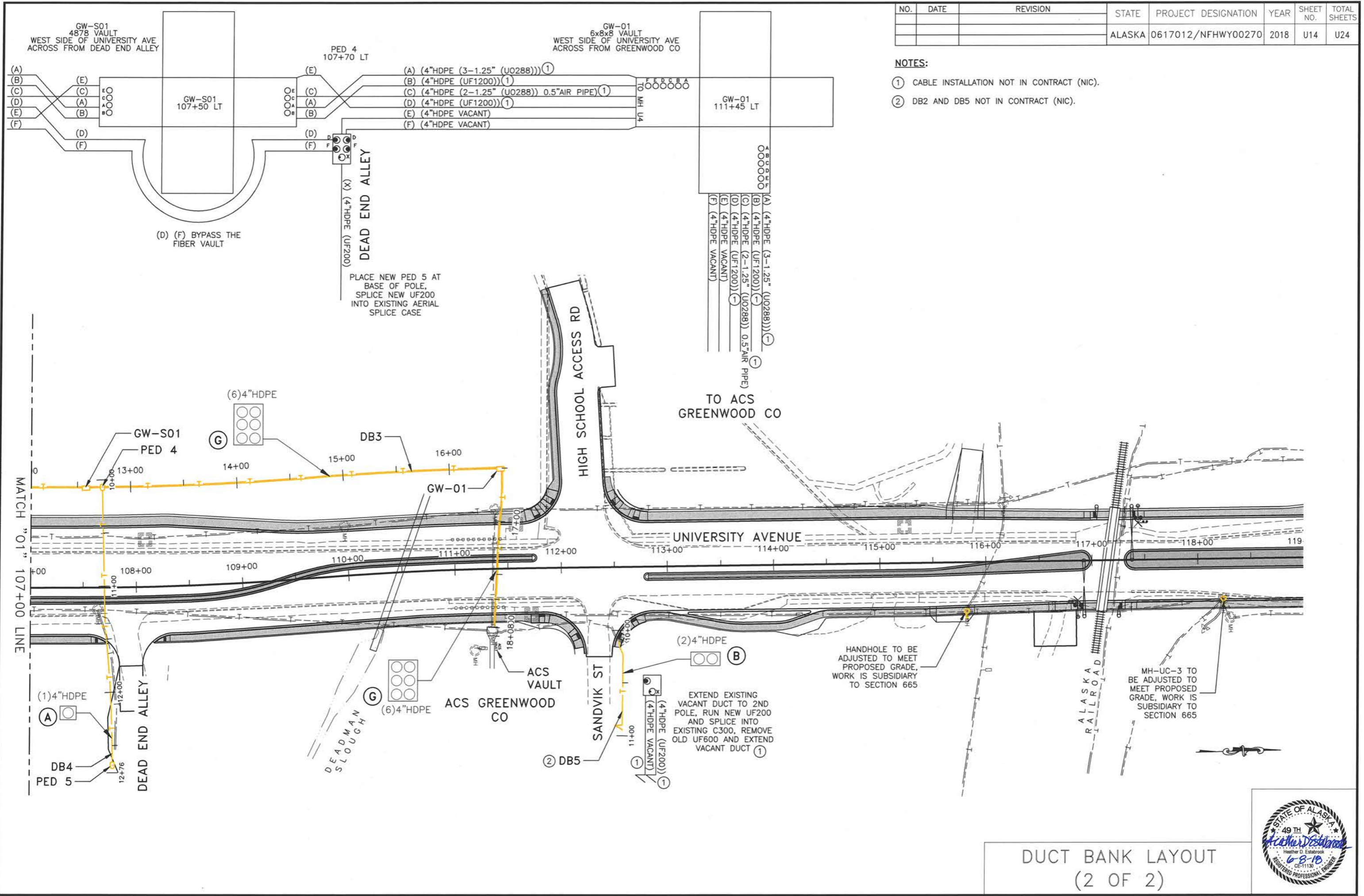
12+72

12+72

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWO0270	2018	U14	U24

NOTES:

- ① CABLE INSTALLATION NOT IN CONTRACT (NIC).
- ② DB2 AND DB5 NOT IN CONTRACT (NIC).

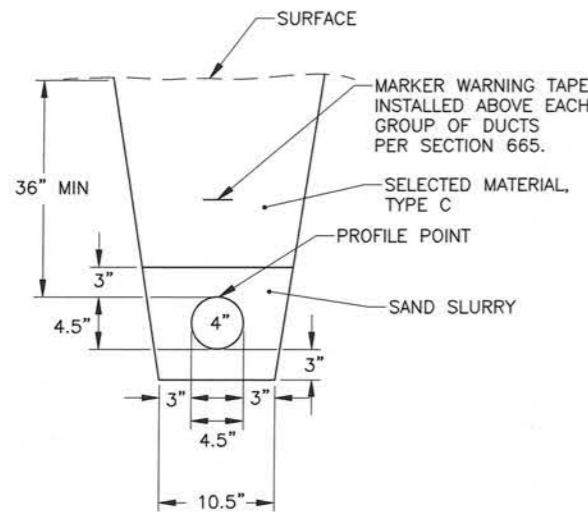


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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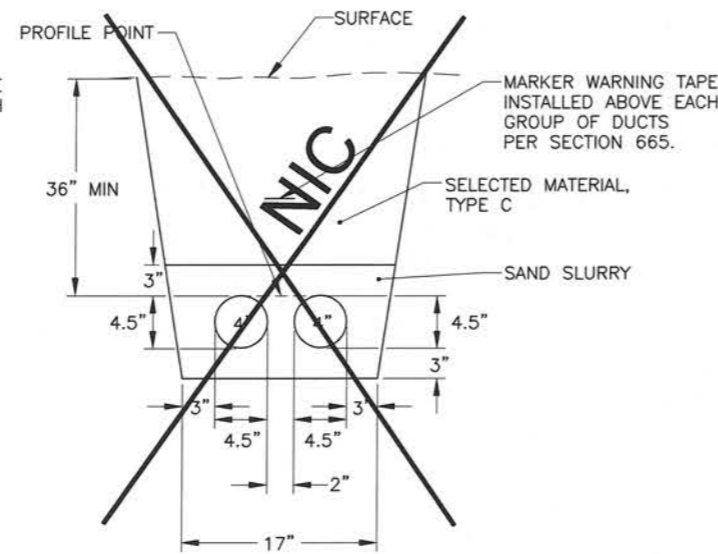
**DUCT BANK LAYOUT
(2 OF 2)**



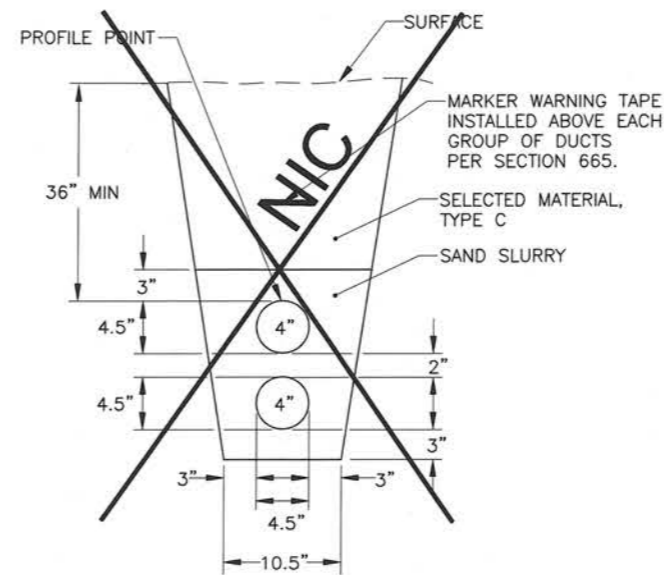
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			ALASKA	0617012/NFHwy00270	2018	U15	U24



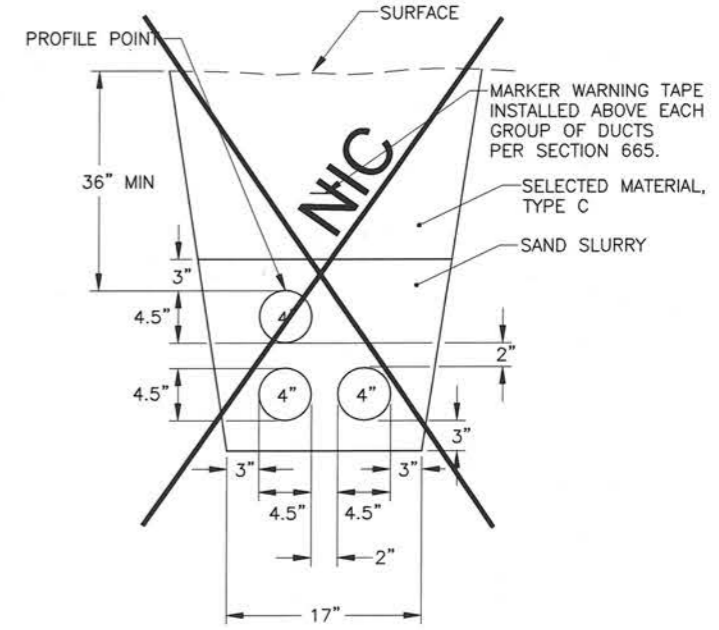
A (1) 4" HDPE CONDUITS
~~"DB1" 12+10.02 TO "DB1" 12+37.00~~ **NIC**
~~"DB4" 10+00.00 TO "DB4" 12+75.56~~



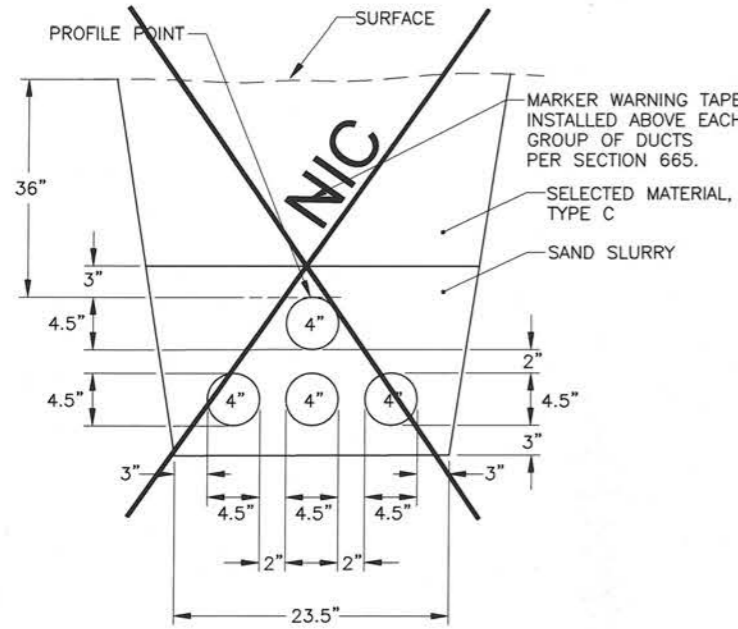
B (2) 4" HDPE CONDUITS
~~"DB5" 10+00.00 TO "DB5" 10+09.76~~ **NIC**



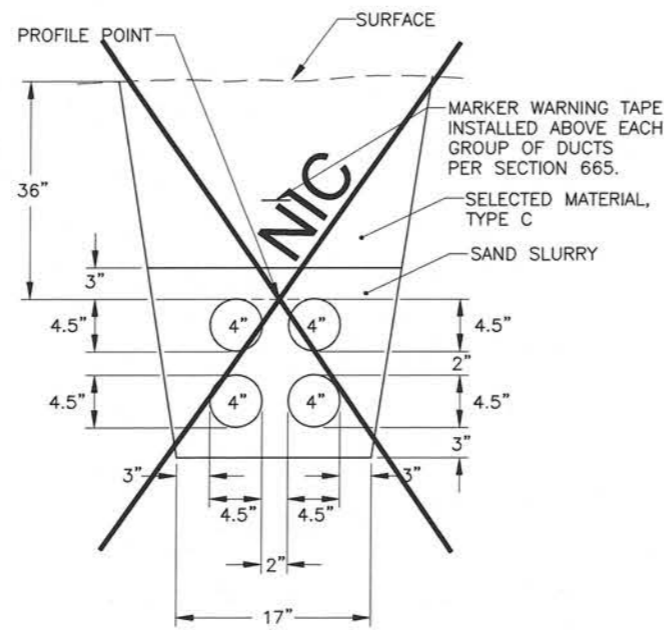
C (2) 4" HDPE CONDUITS
~~"DB2" 10+00.00 TO "DB2" 12+60.60~~ **NIC**



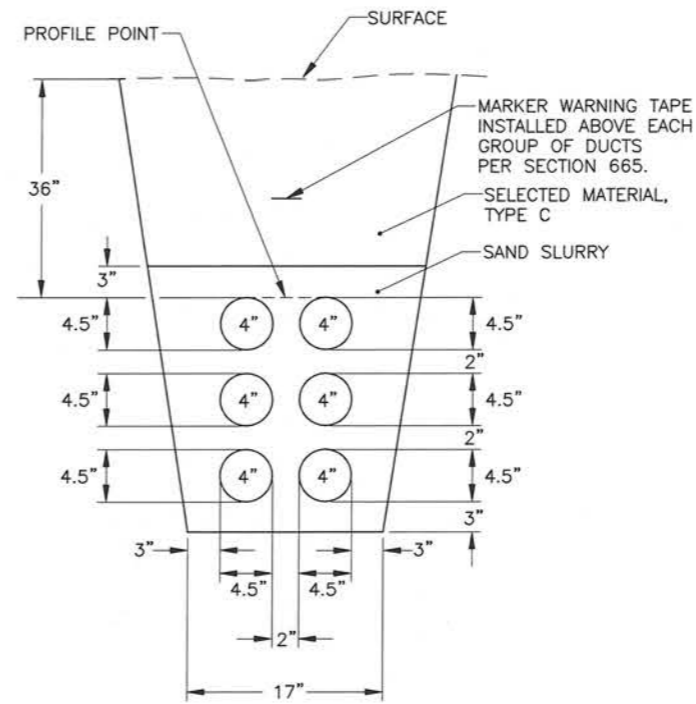
D (3) 4" HDPE CONDUITS



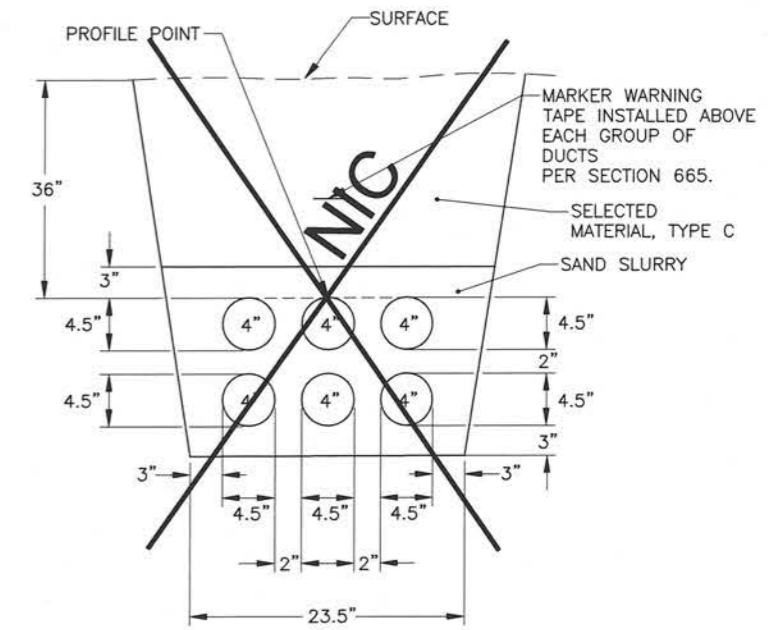
E (4) 4" HDPE CONDUITS



F (4) 4" HDPE CONDUITS
~~"DB1" 10+10.15 TO "DB1" 15+00.60~~ **NIC**



G (6) 4" HDPE CONDUITS
~~"DB3" 10+00.00 TO "DB3" 18+00.00~~



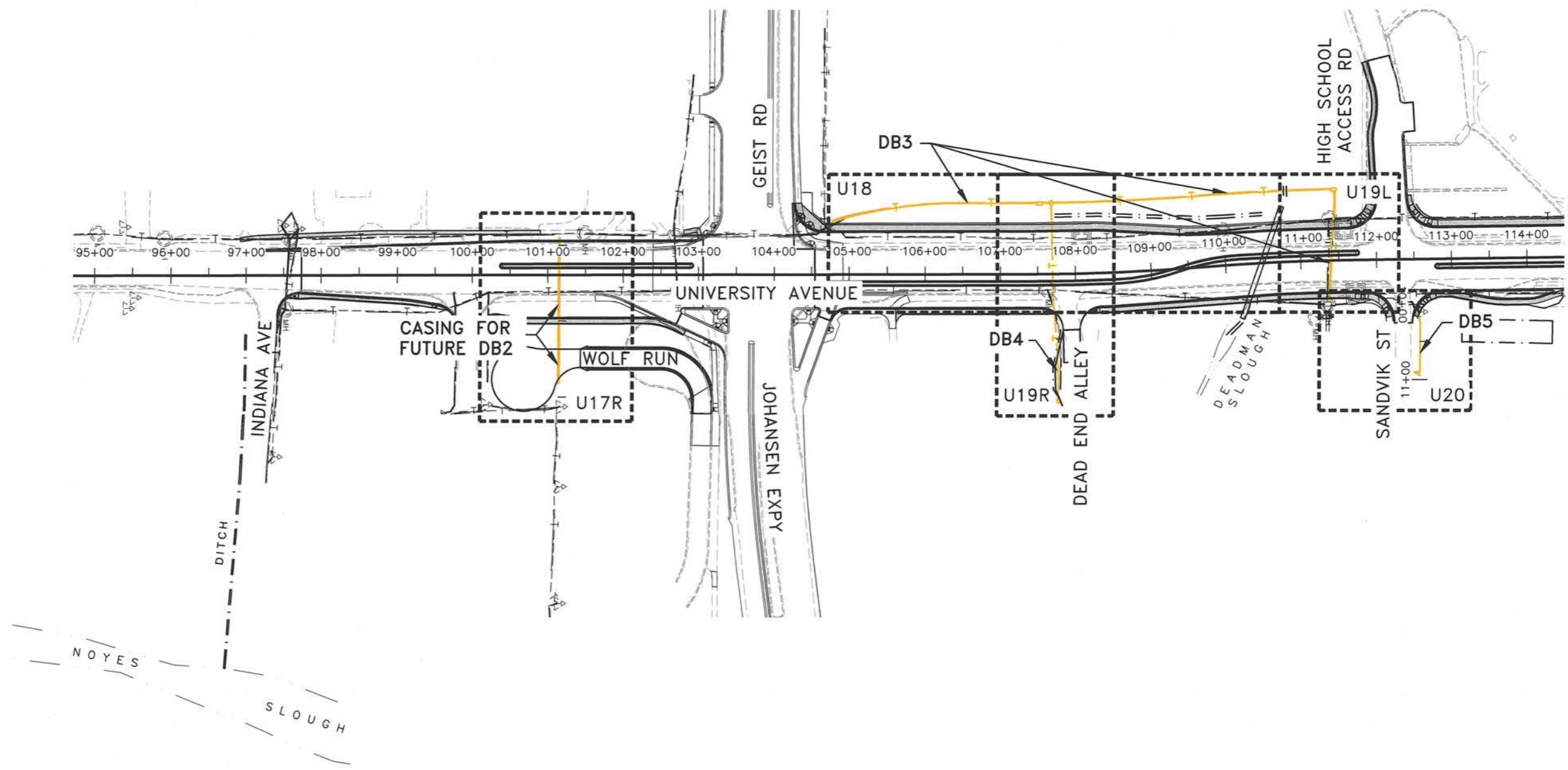
H (6) 4" HDPE CONDUITS
~~"DB1" 15+00.00 TO "DB1" 17+30.62~~ **NIC**

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\700\const\1147.01\FB-Seg_1B-Duct Bank Layout and Trench Sections.rvt, Jun/08/18 12:51pm

DUCT BANK TRENCH SECTIONS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	U16	U24



