NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	A1-SS	A4-SS

GENERAL NOTES

1. 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.
2. 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.
3. 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.
4. 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.
5. REFERENCE GRADING PLAN SHEETS FOR INTERSECTION TRANSITION LAYOUTS.
6. WORK IN PUE'S IS FOR UTILITY PURPOSES. PUE'S ARE NOT AVAILABLE FOR STAGING, ETC. FOR OTHER WORK ITEMS.

UTILITY NOTES

1. NUMEROUS UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT CORRIDOR. CONTACT UTILITY OWNERS AND GET LOCATES PRIOR TO ANY EXCAVATION.
2. 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.
3. 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.
4. 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.
5. SEE INDIVIDUAL U SERIES SHEETS FOR ADDITIONAL NOTES.
6. CONTRACTOR MUST RESTORE PUE'S AFTER UTILITY CONSTRUCTION, IN ACCORDANCE WITH PUE REQUIREMENTS.
7. CONTRACTOR SHALL PROVIDE SWPPP FOR THE CONCURRENT UTILITY RELOCATIONS. THIS WORK IS SUBSIDIARY TO 641 PAY ITEMS.
8. 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.

INDEX OF SHEETS

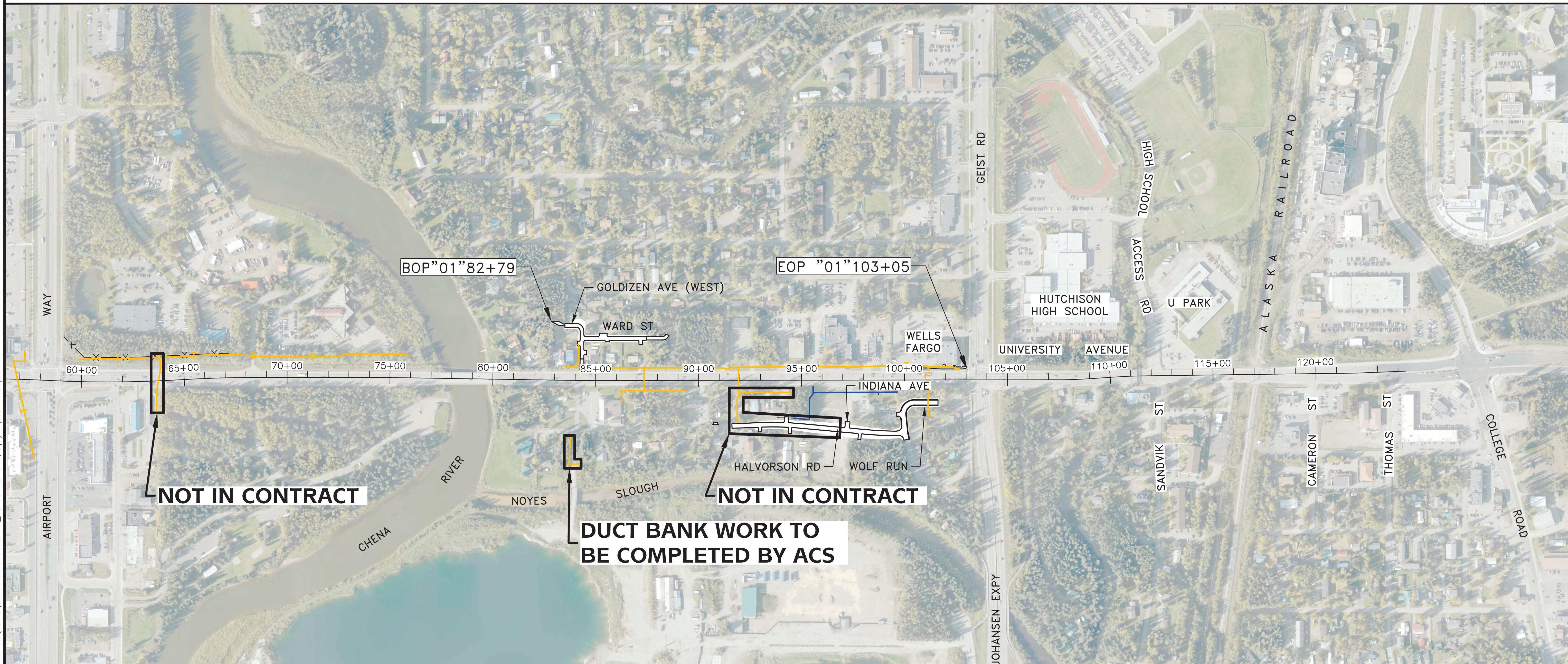
GENERAL NOTES

STATE OF ALASKA
49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\c0002cnst11147.01fb_1c-A1-SS Wed, Apr/24/19 04:30pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	A2-SS	A4-SS