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\0012const11147.01\FB-Seg_1B-Duct Bank Sheet Index Fr. Jun/08/18 12:59pm

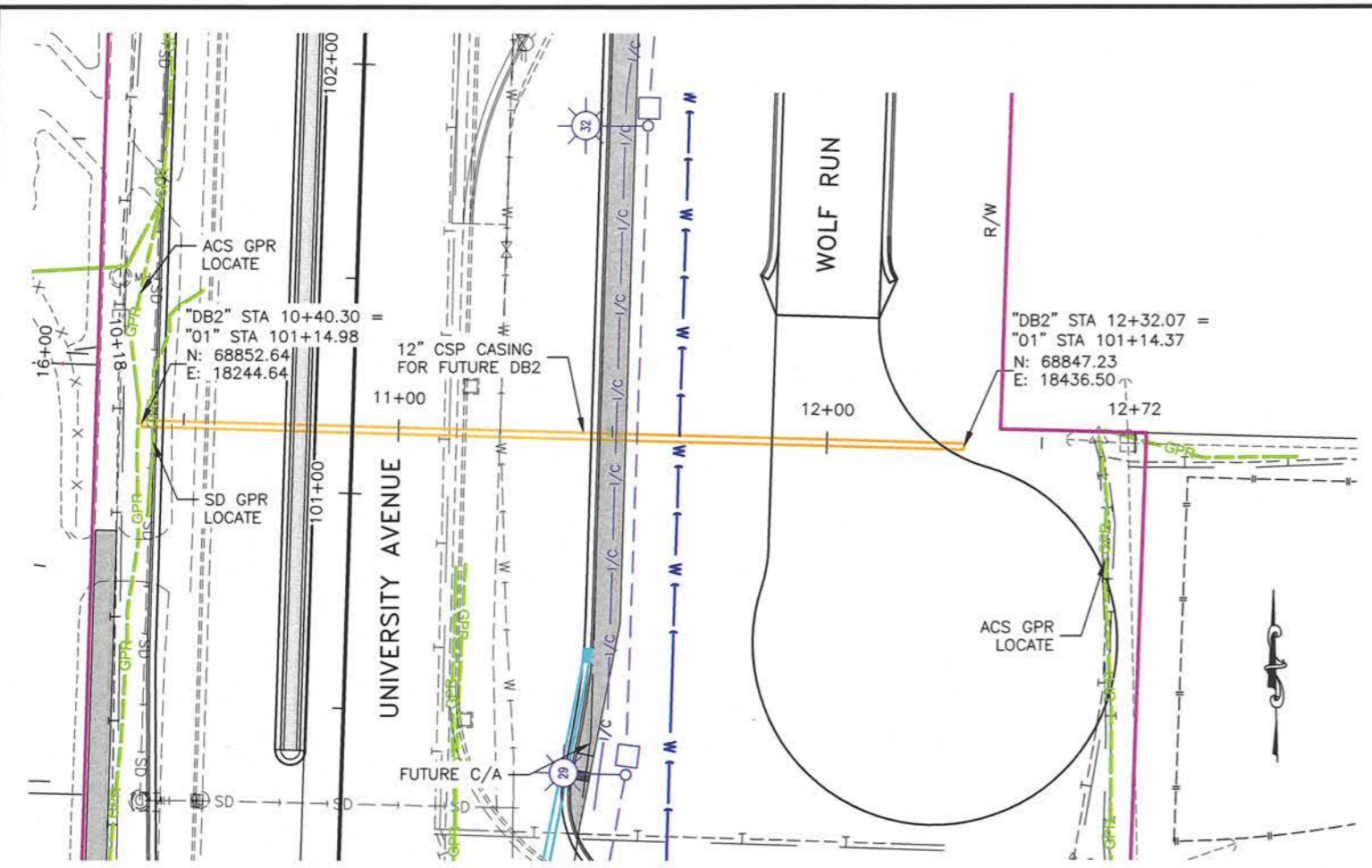
DUCT BANK SHEET INDEX



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	U17	U24

NOTES:

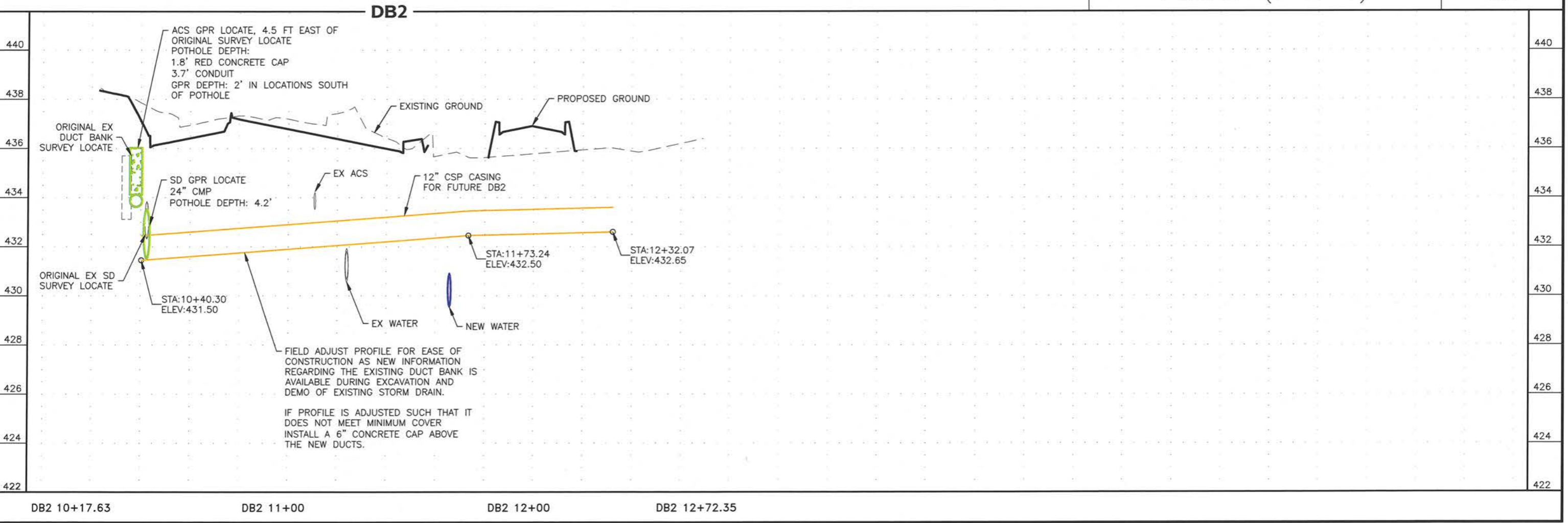
1. PROFILES SHOWN ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. POTHOLE AND LOCATE EXISTING ACS DUCT BANK AT NEW DUCT BANK CROSSINGS. PROVIDE EXISTING DUCT BANK ELEVATIONS TO PROJECT ENGINEER FOR UTILITY CROSSING ELEVATION VERIFICATION.
4. DB2 NOT IN CONTRACT (NIC), INSTALL CASING FOR FUTURE DB2 ROADWAY CROSSINGS.



DUCT BANK PLAN AND PROFILE (1 OF 4)



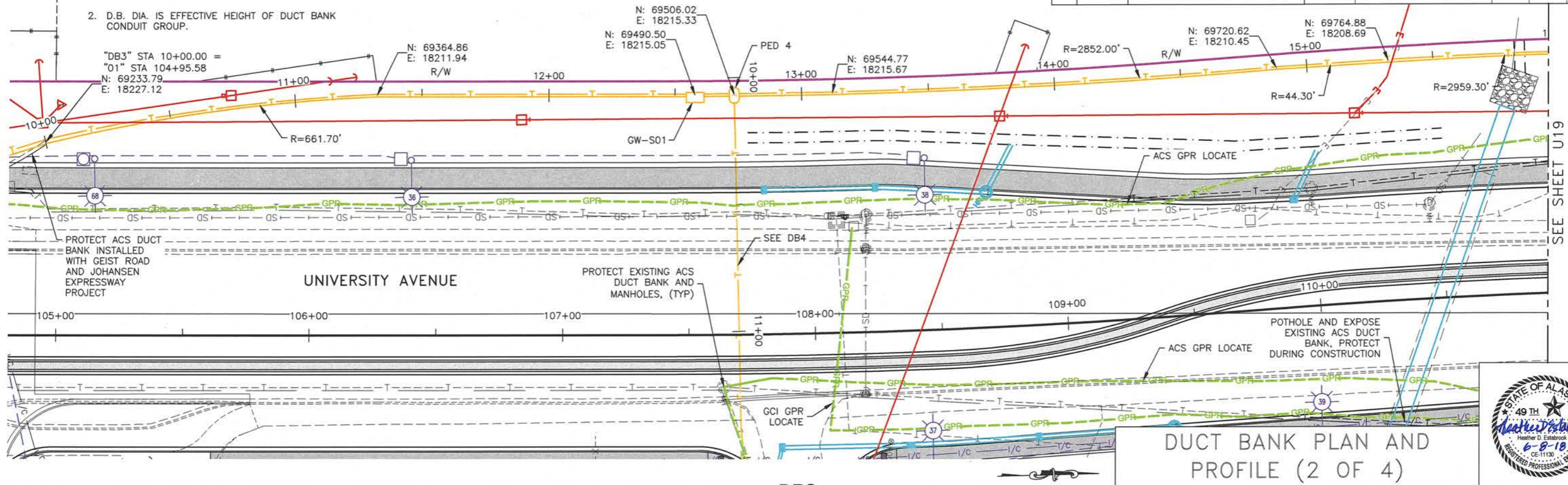
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\B-C\7002\inst1147.01\FB_Seg_1B-Duct Bank Plan and Profile (1 of 4).rvt, Jun/08/18 01:12pm



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	U18	U24

NOTES:

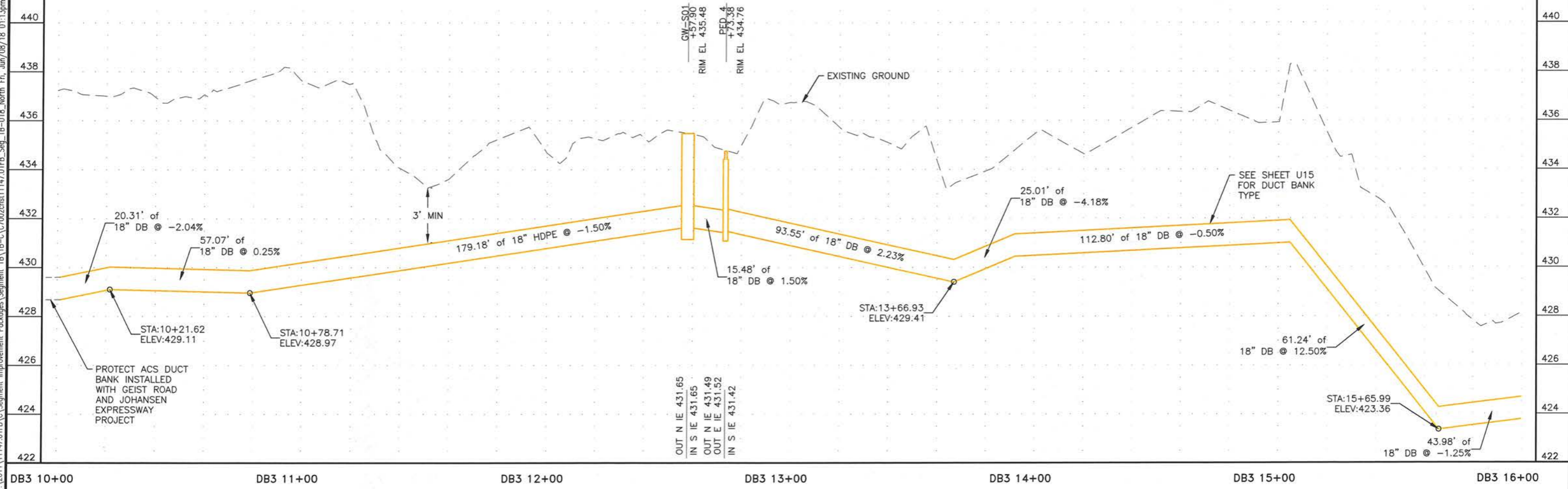
- PROFILES SHOWN ARE BASED ON PIPE CENTERLINE.
- D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.



DUCT BANK PLAN AND PROFILE (2 OF 4)

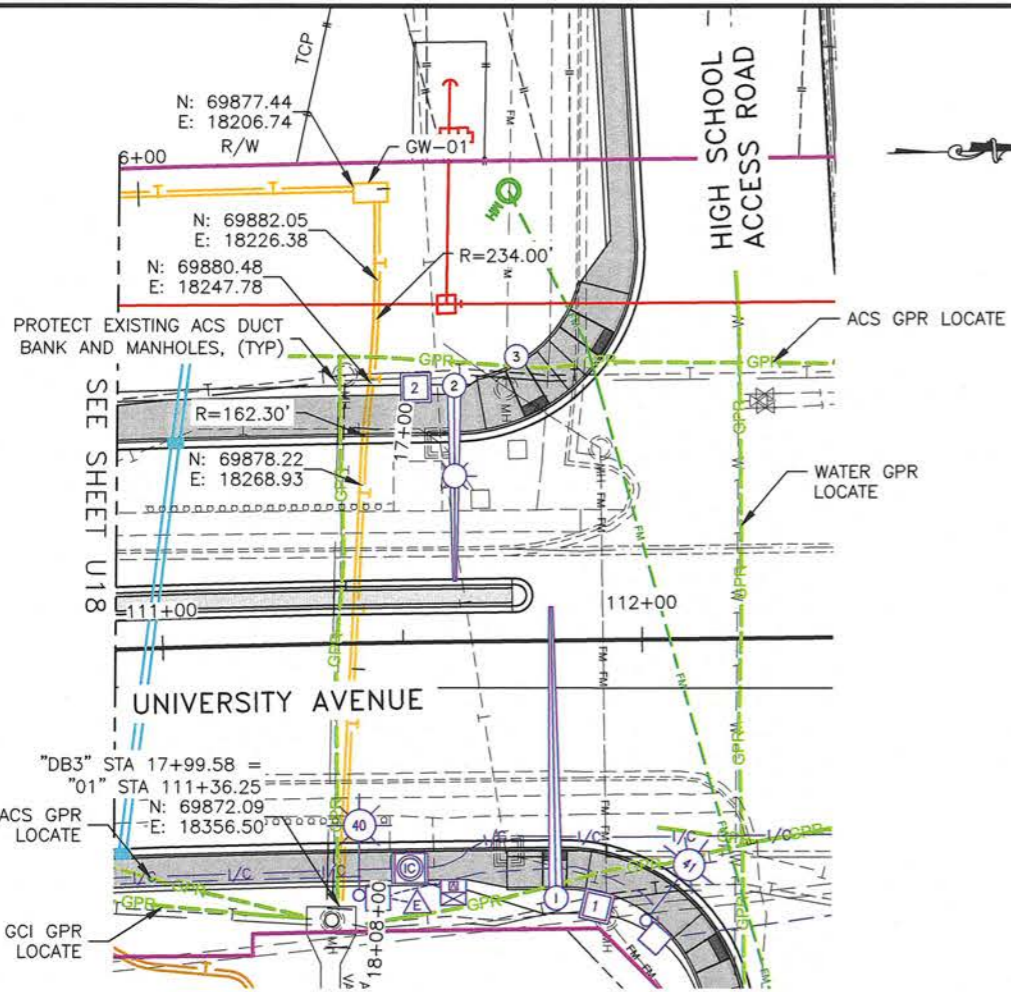


DB3

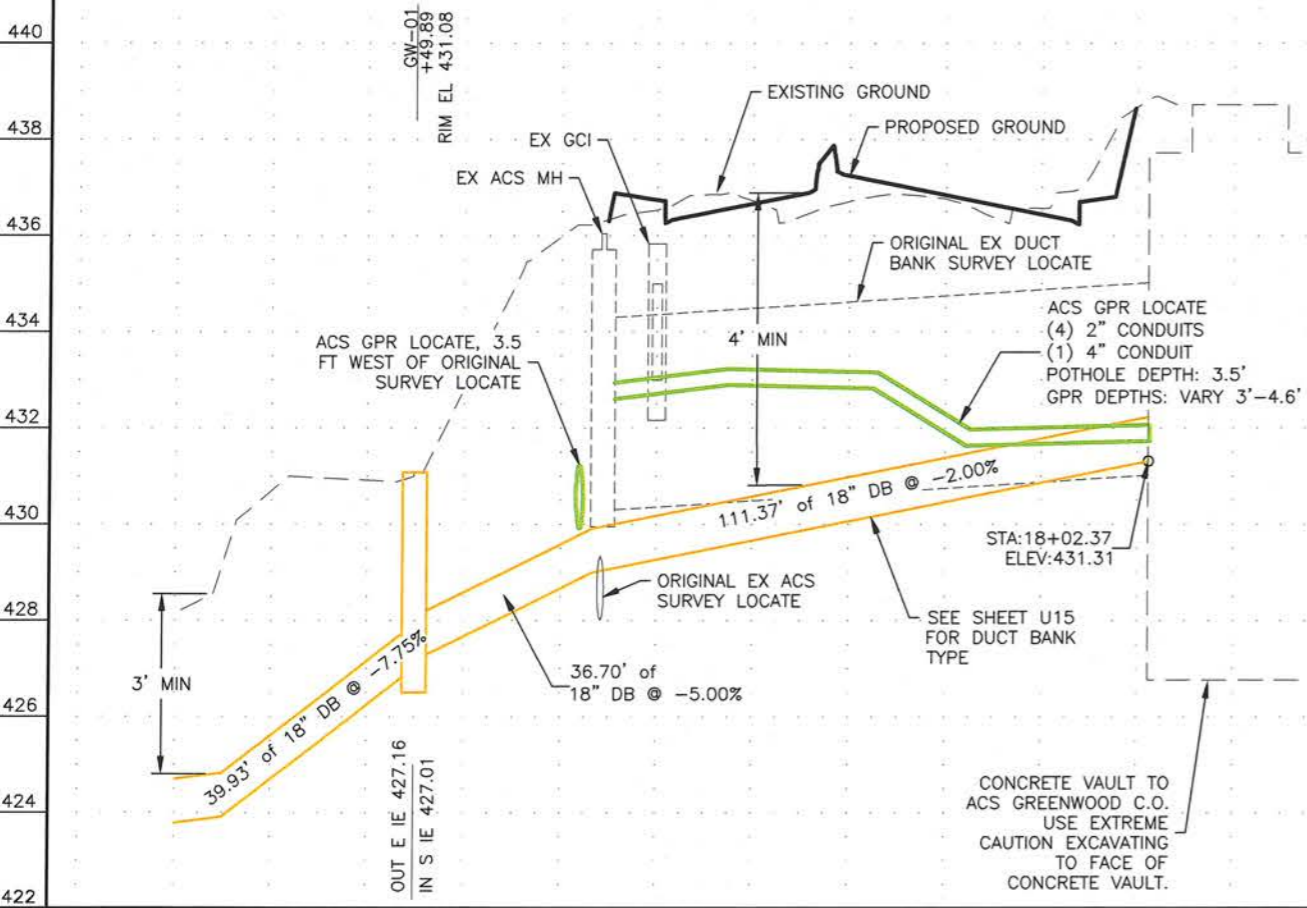


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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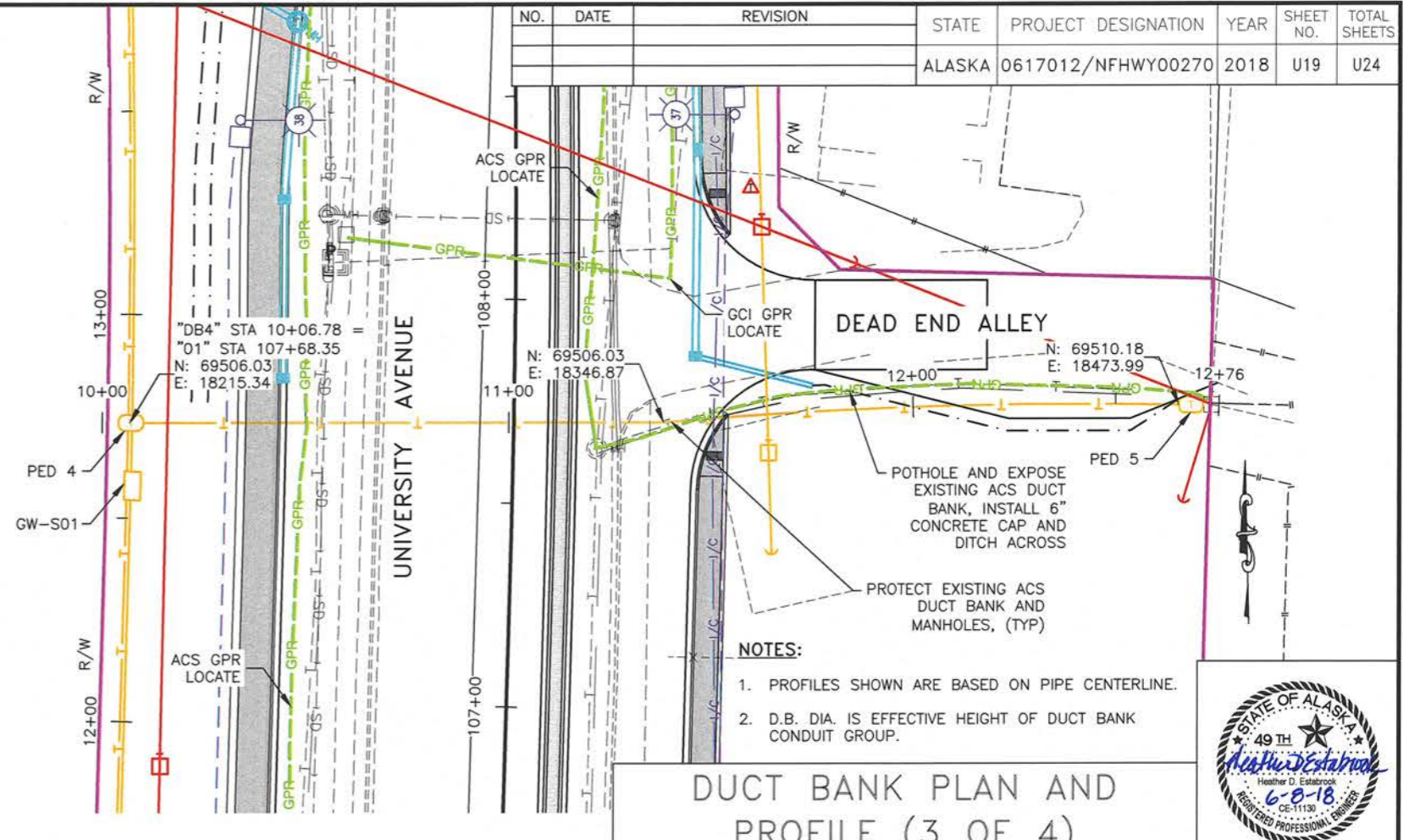
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment Improvement Packages\Segment 1B\1B-C\7002\11147.01\FB_Seg_1B-U19_N\ing Fri, Jun 08/18 03:29pm



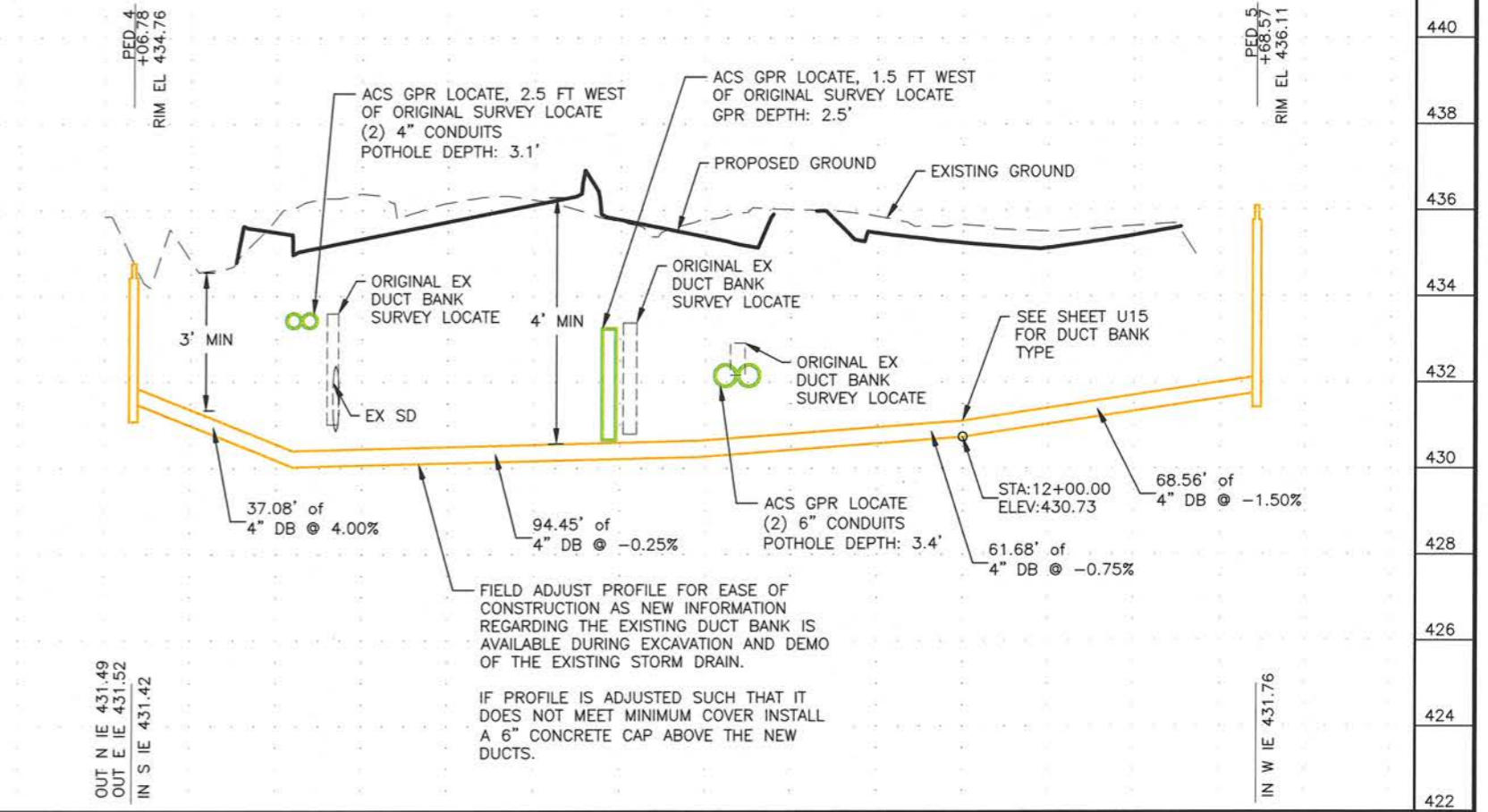
DB3



DB3 16+00 DB3 17+00 DB3 18+00 18+20



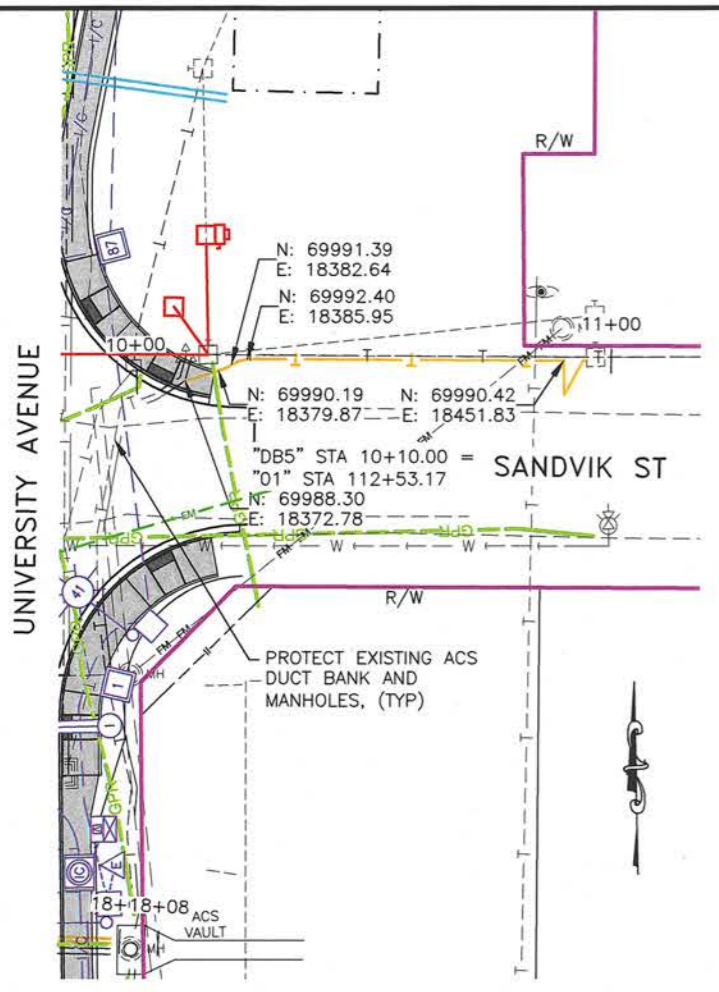
DB4



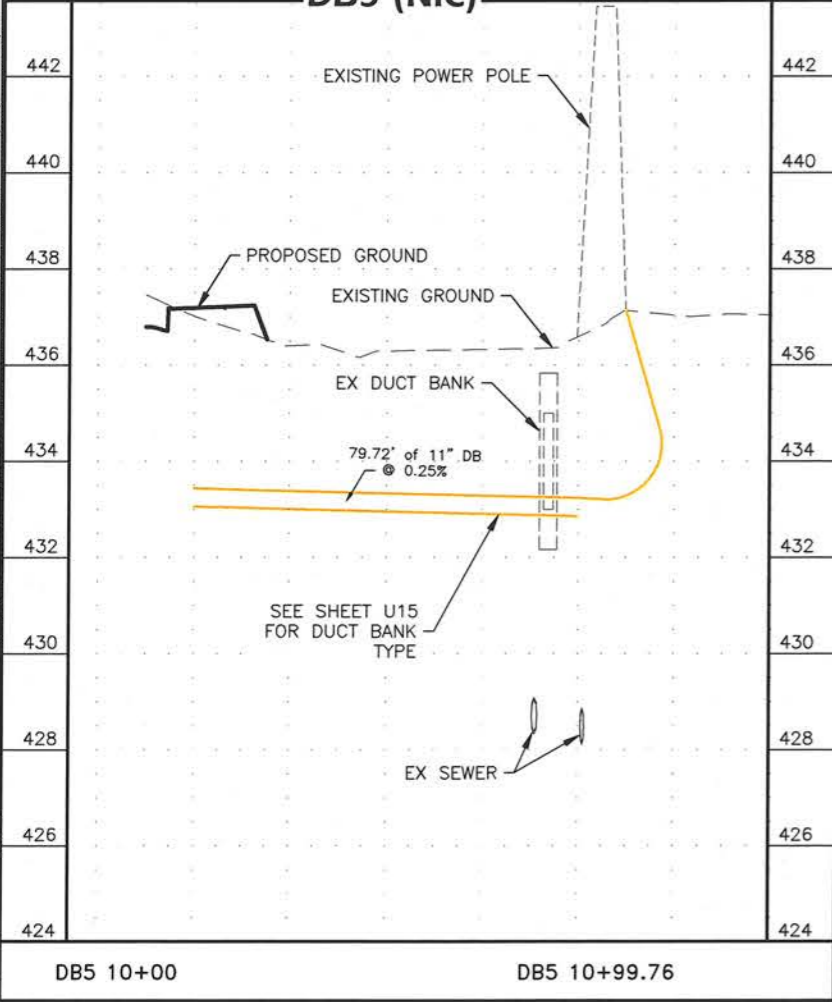
DB4 10+00 DB4 11+00 DB4 12+00 DB4 12+75.56



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	U20	U24



DB5 (NIC)



NOTES:

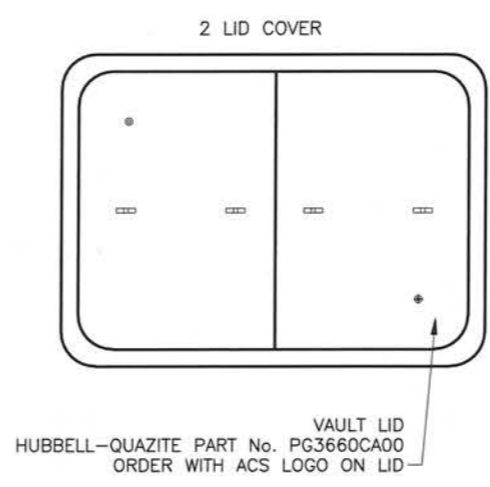
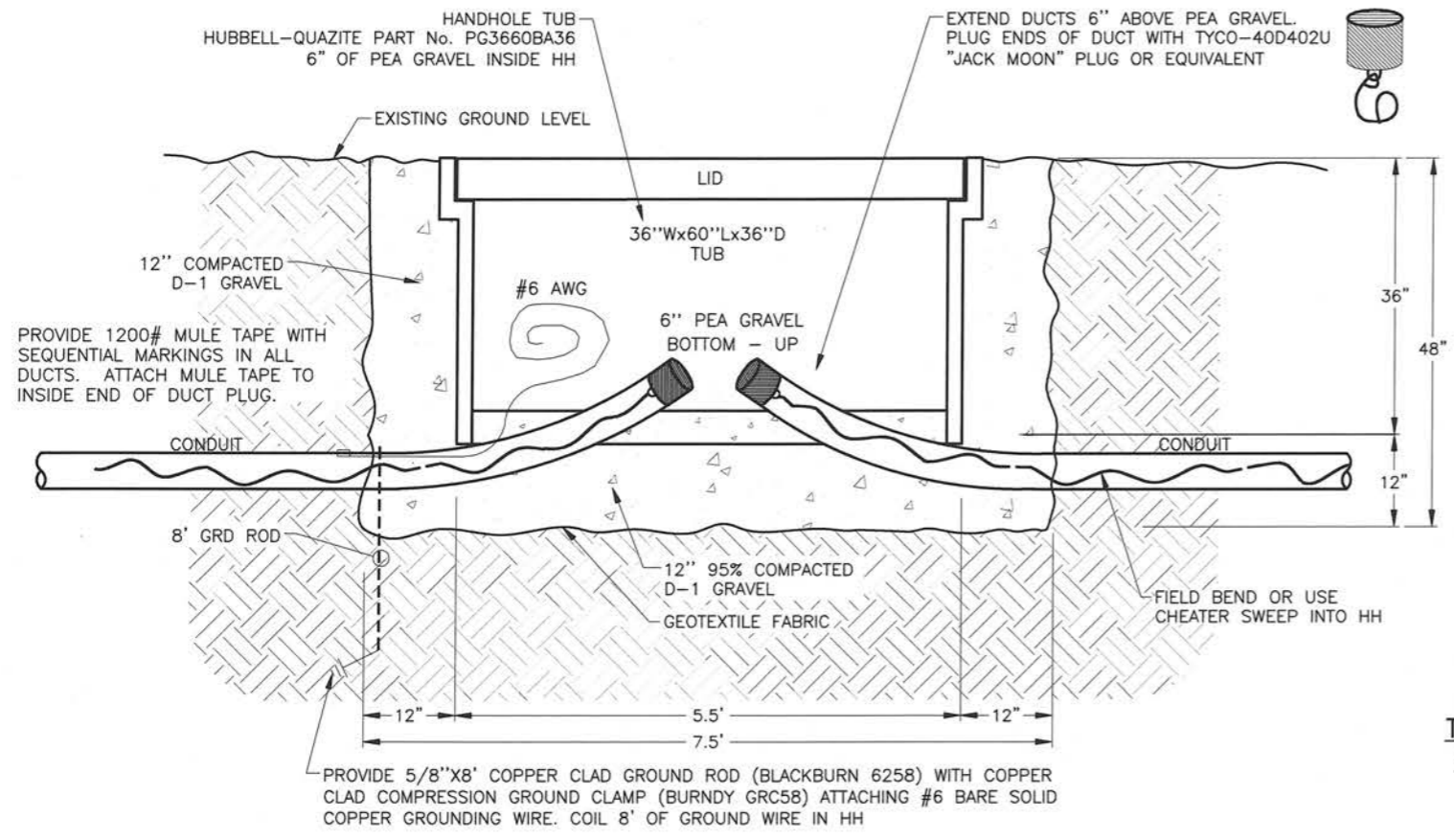
1. PROFILES SHOWN ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. DB5 NOT IN CONTRACT (NIC).

DUCT BANK PLAN AND PROFILE (4 OF 4)



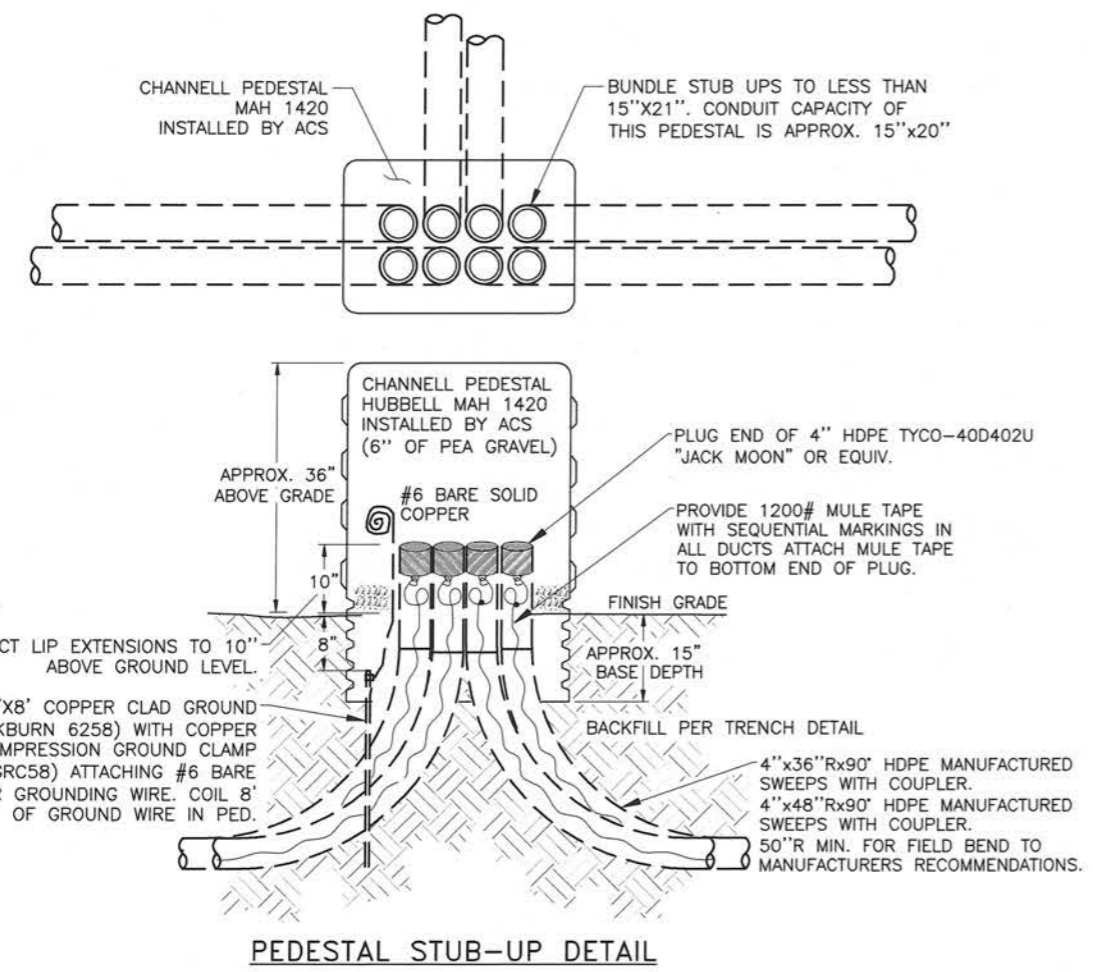
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.D\FB\C\Segment Improvement Packages\Segment 1B\B-C\7002\inst1147.D\FB_Seg_1B-U20_Sandvik Fr. Jun/08/18 03:30pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	U21	U24



NOTE:
1. DROP EMS IN HANDHOLE.

TYPICAL 36X60X36 PG QUAZITE HANDHOLE PLACEMENT DETAIL



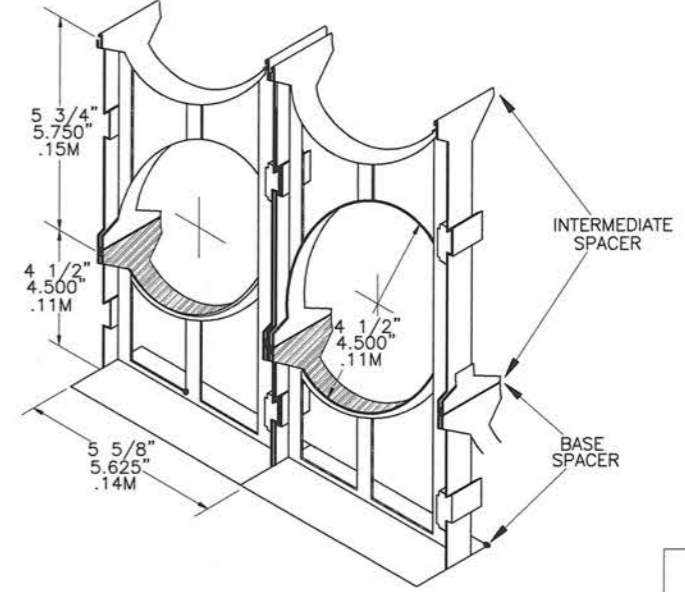
PEDESTAL STUB-UP DETAIL

CARLON PLASTIC SPACER DETAIL NOTES

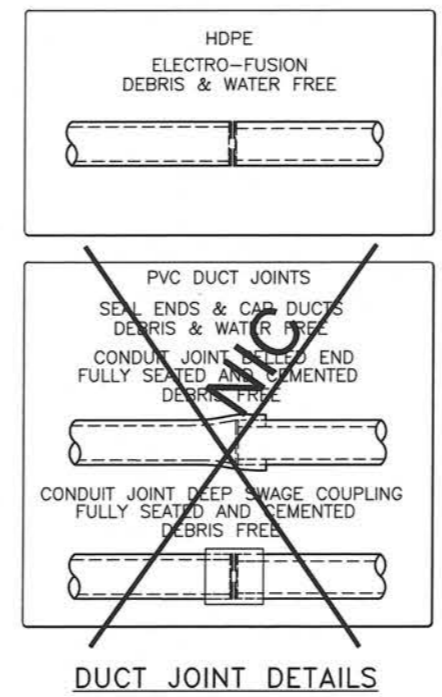
1. INSTALL CARLON PLASTIC DUCT SPACERS AT 4 FOOT INTERVALS MINIMUM
2. INSTALL CONTRACTOR PROVIDED POLY BANDING AT EVERY THIRD SPACER MINIMUM
3. STAGGER JOINTS IN HDPE SO THAT NO TWO JOINTS ARE CLOSER THAN 2 FEET

CARLON PLASTIC DUCT SPACERS:

CONDUIT SPACER BASE 4" CARLON #S288NLN
CONDUIT SPACER INTERMEDIATE 4" CARLON #S289NLN



CONDUIT SPACING DETAIL



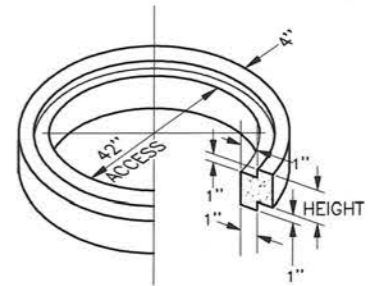
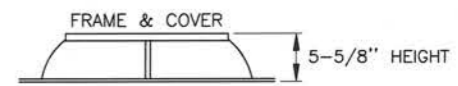
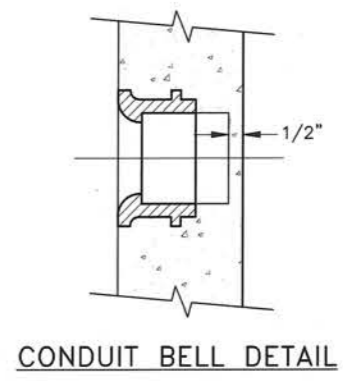
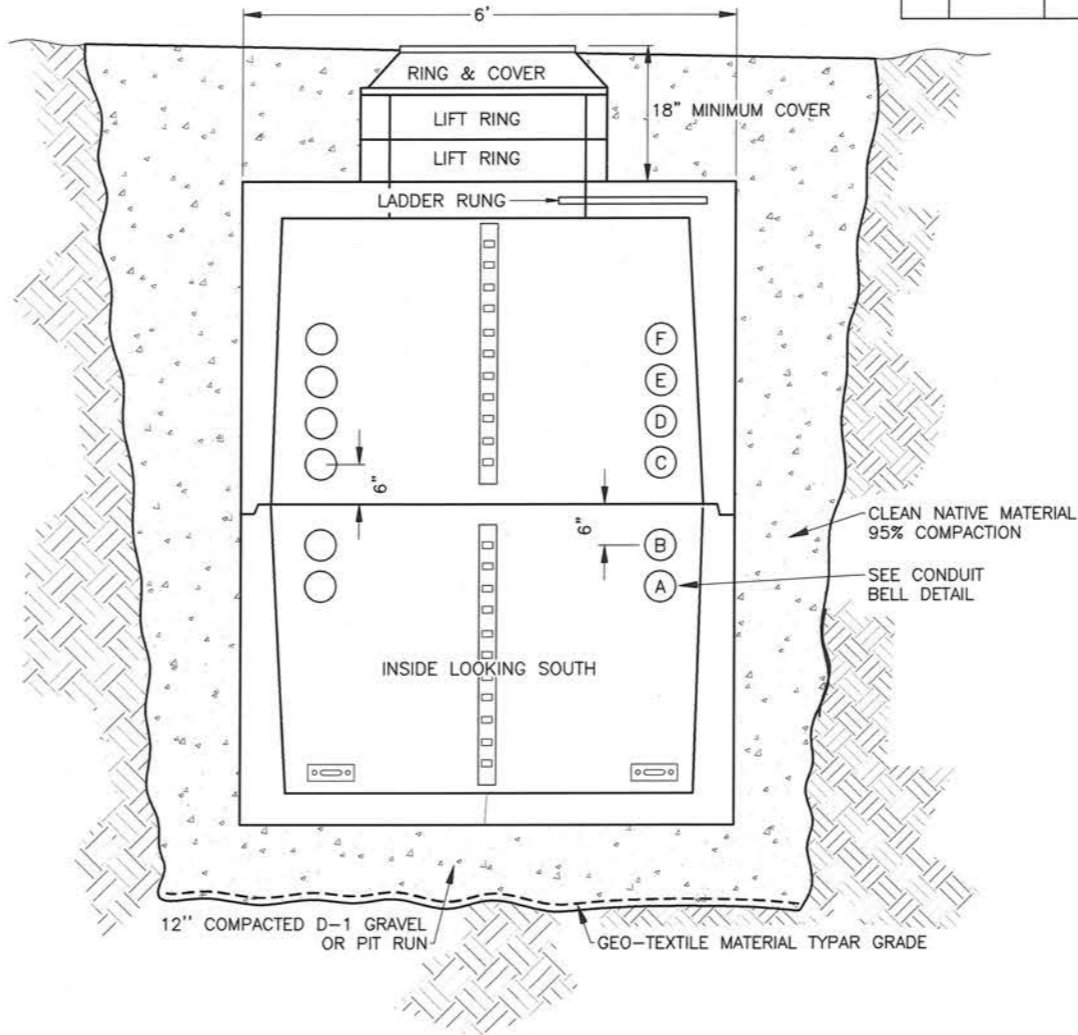
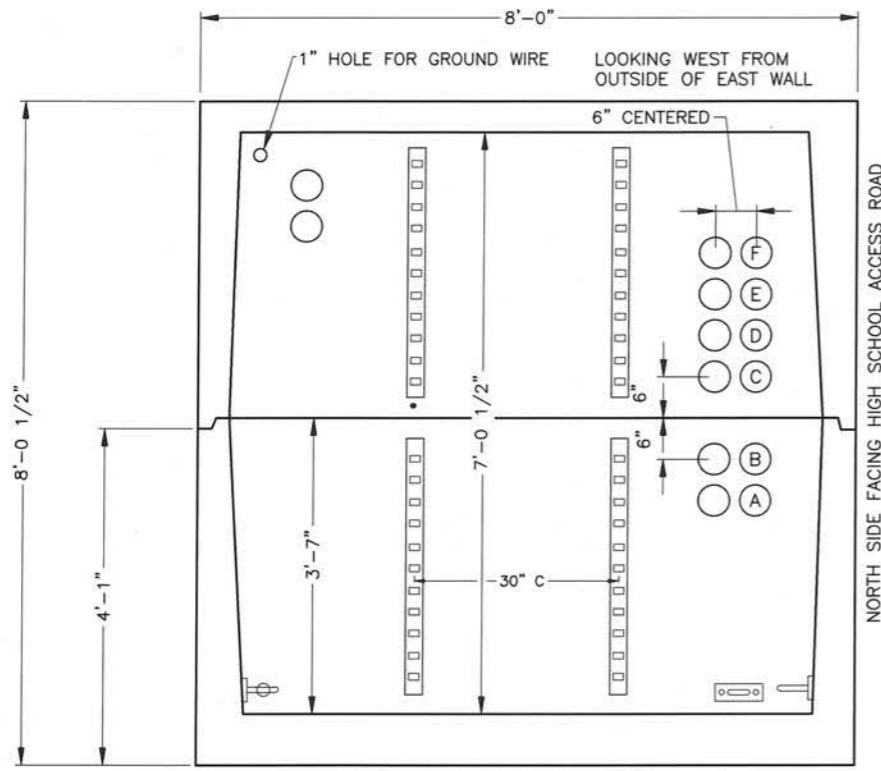
DUCT JOINT DETAILS

DUCT BANK DETAILS (1 OF 3)



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200 P:\2011\114701FB\C\Segment Improvement Packages\Segment 1B\B-C\7003const114701FB_Seg_1B-U21 - Duct Bank Details (1 of 3).rvt, Jun/08/18 01:16pm

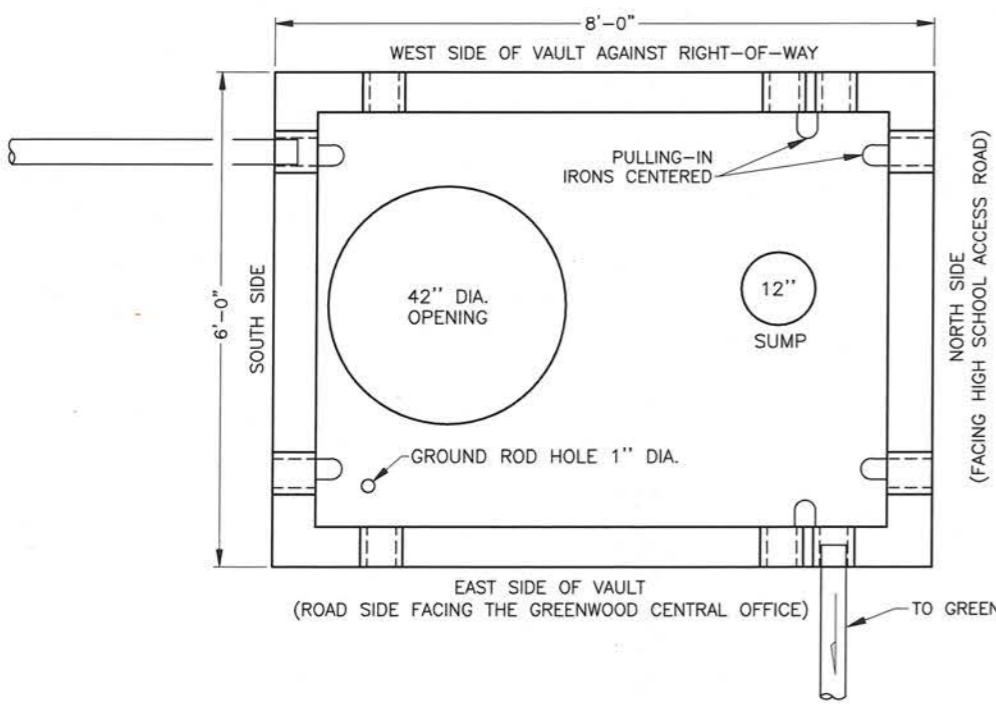
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	U22	U24



- HEIGHT**
- RING NO.1 4"
 - RING NO.2 6"
 - RING NO.3 12"

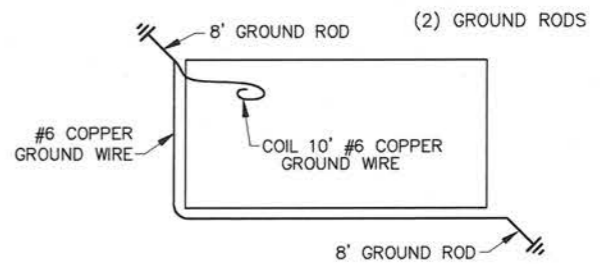
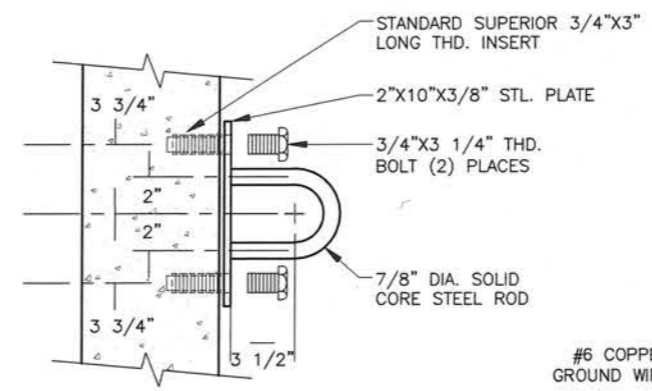
VAULT RISER NOTES:

1. STACKING OF 12" RISERS MAY CHANGE PENDING ACTUAL DEPTH OF DUCTING LIFT RINGS AS REQUIRED



VAULT NOTES:

1. FTW 6'x8'x8' O.D. COMM VAULT FAIRBANKS PRECAST & REBAR SPECIFICATIONS DICTATING
2. APPROXIMATE WEIGHT: TOP SECTION: 10,000 LBS BOTTOM SECTION: 10,000 LBS
3. REINFORCEMENT: #5 12" O.C.E.W. WITH ADDITIONAL #5 AROUND 40" DIAMETER OPENING.
4. RACKING SUPPORT TO ACS COMMON REQUIREMENTS.
5. DROP EMS IN VAULT.



6'x8'x8' VAULT DETAIL
NTS

PULLING IRON DETAIL
GALVANIZED ASSY.

TYPICAL GROUND PLACEMENTS

DUCT BANK DETAILS
(2 OF 3)

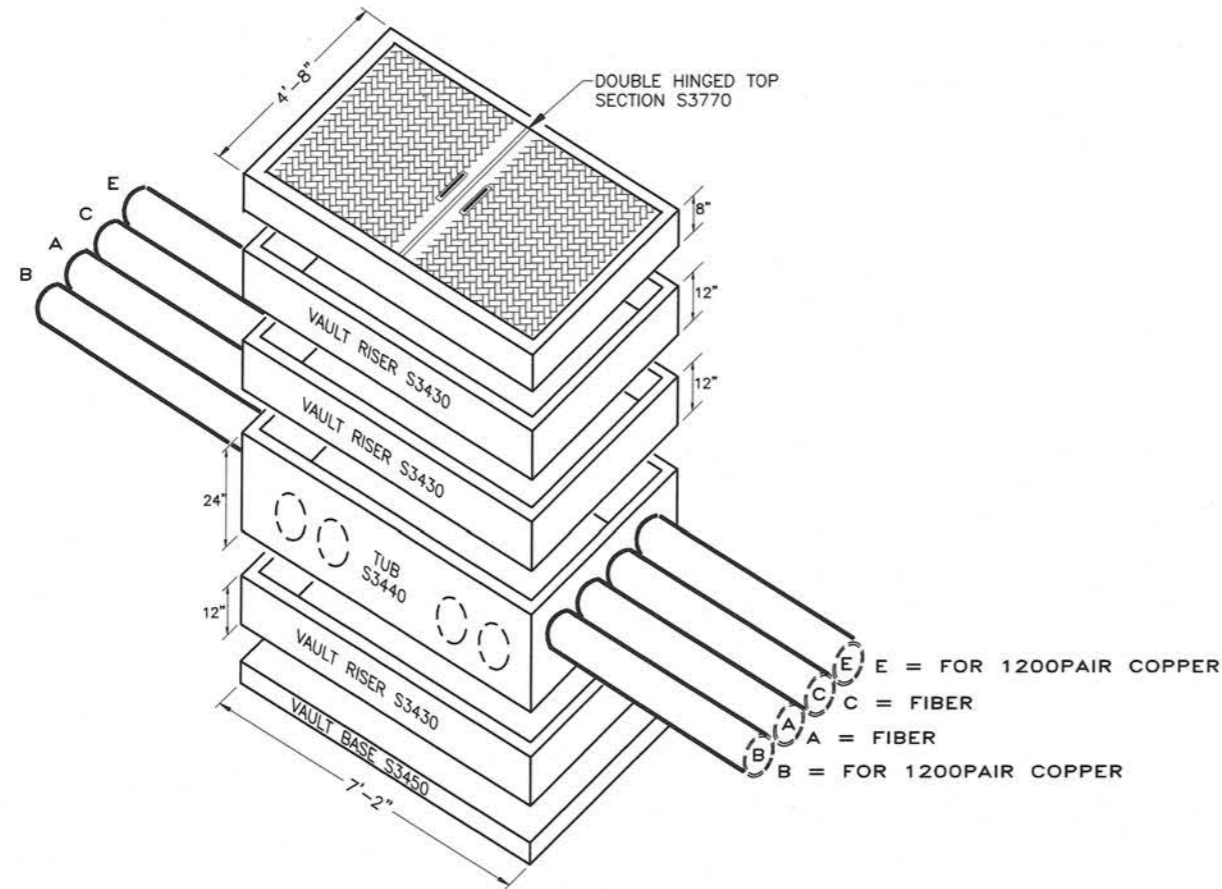


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC605, 2700 CAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\1147.01FB\C_Segment Improvement Packages_Segment 1B\1B-C\7003cons\1147.01FB_Seg. 1B-U22 - Duct Bank Details (2 of 3).Wed, Jun/06/18 02:27pm

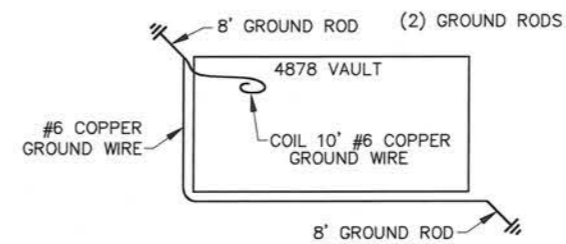
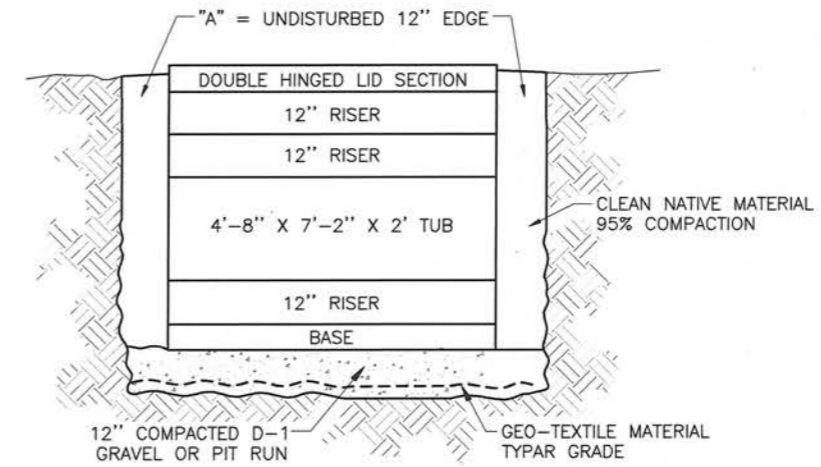
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	U23	U24

VAULT NOTES:

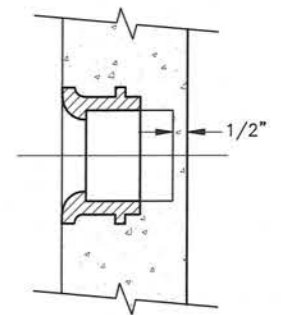
1. STACKING OF 12" RISERS MAY CHANGE PENDING ACTUAL DEPTH OF DUCTING LIFT RINGS AS REQUIRED.
2. COPPER CABLE DUCTS NEED TO ALIGN AGAINST THE VAULT WALL FOR SPLICING.
3. DROP EMS IN VAULT.
4. USE RAM NECK SEALANT MATERIAL FOR ALL JOINTS. SEALER STRIP BUTYLITE 1.25"X14.5" ACS MTRL CODE T1990.



4878 VAULT CONCRETE DOUBLE HINGED LID DETAIL
NTS



TYPICAL 4878 VAULT
NTS

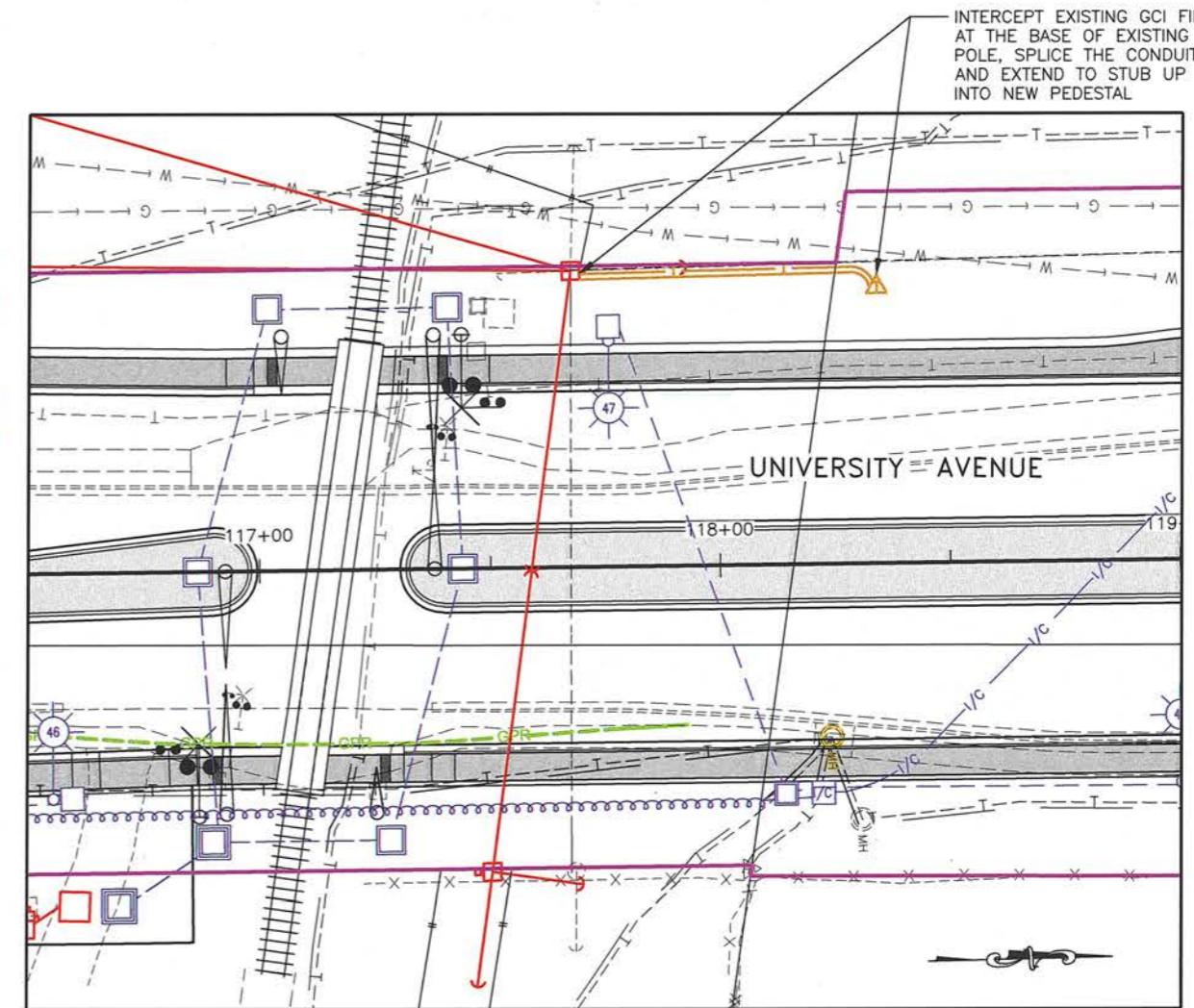
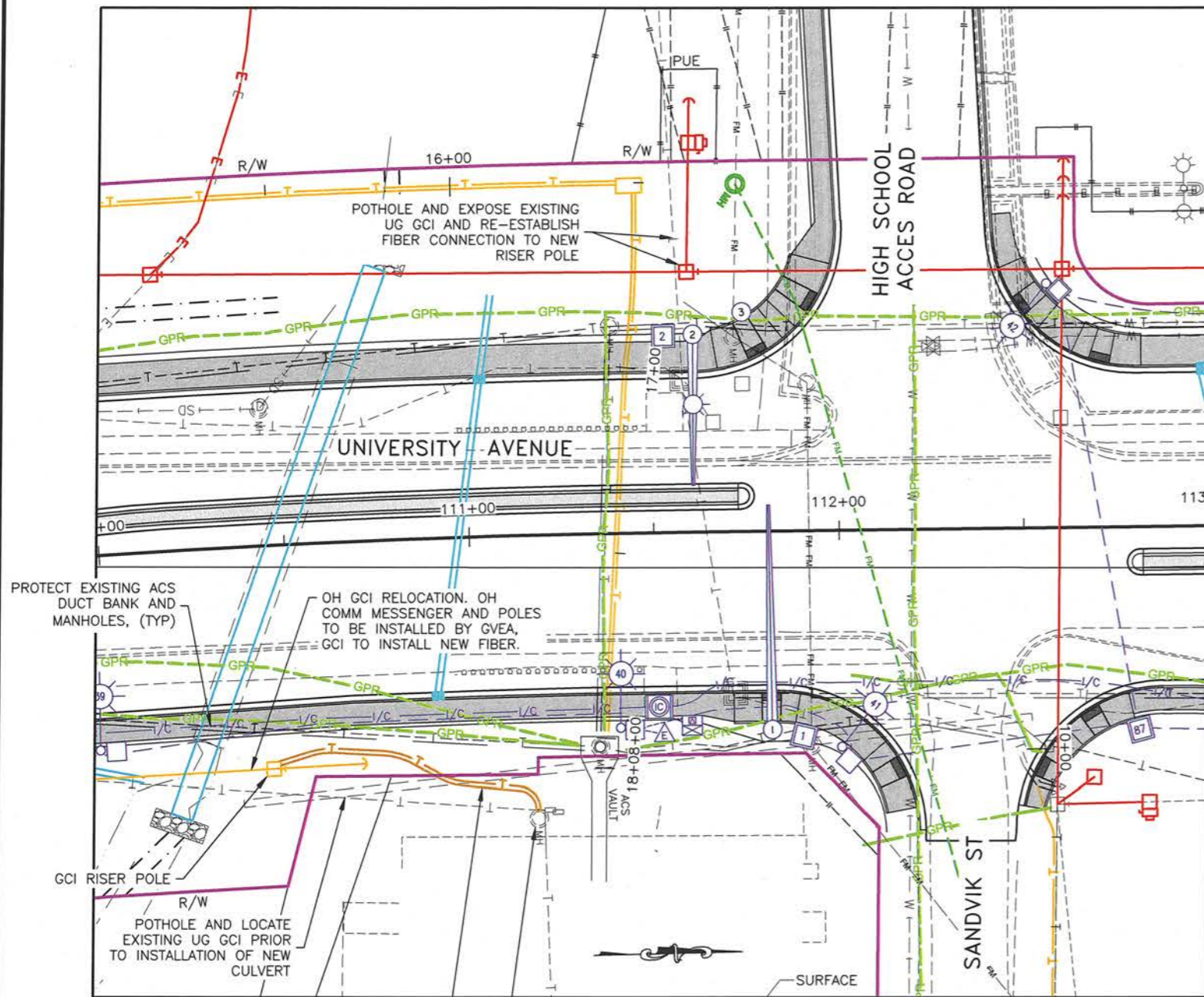


CONDUIT BELL DETAIL

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 P:\2011\11147.01\FB\C\Segment_Improvement_Packages\Segment_1B\B-C\7003cons11147.01\FB_Seg_1B-C\7003cons11147.01\FB_Details (3 of 3).rvt, Jun/08/18 01:16pm

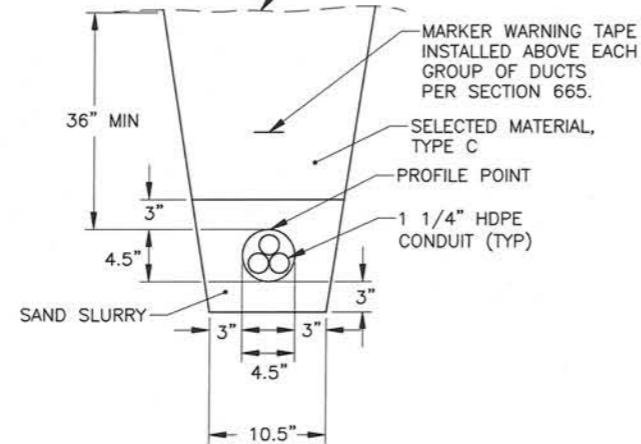


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	U24	U24

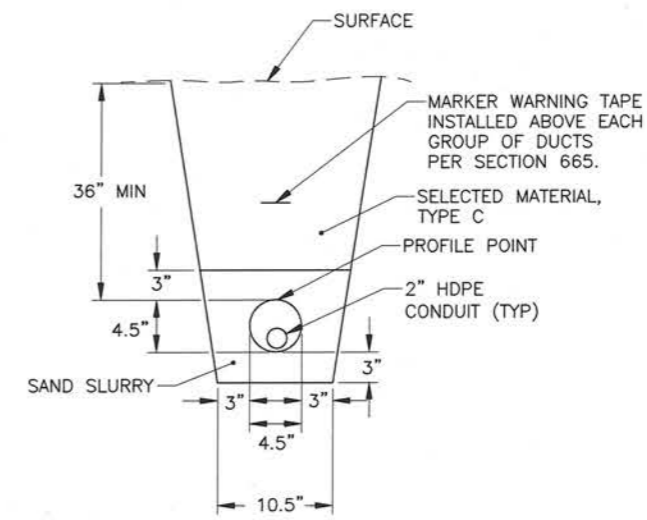


GCI TRENCH BACK TO EXISTING MH FROM NEW RISER POLE, APPROX. 75' OF UG CONDUIT

CORE DRILL NEW PENETRATION ON SIDE OF MH IF EXISTING KNOCK OUTS DO NOT EXIST



- (1) 4" HDPE CONDUIT.
- (3) 1 1/4" HDPE CONDUITS



- (1) 4" HDPE CONDUIT.
- (1) 2" HDPE CONDUIT

UNDERGROUND GCI RELOCATION

GCI RELOCATION LAYOUT

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	V1	V10

ABBREVIATIONS	
A	AMPERES
AC	ALTERNATING CURRENT
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
AK	ALASKA
AMP	AMPERES
ANC	ANCHOR
ARRC	ALASKA RAILROAD CORPORATION
ASMBLY	ASSEMBLY
AT	AMP TRIP
AWG	AMERICAN WIRE GAUGE
BCU	BARE COPPER WIRE
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
DEG	DEGREE
DIA	DIAMETER
DISC	DISCONNECT
DOT	DEPARTMENT OF TRANSPORTATION
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METALLIC TUBING
FLA	FULL LOAD AMPS
FT	FEET
FU	FUSE
GCI	GENERAL COMMUNICATION INC
GEC	GROUNDING ELECTRODE CONDUCTOR
GND	GROUND OR GROUNDED
GVEA	GOLDEN VALLEY ELECTRIC ASSOCIATION
HBH	HEADBOLT HEATER
ID	IDENTIFICATION
KVA	KILOVOLT AMPERES
LBS	POUNDS
LT	LEFT
LV	LOW VOLTAGE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MIN	MINIMUM
N	NEUTRAL, NORTH
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE; NFPA 70
NEC	NATIONAL ELECTRICAL SAFETY CODE
NTS	NOT TO SCALE
OH	OVERHEAD
P	POLE
PE	POLYETHYLENE
PH	PHASE
PRI	PRIMARY
QTY	QUANTITY
RMC	RIGID METAL CONDUIT (HOT-DIPPED GALVANIZED)
RMS	ROOT MEAN SQUARED
REQ'D	REQUIRED
RT	RIGHT
SEC	SECONDARY
SPEC	SPECIFICATION
SVD	SERVICE DISCONNECT
TEL	TELEPHONE
TYP	TYPICAL
UAF	UNIVERSITY OF ALASKA FAIRBANKS
UG	UNDERGROUND
V	VOLTS
VA	VOLT AMPERES
W	WATT, WEST or WIRE
WH	WATTHOUR
XFMR	TRANSFORMER
#	NUMBER

NOT ALL ABBREVIATIONS ARE USED

SYMBOLS	
	POWER POLE LINE
	JOINT USE POWER & TELEPHONE
	STUB POLE (POWER OR TELEPHONE)
	TELEPHONE PEDESTAL
	SIGNAL CONTROLLER
	LOAD CENTER
	ELECTRICAL SERVICE
	LUMINAIRE

WORK DESIGNATIONS	
	GVEA
	PROJECT CONTRACTOR
	EXISTING EQUIPMENT

LINETYPES		
DEMO	PROPOSED	
		ELECTRICAL LINE (OVERHEAD)
		ELECTRICAL LINE (UNDERGROUND)

GENERAL ELECTRICAL NOTES:

1. COMPLY WITH NFPA 70, NATIONAL ELECTRICAL CODE 2014 EDITION; NECA 1, STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION; AND NATIONAL ELECTRICAL SAFETY CODE 2012 EDITION.
2. ELECTRICAL COMPONENTS, DEVICES, ASSEMBLIES, AND ACCESSORIES ARE REQUIRED TO BE LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
3. DRAWINGS SHOW THE GENERAL LOCATIONS OF THE ELECTRICAL FEATURES ONLY, UNLESS OTHERWISE INDICATED. MAKE MINOR RELOCATIONS AS REQUIRED FOR PROJECT CONDITIONS WHEN NECESSARY TO PRESENT SYMMETRICAL APPEARANCE OR TO AVOID INTERFERENCE WITH OTHER INSTALLATIONS.
4. ALL DETAILS/ASSEMBLIES INDICATED IN STAKING SHEETS REFERENCES GVEA STANDARD DETAILS, RUS BULLETIN 1728F-804, 2005 "SPECIFICATIONS AND DRAWINGS FOR 12.47KV LINE CONSTRUCTION" AND RUS BULLETIN 1728F-806, 2000 "SPECIFICATIONS AND DRAWINGS FOR UNDERGROUND ELECTRIC DISTRIBUTION". GVEA STANDARD DETAILS TAKE PRECEDENCE OVER RUS DETAILS. MODIFICATIONS TO RUS DETAILS/ASSEMBLIES ARE LOCATED IN THE DETAIL SECTION OF THIS PROJECT'S DESIGN AND ARE DESIGNATED WITH AN "XX" AFTER THE STANDARD RUS DETAILS/ASSEMBLIES DESIGNATION.
5. SEE UNIVERSITY AVE ELECTRIC UTILITY RELOCATION PLANS FOR ADDITIONAL INFORMATION RELATING TO GVEA'S MEDIUM VOLTAGE ELECTRICAL SYSTEM AND WORK ASSOCIATED WITH SECONDARY ELECTRICAL DESIGN.
6. COORDINATE ELECTRICAL SERVICE WORK AND SERVICE OUTAGES WITH OWNERS. TO MINIMIZE ELECTRICAL OUTAGES, SERVICE WORK SHALL BE PERFORMED TO THE FULLEST EXTENT POSSIBLE BEFORE DE-ENERGIZING SERVICE.
7. ALL NEW SECONDARY OVERHEAD SERVICE DROPS ARE TO BE SLACK SPANS.

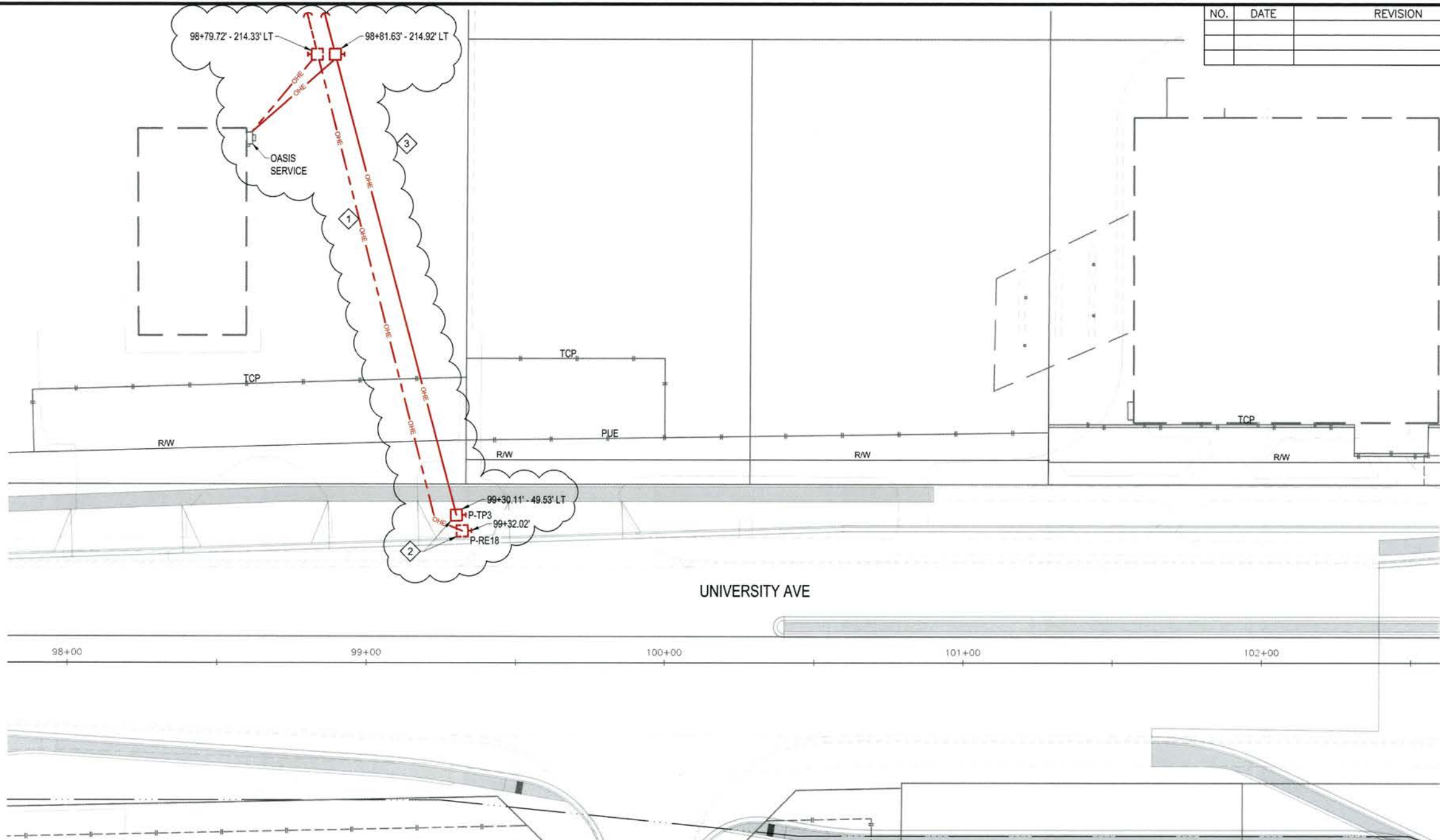
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01\FB\Electrical\Secondary Relocation\E0001\ep11147.01\FB-V1_Thu, Jun/07/18 11:04am

ELECTRICAL LEGEND
AND NOTES



PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
 C:\Users\msmith\AppData\Local\Temp\AcPublish_22360\E0002spp1147.01FB-V2_Thu_Jun/07/18_11:05am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	V2	V10



SHEET NOTES:

1. THE LOWEST OVERHEAD SPAN TO HAVE A MINIMUM VERTICAL CLEARANCE OF 15.5 FT FROM OASIS PARKING LOT/DRIVEWAY, AS REQUIRED BY THE NESC.

SHEET KEYNOTES: ⓧ

1. EXISTING OVERHEAD TELECOM(ACS/GCI) IS LOCATED BELOW THE OVERHEAD SERVICE DROP. TELECOM UTILITY PROVIDERS TO REATTACH EXISTING OVERHEAD TELECOM CABLES TO NEW POLES.
2. WORK ASSOCIATED WITH UTILITY POLE IS TO BE BY OTHERS, UNLESS OTHERWISE NOTED.
3. WORK WITHIN INDICATED CLOUDING IS NOT IN CONTRACT.

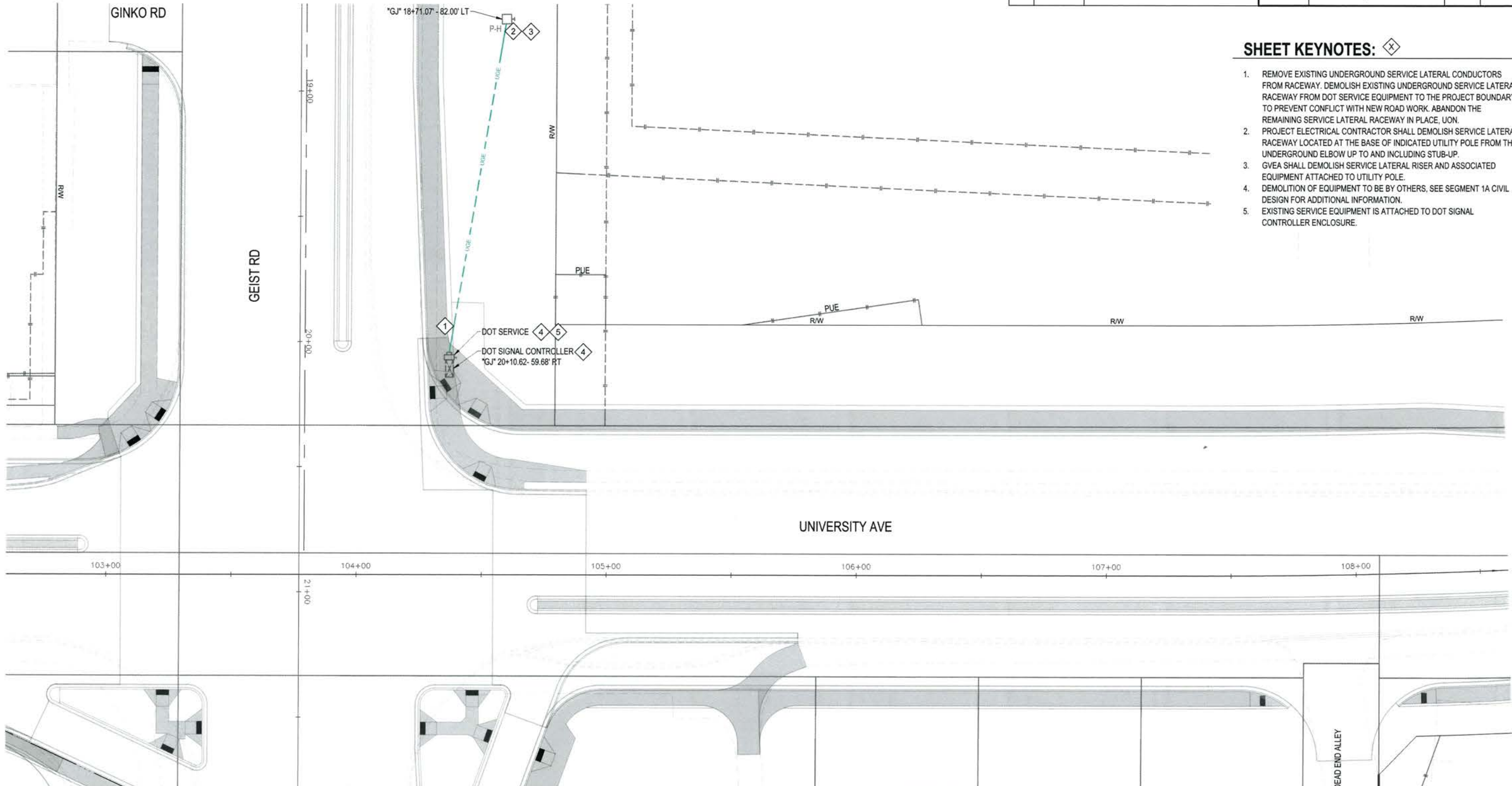
STAKING SHEET

ID #	EXIST RETIRE ADD SALVAGE NEW	POLE						Underground			SECONDARY						GUY & ANCHOR						Misc. Parts				Remarks	
		Back Span (Ft)	From Pole	To Pole	Line Angle		Poles		Qty.	Asmby	FT	Qty.	Conductor			# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Guy Strand		Anchor Unit 'F'	Qty	Description			
					Deg.	Dir.	Height (Ft)	Class					Burial Depth (Ft)	#	AWG						Type	Trade Name			Dia. (in)	Grade		Description
*P-RE18	RETIRE			98+79.72'-214.33' LT							1	J3.1B																
98+79.72'-214.33' LT	RETIRE	173	*P-RE18 99+32.02	OASIS SERVICE			30	5			1	J3.1B	1	4/0	QUADRAPLEX	-	1	1	E1.1XX			F3.10						
OASIS SERVICE	RETIRE	43	98+79.72'-214.33' LT								1	K3.2	1	4/0	QUADRAPLEX	-												EXISTING METER NO.: 200698
*P-TP3	ADD			98+81.63'-214.92' LT							1	J3.1B																
98+81.63'-214.92' LT	ADD	172	*P-TP3 99+30.11'-49.53' LT	OASIS SERVICE			35	4	5.5		1	J3.1B	1	4/0	QUADRAPLEX	-	1	1	E1.1XX		3/8	EHS	F3.10					
OASIS SERVICE	ADD	44	98+81.63'-214.92' LT								1	K3.2	1	4/0	QUADRAPLEX	-												

ELECTRICAL SECONDARY RELOCATION PLANS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	V3	V10



SHEET KEYNOTES: X

1. REMOVE EXISTING UNDERGROUND SERVICE LATERAL CONDUCTORS FROM RACEWAY. DEMOLISH EXISTING UNDERGROUND SERVICE LATERAL RACEWAY FROM DOT SERVICE EQUIPMENT TO THE PROJECT BOUNDARY TO PREVENT CONFLICT WITH NEW ROAD WORK. ABANDON THE REMAINING SERVICE LATERAL RACEWAY IN PLACE, UON.
2. PROJECT ELECTRICAL CONTRACTOR SHALL DEMOLISH SERVICE LATERAL RACEWAY LOCATED AT THE BASE OF INDICATED UTILITY POLE FROM THE UNDERGROUND ELBOW UP TO AND INCLUDING STUB-UP.
3. GVEA SHALL DEMOLISH SERVICE LATERAL RISER AND ASSOCIATED EQUIPMENT ATTACHED TO UTILITY POLE.
4. DEMOLITION OF EQUIPMENT TO BE BY OTHERS, SEE SEGMENT 1A CIVIL DESIGN FOR ADDITIONAL INFORMATION.
5. EXISTING SERVICE EQUIPMENT IS ATTACHED TO DOT SIGNAL CONTROLLER ENCLOSURE.

STAKING SHEET

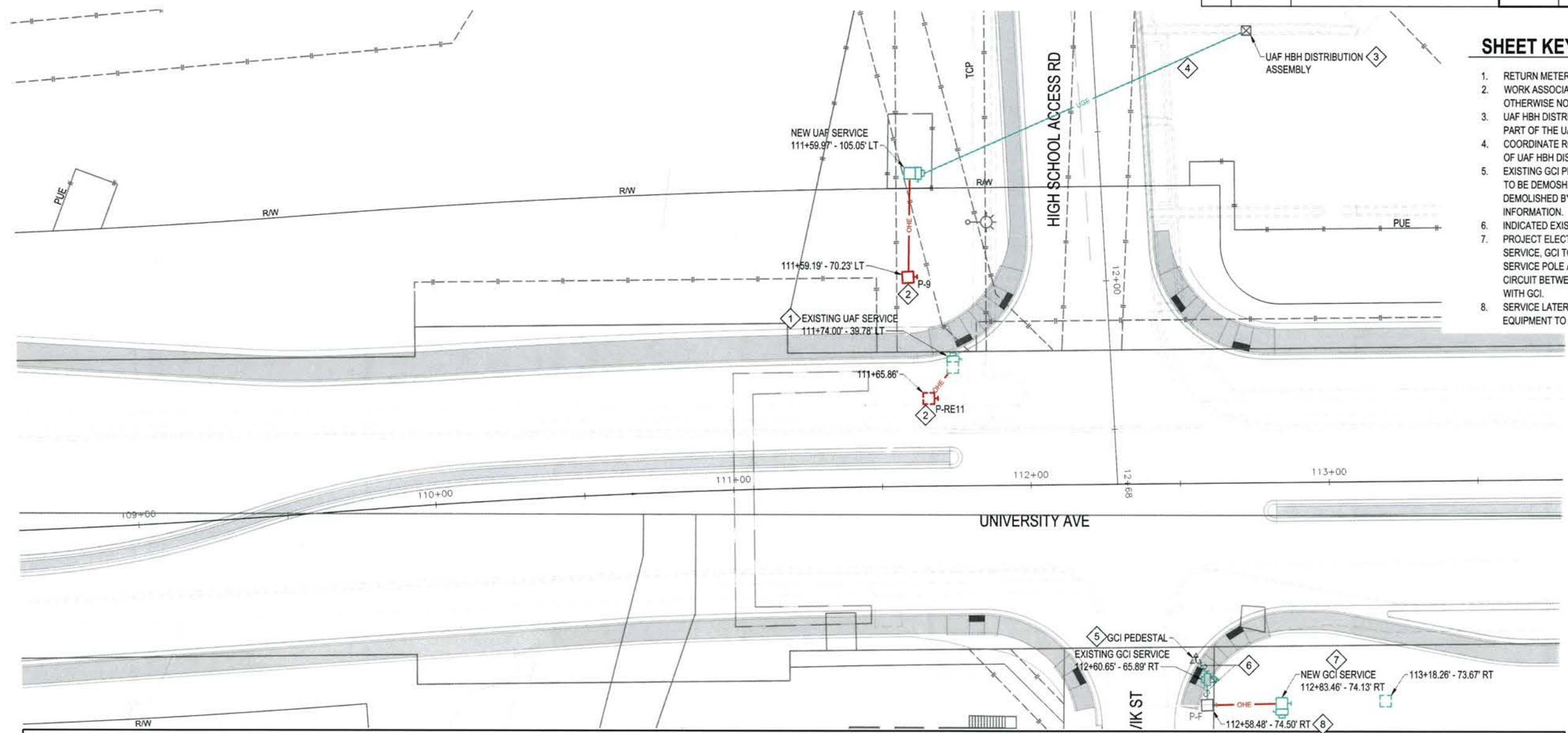
ID #	EXIST RETIRE ADD SALVAGE NEW	POLE				Underground				SECONDARY				GUY & ANCHOR				Misc. Parts		Remarks						
		Back Span (Ft)	From Pole	To Pole	Line Angle Deg. Dir.	Poles		Qty.	Asmby	FT	Conductor				# of guy anc.	No.	Guy Unit	Min. Lead or Span (Ft)	Lead N-pos (Ft)		Anchor		Qty	Description	Qty	Description
						Height (Ft)	Class				Burial Depth (Ft)	#	AWG	Type							Trade Name	Dia. (in)				
"P-H" "GJ" 18+71.07'-82.00' LT	RETIRE																									
DOT SERVICE	RETIRE		"P-H" "GJ" 18+71.07'-82.00' LT				1	UM5XX																		EXISTING DOT SERVICE, METER NO.: 51607

PLANS DEVELOPED BY: PDC, INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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ELECTRICAL SECONDARY RELOCATION PLANS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	V4	V10



- SHEET KEYNOTES:** ⓧ
- RETURN METER TO GVEA WHEN ELECTRICAL SERVICE IS DEMOLISHED.
 - WORK ASSOCIATED WITH UTILITY POLE IS TO BE BY OTHERS, UNLESS OTHERWISE NOTED.
 - UAF HBH DISTRIBUTION ASSEMBLY IS BEING DESIGNED/INSTALLED AS PART OF THE UAF PARKING LOT IMPROVEMENT PROJECT.
 - COORDINATE ROUTING OF CONDUCTORS IN RACEWAY WITH LOCATION OF UAF HBH DISTRIBUTION ASSEMBLY.
 - EXISTING GCI PEDESTAL AND ASSOCIATED TELECOMMUNICATION CABLES TO BE DEMOLISHED BY OWNER. ASSOCIATED PEDSTAL VAULT TO BE DEMOLISHED BY CIVIL CONTRACTOR, SEE CIVIL DESIGN FOR ADDITIONAL INFORMATION.
 - INDICATED EXISTING ELECTRICAL CIRCUITS ARE ROUTED UNDERGROUND.
 - PROJECT ELECTRICAL CONTRACTOR TO PROVIDE NEW POLE MOUNTED SERVICE, GCI TO INSTALL NEW TELECOMMUNICATION POWER SUPPLY ON SERVICE POLE AND PROJECT ELECTRICAL CONTRACTOR TO INSTALL CIRCUIT BETWEEN SERVICE AND POWER SUPPLY. COORDINATE WORK WITH GCI.
 - SERVICE LATERAL RISER STARTING AT STUB-UP AND ASSOCIATED EQUIPMENT TO BE DEMOLISHED BY GVEA.

STAKING SHEET

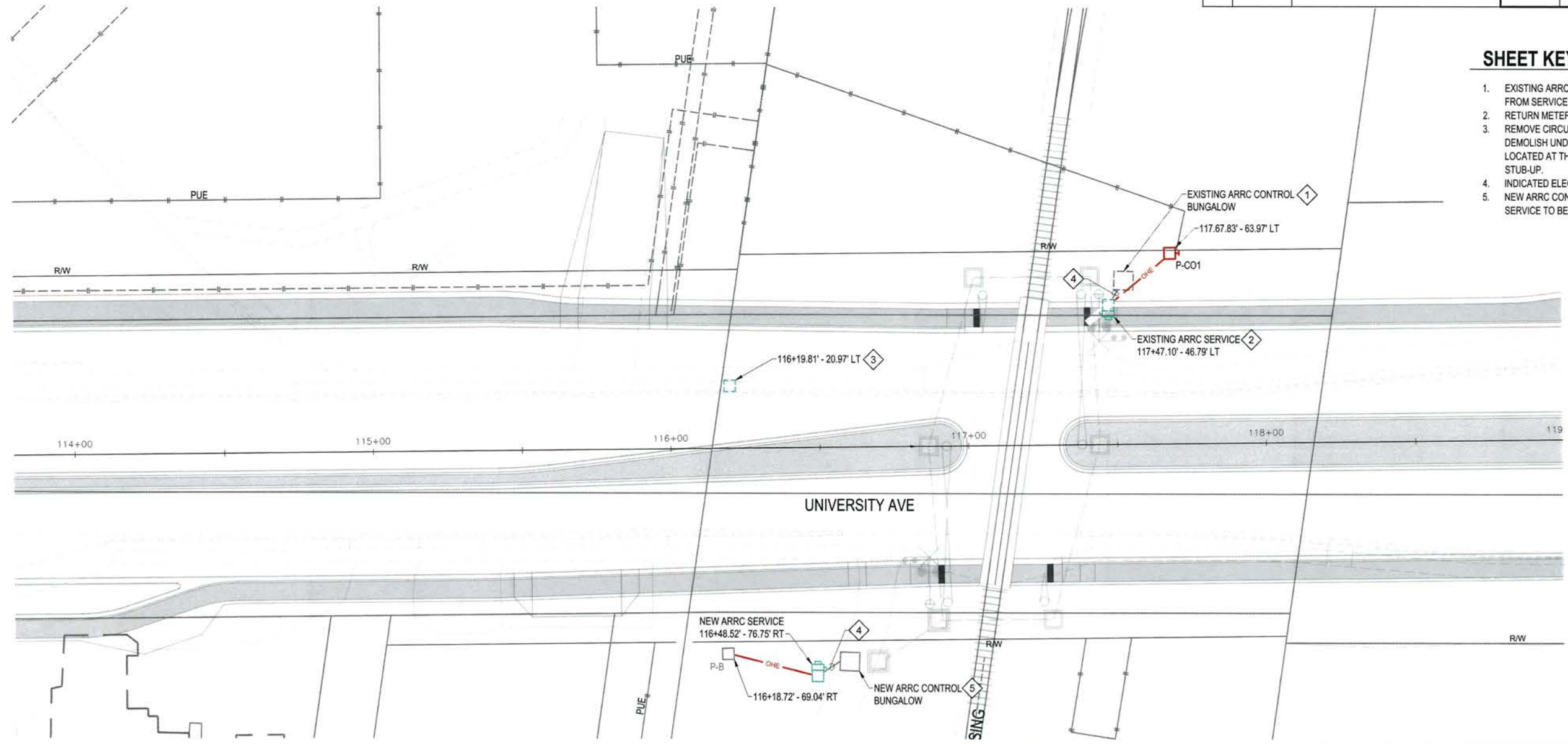
ID #	EXIST RETIRE ADD SALVAGE NEW	POLE							Underground			SECONDARY				GUY & ANCHOR					Misc. Parts				Remarks									
		Back Span (Ft)	From Pole	To Pole	Line Angle		Poles		Qty.	Asmby	FT	Qty.	Asmby	Conductor			# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Guy Strand		Anchor Unit 'F'		Qty	Description	Qty	Description					
					Deg.	Dir.	Height (Ft)	Class						Burial Depth (Ft)	#	AWG						Type	Trade Name							Dia. (in)	Grade			
"P-RE11" 111+65.86'	RETIRE			111+74.00'-39.78' LT								1	J3.1B																			EXISTING UAF SERVICE, METER NO.: 59521		
111+74.00'-39.78' LT	RETIRE	13	"P-RE11" 111+65.86'									1	Q2.1XX	1	2/0	TRIPLEX	CAVOLINIA																	
"P-9" 111+59.19'-70.23' LT	ADD			111+59.97'-105.05' LT								1	J3.1B																					
111+59.97'-105.05' LT	ADD	35	"P-9" 111+59.19'-70.23' LT									1	Q2.1XX	1	2/0	TRIPLEX	CAVOLINIA																	NEW UAF SERVICE
UAF HBH Distribution Assembly	ADD											1	UR2XX	117																				
"P-F" 112+58.48'-74.50' RT	RETIRE			112+60.65'-65.89' RT								1	UM5XX																					
112+60.65'-65.89' RT	RETIRE	9	"P-F" 112+58.48'-74.50' RT									1	UR2XX	9	1	UM8-2XX	3	2																EXISTING GCI SERVICE, METER NO.: 204178
112+60.65'-65.89' RT	RETIRE		GCI PEDESTAL									1	UR2XX	5																				
"P-F" 112+58.48'-74.50' RT	ADD			112+83.46'-74.13' RT								1	J3.1B																					
112+83.46'-74.13' RT	ADD	25	"P-F" 112+58.48'-74.50' RT									1	Q2.1XX	1	2	TRIPLEX	CONCH																	NEW GCI SERVICE
"P-F" 112+58.48'-74.50' RT	ADD											1	J3.1B																					
113+18.26'-73.67' RT	RETIRE																																	

ELECTRICAL SECONDARY RELOCATION PLANS



PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHwy00270	2018	V5	V10



- SHEET KEYNOTES:** X
- EXISTING ARRC CONTROL BUNGALOW AND UNDERGROUND FEEDER FROM SERVICE TO BE DEMOLISHED BY OWNER.
 - RETURN METER TO GVEA WHEN ELECTRICAL SERVICE IS DEMOLISHED.
 - REMOVE CIRCUIT CONDUCTORS FROM UNDERGROUND RACEWAY. DEMOLISH UNDERGROUND RACEWAY FROM THE UNDERGROUND ELBOW LOCATED AT THE BASE OF INDICATED WOOD POLE UP TO AND INCLUDING STUB-UP.
 - INDICATED ELECTRICAL CIRCUIT IS ROUTED UNDERGROUND.
 - NEW ARRC CONTROL BUNGALOW AND UNDERGROUND FEEDER FROM SERVICE TO BE INSTALLED BY OWNER.

STAKING SHEET

ID #	EXIST RETIRE ADD SALVAGE NEW	POLE		Line Angle Deg. Dir.	Poles		Underground			SECONDARY				GUY & ANCHOR				Misc. Parts				Remarks						
		Back Span (Ft)	From Pole		To Pole	Height (Ft)	Class	Burial Depth (Ft)	Qty.	Asmby	FT	Qty.	Asmby	Conductor		# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Guy Strand		Anchor Unit 'F'	Qty	Description	Qty	Description	
														#	AWG						Type							Trade Name
116+19.81' - 20.97' LT	RETIRE				40	6				1	Q2.1XX																	
"P-CO1" 117+67.83' - 63.97' LT	RETIRE			117+47.10' - 46.79' LT						1	J3.1B																	
117+47.10' - 46.79' LT	RETIRE	27	"P-CO1" 117+67.83' - 63.97' LT		35	5				1	Q2.1XX	1	2	TRIPLEX	CONCH													EXISTING ARRC SERVICE. METER NO.: 57250
"P-B" 116+18.72' - 69.04' RT	ADD			116+48.52' - 76.75' RT						1	J3.1B																	
116+48.52' - 76.75' RT	ADD	31	"P-B" 116+18.72' - 69.04' RT		35	4	5.5			1	Q2.1XX	1	2/0	TRIPLEX	CAVOLINIA													NEW ARRC SERVICE
" "	ADD									1	J3.1B																	

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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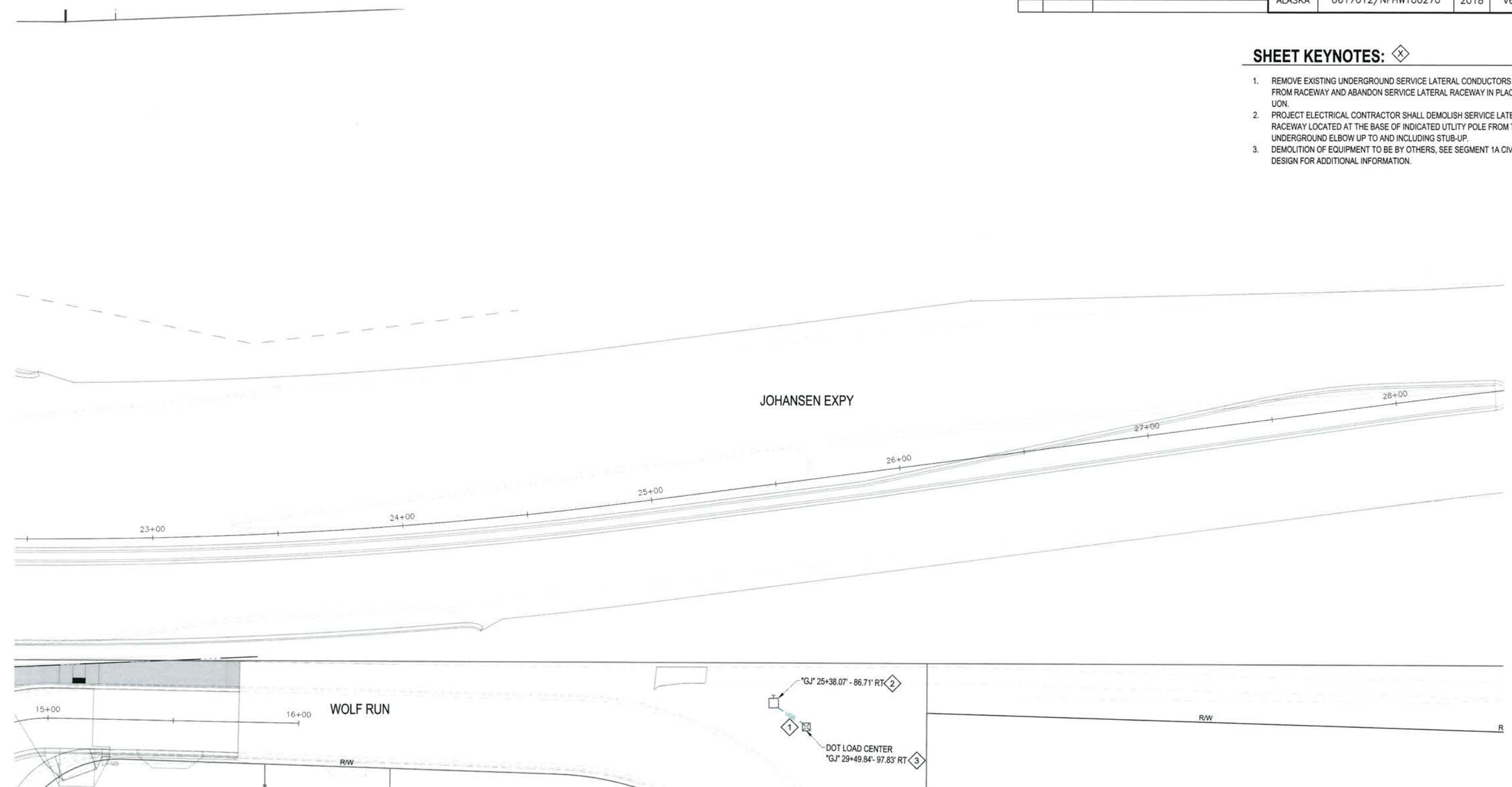
ELECTRICAL SECONDARY
RELOCATION PLANS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	V6	V10

SHEET KEYNOTES: X

1. REMOVE EXISTING UNDERGROUND SERVICE LATERAL CONDUCTORS FROM RACEWAY AND ABANDON SERVICE LATERAL RACEWAY IN PLACE, UON.
2. PROJECT ELECTRICAL CONTRACTOR SHALL DEMOLISH SERVICE LATERAL RACEWAY LOCATED AT THE BASE OF INDICATED UTILITY POLE FROM THE UNDERGROUND ELBOW UP TO AND INCLUDING STUB-UP.
3. DEMOLITION OF EQUIPMENT TO BE BY OTHERS, SEE SEGMENT 1A CIVIL DESIGN FOR ADDITIONAL INFORMATION.



STAKING SHEET

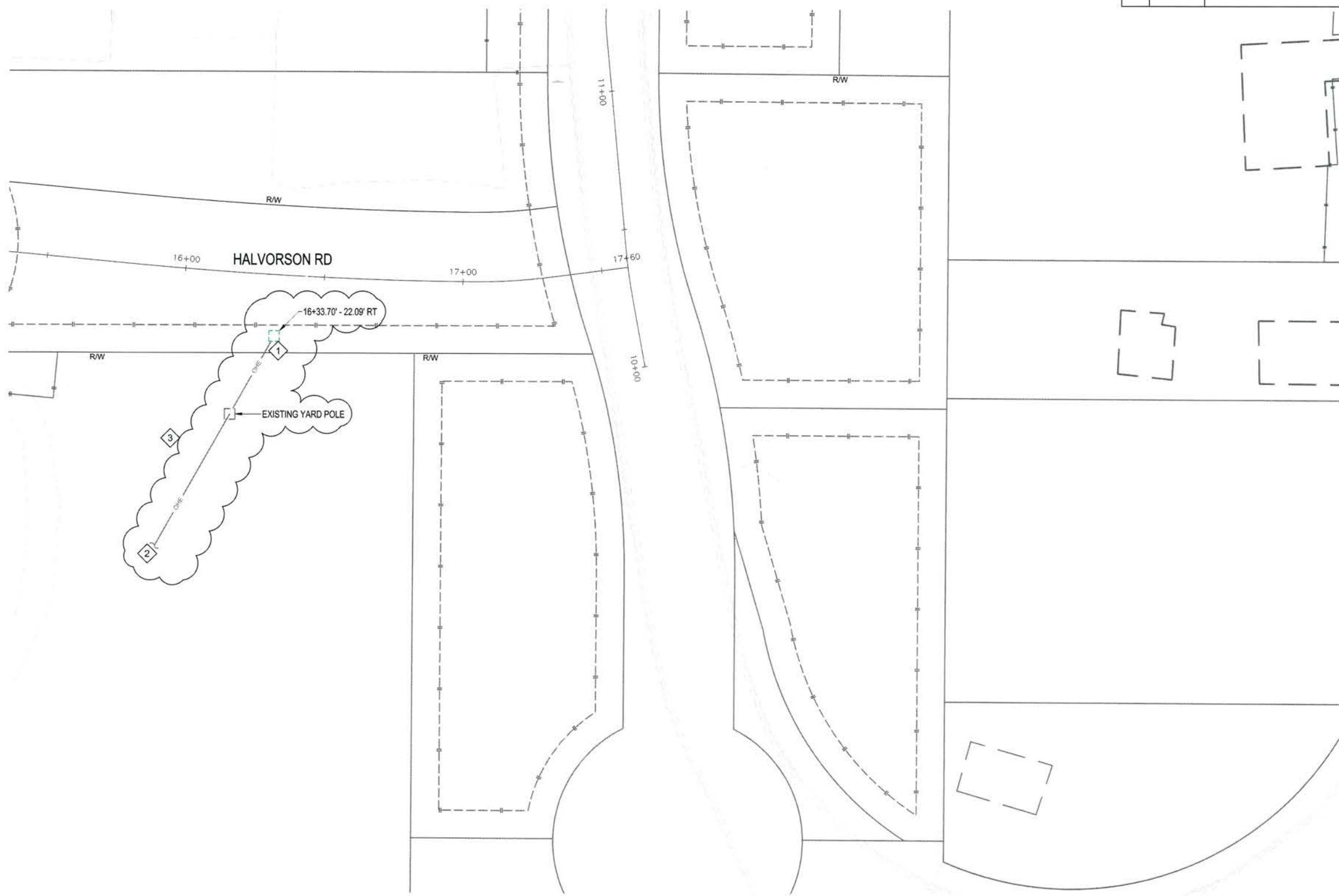
ID #	EXIST RETIRE ADD SALVAGE NEW	POLE										Underground				SECONDARY						GUY & ANCHOR						Misc. Parts				Remarks				
		Back Span (Ft)	From Pole	To Pole	Line Angle		Poles		Qty.	Asmby	FT	Qty.	Asmby	Conductor			# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Guy Strand		Anchor Unit 'F'	Qty	Description	Qty	Description								
					Deg.	Dir.	Height (Ft)	Class						Burial Depth (Ft)	#	AWG						Type	Trade Name						Dia. (in)	Grade						
"GJ" 25+38.07'-86.71' RT	EXIST			"GJ" 29+49.84'-97.83' RT							1	UM5XX																								
"GJ" 25+38.07'-86.71' RT	RETIRE			"GJ" 29+49.84'-97.83' RT																																
"GJ" 29+49.84'-97.83' RT	RETIRE		"GJ" 25+38.07'-86.71' RT								1	UR2XX	14																						EXISTING DOT LOAD CENTER, EXISTING METER NO.: 202622	

ELECTRICAL SECONDARY RELOCATION PLANS



PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	V7	V10



- SHEET KEYNOTES:** X
1. DETACH EXISTING OVERHEAD CONDUCTOR FROM YARD POLE LOCATED AT 16+33.70'-22.09' RT. COIL UP AND PLACE AT THE FOOT OF 'EXISTING YARD POLE'.
 2. EXISTING OVERHEAD SERVICE DROP ROUTES TO A POLE MOUNTED RESIDENTIAL SERVICE THAT IS EXISTING AND TO REMAIN.
 3. WORK WITHIN INDICATED CLOUDING IS NOT IN CONTRACT.

PLANS DEVELOPED BY: PDC, INC. ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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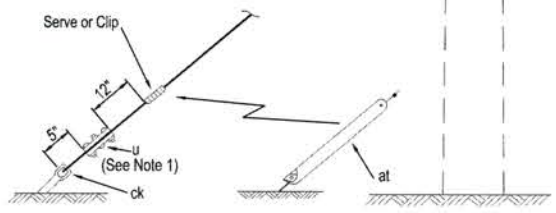
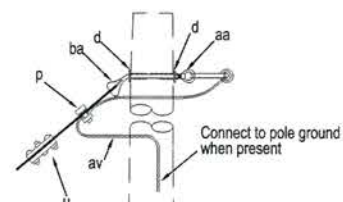
ID #	EXIST RETIRE ADD SALVAGE NEW	POLE							Underground			SECONDARY				GUY & ANCHOR						Misc. Parts				Remarks		
		Back Span (Ft)	From Pole	To Pole	Line Angle		Poles		Qty.	Asmby	FT	Qty.	Asmby	Conductor			# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Guy Strand		Anchor Unit 'F'	Qty		Description	
					Deg.	Dir.	Height (Ft)	Class						Burial Depth (Ft)	#	AWG						Type	Trade Name				Dia. (in)	Grade
"H" 16+33.70'-22.09' RT	RETIRE			"EXISTING YARD POLE"			35	4	-			2	J3.1															

**ELECTRICAL SECONDARY
RELOCATION PLANS**



PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\Electrical Secondary Relocation\E0010d011147.01FB-V8 Thu, Jun/07/18 11:07am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	V8	V10

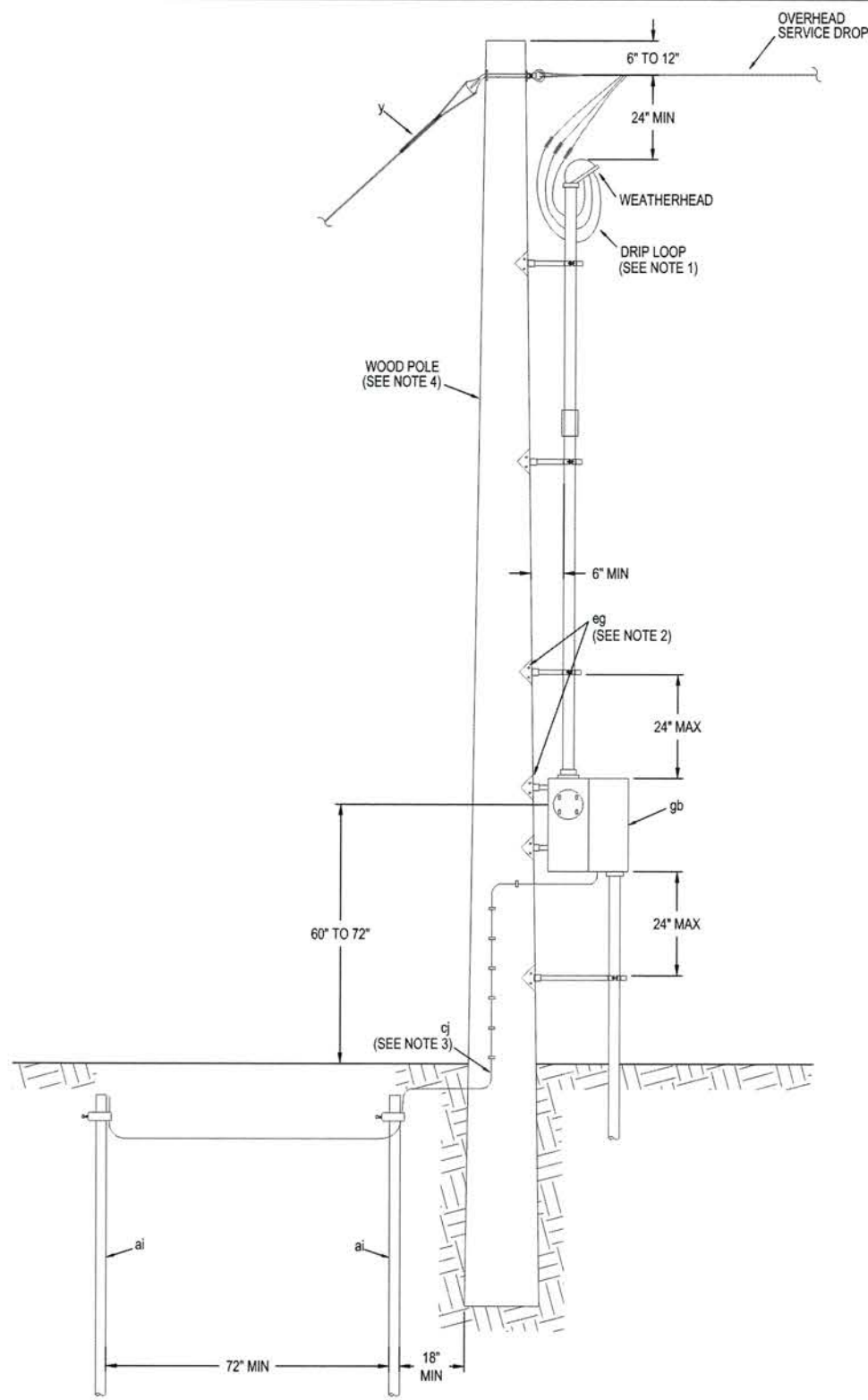


ITEM	QTY	MATERIAL
c	1	BOLT, MACHINE, 5/8" x REQ'D LENGTH
d	2	WASHER, 3" SQUARE, CURVED
p	2	CONNECTORS, GUY BOND AND AS REQ'D
u	2	DEADEND FOR GUY STRAND (SEE NOTE 1)
ba	1	ANGLE THIMBLE EYEBOLT
y	1	GUY WIRE AS REQ'D (SEE NOTE 3)
at	1	GUY MARKER
av	1	JUMPERS, AS REQ'D
ck	1	CLAMP, ANCHOR BONDING
aa	1	GALVANIZED OVAL EYENUT

NOTES:

- OTHER ACCEPTED AND EQUIVALENT GUY DEADEND (ITEM "u") MATERIAL MAY BE SUBSTITUTED FOR THE ONES SHOWN.
- SOME TYPES OF GUY ATTACHMENTS USE 2 BOLTS AND WASHER OR LAG SCREW (ITEM "c"), CHANGE MATERIALS ACCORDINGLY.
- SPECIFY GUY WIRE SIZE, TYPE AND REQUIRED LENGTH.

1 E1.1XX: SINGLE DOWN GUY
V8 SCALE: NTS

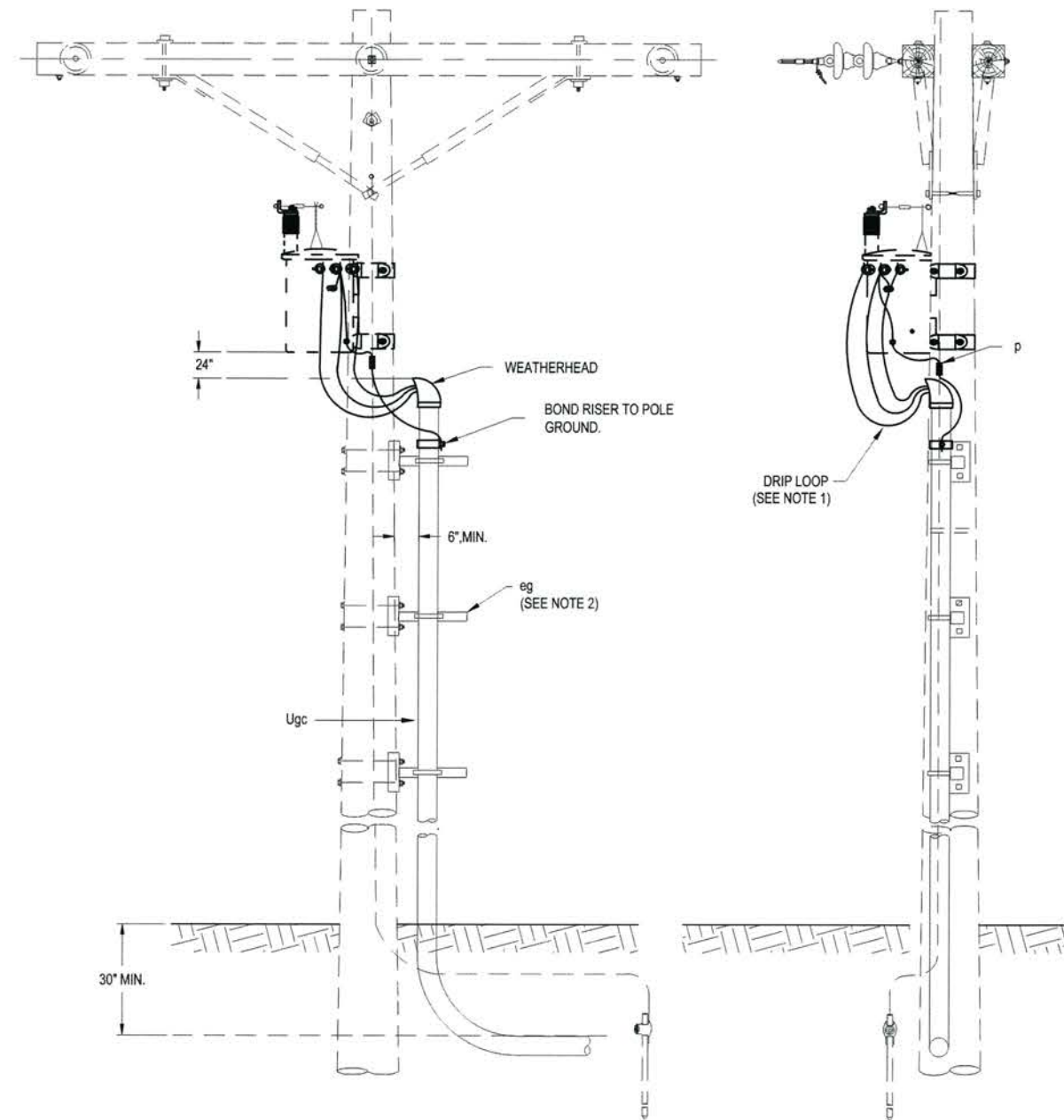


ITEM	QTY	MATERIAL
y	1	DOWN GUY
eg	1	STANDOFF BRACKET & CONDUIT SUPPORT, QTY AS REQ'D
gb	1	SERVICE ASSEMBLY
cj	1	GROUNDING ELECTRODE CONDUCTOR
ai	1	GROUNDING ELECTRODE, 3/4" x 10' COPPER CLAD

NOTES:

- PROVIDE DRIP LOOP TO MINIMIZE MOISTURE INTO SERVICE RISER. PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES FROM THE WEATHERHEAD TO THE BOTTOM OF DRIP LOOP.
- STANDOFF TO BE A MINIMUM 15 INCHES. PROVIDE ONE MINIMUM PER SECTION OF CONDUIT.
- STAPLE GROUNDING ELECTRODE CONDUCTOR EVERY 6 INCHES. STAPLES SHALL BE COPPER CLAD.
- POLE BASE BELOW GRADE TO BE WRAPPED WITH THREE LAPS OF POLYETHYLENE SHEETING TO RESIST FROST JACKING.

2 Q2.1XX: POLE TYPE SERVICE ASSEMBLY
V8 SCALE: NTS



ITEM	QTY	MATERIAL
p	2	CONNECTORS, AS REQ'D
Ugc	1	RMC RISER, DIAMETER AND LENGTH AS REQ'D
eg	1	STANDOFF BRACKET & CONDUIT SUPPORT, QTY AS REQ'D

NOTES:

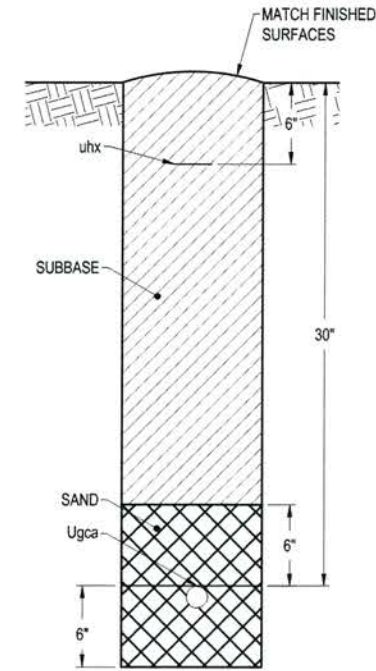
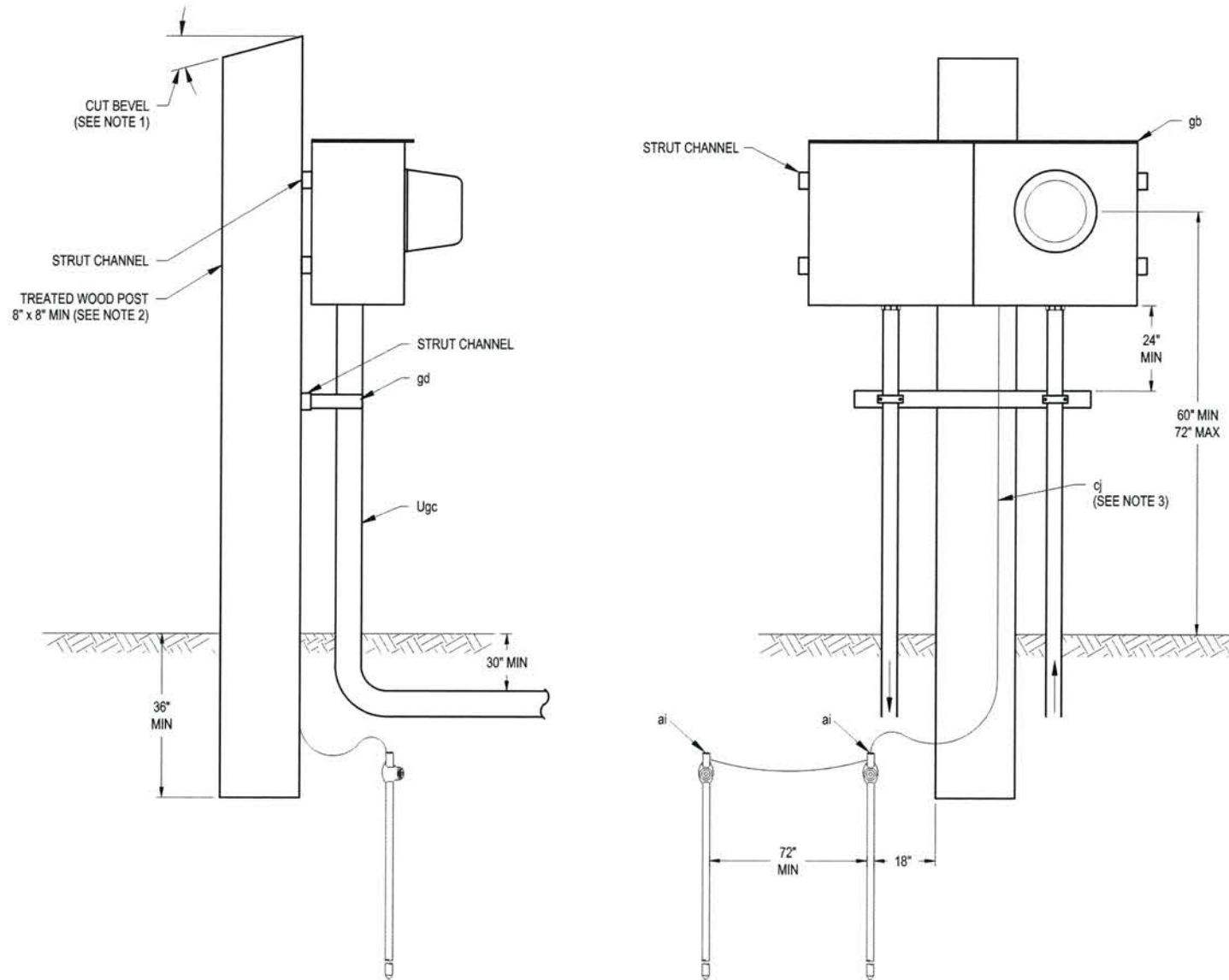
- PROVIDE DRIP LOOP TO MINIMIZE MOISTURE INTO SERVICE RISER. PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES FROM THE WEATHERHEAD TO THE BOTTOM OF DRIP LOOP.
- STANDOFF TO BE A MINIMUM 15 INCHES. PROVIDE ONE MINIMUM PER SECTION OF CONDUIT.

3 UM5XX: SECONDARY CABLE TERMINAL POLE
V8 SCALE: NTS

ELECTRICAL DETAILS

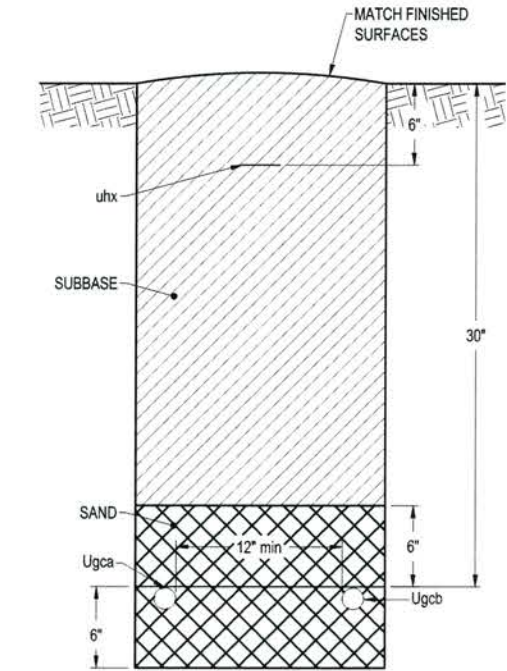


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWHY00270	2018	V9	V10



UR2
TRENCHING UNIT
ONE CONDUIT

ITEM	QTY	MATERIAL
uhx		MARKER TAPE
Ugca		POWER CONDUIT, DIAMETER AND LENGTH REQ'D
Ugcb		TELECOM CONDUIT, DIAMETER AND LENGTH REQ'D



UR2-1
TRENCHING UNIT
POWER AND TELEPHONE CONDUIT

ITEM	QTY	MATERIAL
gb	1	SERVICE ASSEMBLY
gd	1	STRUT CHANNEL CLAMP, QTY AS REQ'D
cj		GROUNDING ELECTRODE CONDUCTOR
ai	2	GROUNDING ELECTRODE 3/4\"/>

- NOTES:
1. WEATHER TREAT THE END OF POST.
 2. POST BASE BELOW GRADE TO BE WRAPPED WITH THREE LAPS OF POLYETHYLENE SHEETING TO RESIST FROST JACKING.
 3. STAPLE GROUNDING ELECTRODE CONDUCTOR EVERY 6 INCHES STARTING AT FINISH GRADE. STAPLES SHALL BE COPPER CLAD.

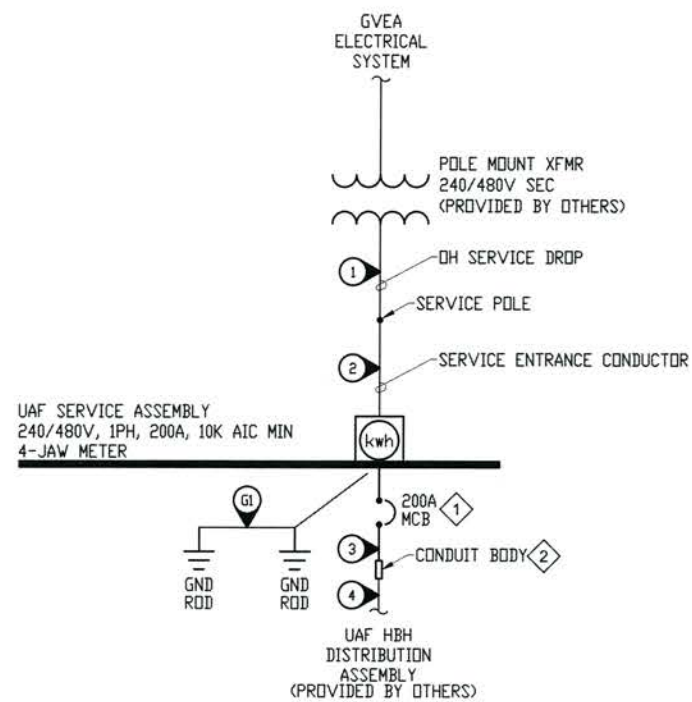
1 UM8-2XX: POST TYPE SERVICE ASSEMBLY
SCALE: NTS

2 UR2XX: TRENCHES FOR CONDUITS
SCALE: NTS

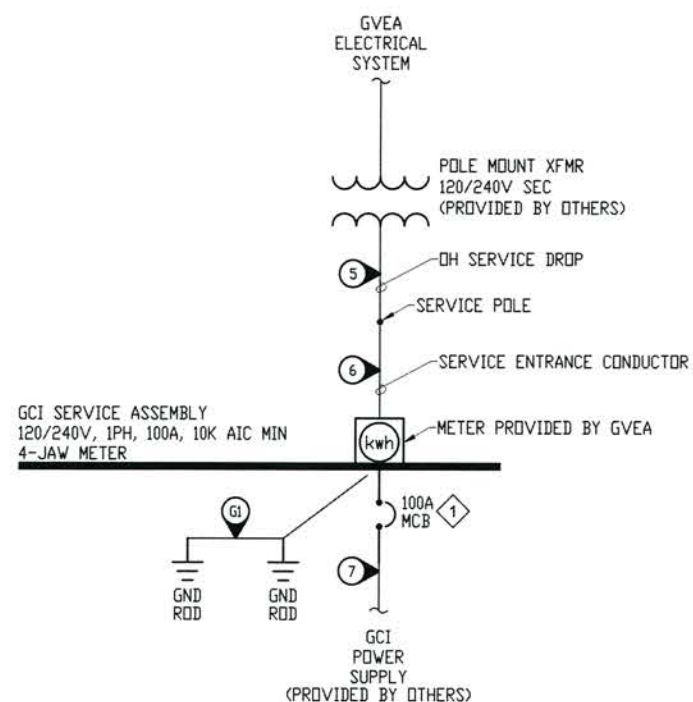
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
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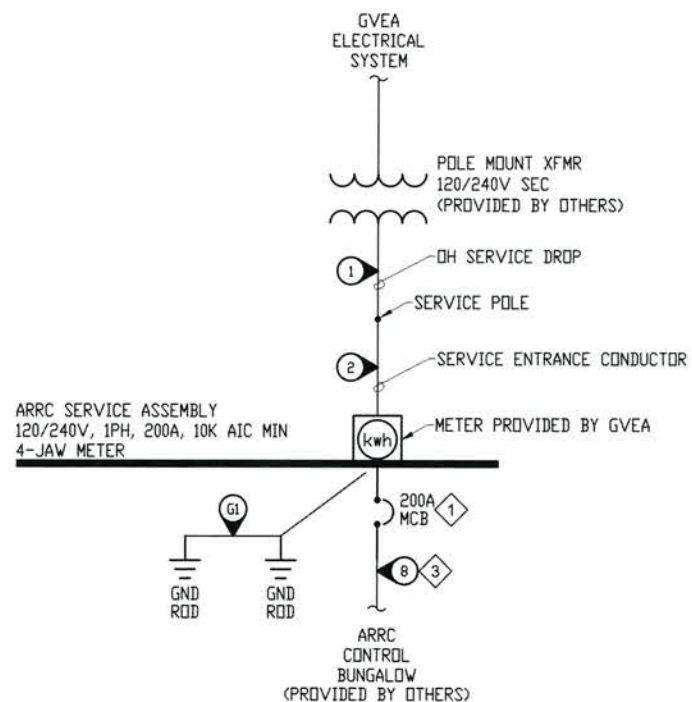
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2018	V10	V10



1 UAF SERVICE ONE-LINE DIAGRAM
V10 SCALE: NTS



2 GCI SERVICE "112+83.46'- 74.13' RT" ONE-LINE DIAGRAM
V10 SCALE: NTS



3 ARRC SERVICE ONE-LINE DIAGRAM
V10 SCALE: NTS

SHEET KEYNOTES: X

1. PROVIDE A TWO POLE BREAKER.
2. PROVIDE 3" TYPE BC MOGUL CONDUIT BODY WITH 3" x 2" REDUCER BUSHING. LOCATED CONDUIT BODY ON SERVICE POLE, BELOW METER ENCLOSURE. PROVIDED RACEWAY SUPPORT ABOVE AND BELOW CONDUIT BODY.
3. FEEDER PROVIDED BY OTHERS. SEE FEEDER SCHEDULE FOR MINIMUM CONDUCTOR AND RACEWAY SIZE BASED ON CODE.

FEEDER SCHEDULE				
NO.	CONDUCTORS	INSUL	RACEWAY	REMARKS
1	OVERHEAD TRIPLEX 2 NO. 2/0 W/ XLP INSULATION 1 NO. 1 ACSR BARE	N/A	N/A	OVERHEAD SERVICE DROP CABLE TYPE "CAVOLINIA" 453 LBS/1000 FT MAX, RATED STRENGTH 3550 LBS MIN SEE PLANS AND DETAILS FOR ADDITIONAL RACEWAY AND ROUTING REQUIREMENTS. FOR SERVICE POLE.
2	3 NO. 3/0	XHHW-2	2" RMC	SEE PLANS AND DETAILS FOR ADDITIONAL RACEWAY AND ROUTING REQUIREMENTS. FOR SERVICE POLE.
3	4 NO. 3/0 1 NO. 6 EGC	XHHW-2	2" RMC	AN ADDITIONAL PHASE CONDUCTOR IS PROVIDED TO ALLOW UAF TO UPGRADE TO A 3-PHASE SERVICE/LOAD IN THE FUTURE. SEAL BOTH ENDS OF UNUSED PHASE CONDUCTOR WITH HEAT SHRINK CAPS.
4	4 NO. 3/0 1 NO. 6 EGC	XHHW-2	3" RMC	AN ADDITIONAL PHASE CONDUCTOR IS PROVIDED TO ALLOW UAF TO UPGRADE TO A 3-PHASE SERVICE/LOAD IN THE FUTURE. SEAL BOTH ENDS OF UNUSED PHASE CONDUCTOR WITH HEAT SHRINK CAPS.
5	OVERHEAD TRIPLEX 2 NO. 2 W/ XLP INSULATION 1 NO. 2 ACSR BARE	N/A	N/A	OVERHEAD SERVICE DROP CABLE TYPE "CONCH" 262 LBS/1000 FT MAX, RATED STRENGTH 2850 LBS MIN SEE PLANS AND DETAILS FOR ADDITIONAL RACEWAY AND ROUTING REQUIREMENTS. FOR SERVICE POLE.
6	3 NO. 2	XHHW-2	2" RMC	SEE PLANS AND DETAILS FOR ADDITIONAL RACEWAY AND ROUTING REQUIREMENTS. FOR SERVICE POLE.
7	3 NO. 3 1 NO. 8 EGC	XHHW-2	2" RMC	COORDINATE INSTALLATION WITH OWNER.
8	3 NO. 3/0 1 NO. 6 EGC	XHHW-2	2" RMC	
G1	1 NO. 4 BCU	N/A	N/A	GROUNDING ELECTRODE CONDUCTOR

**ELECTRICAL
ONE-LINE DIAGRAM**