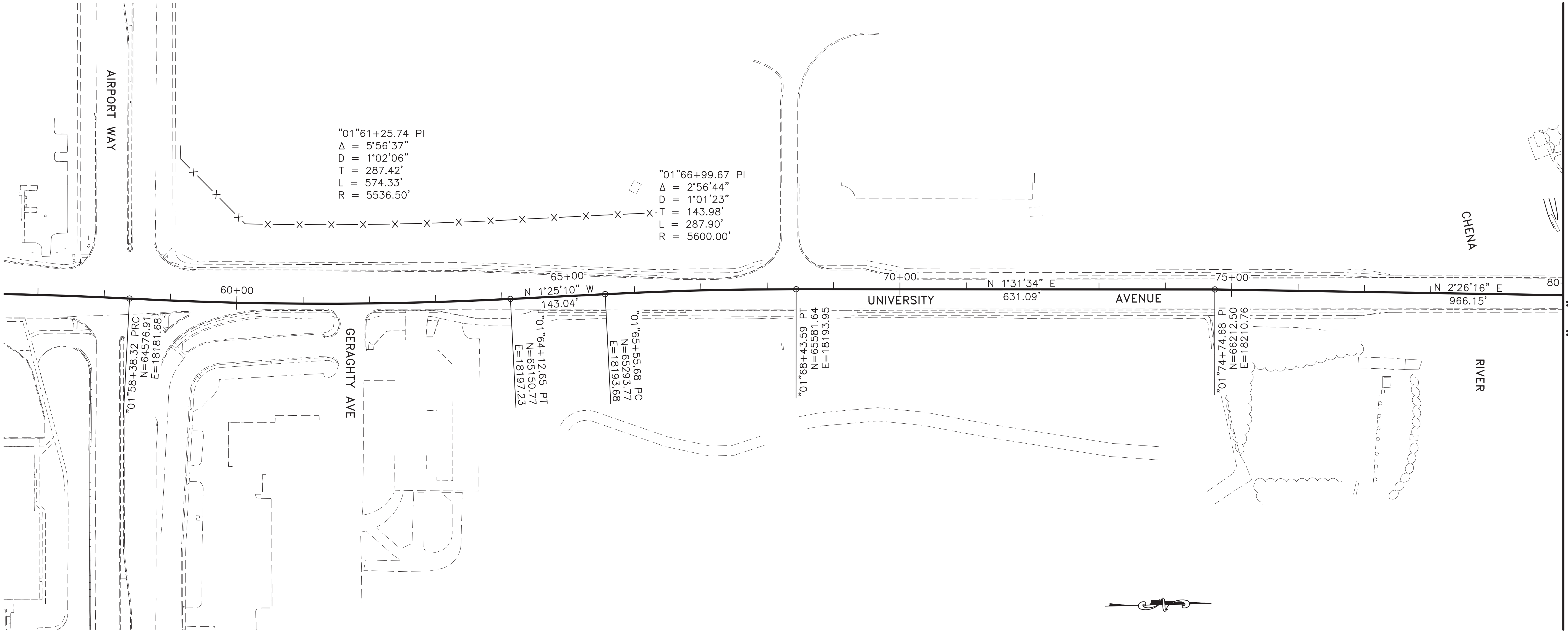
VICINITY MAP

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C0003cnst\11147.01FB_1C-A2-SS Wed, Apr/24/19 04:34pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	A3-SS	A4-SS



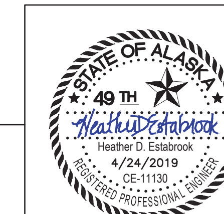
PROJECT CONTROL NOTES:

FOR SURVEY CONTROL INFORMATION, INCLUDING BASIS OF COORDINATES, BASIS OF BEARINGS AND BASIS OF VERTICAL CONTROL, SEE UNIVERSITY AVENUE SEGMENT 1 NORTH, INDIANA AVENUE TO THOMAS STREET PLAN SET.

ALIGNMENT DESIGNATION

"01"	UNIVERSITY AVENUE
"GDW"	GOLDIZEN AVENUE (WEST)
"W"	WARD ST
"H"	HALVORSON RD
"WR"	WOLF RUN

ALIGNMENT 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\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\c0002cnst11147.01fb_1c-A3-SS Wed, Apr/24/19 04:37pm

NO.	DATE	REVISION

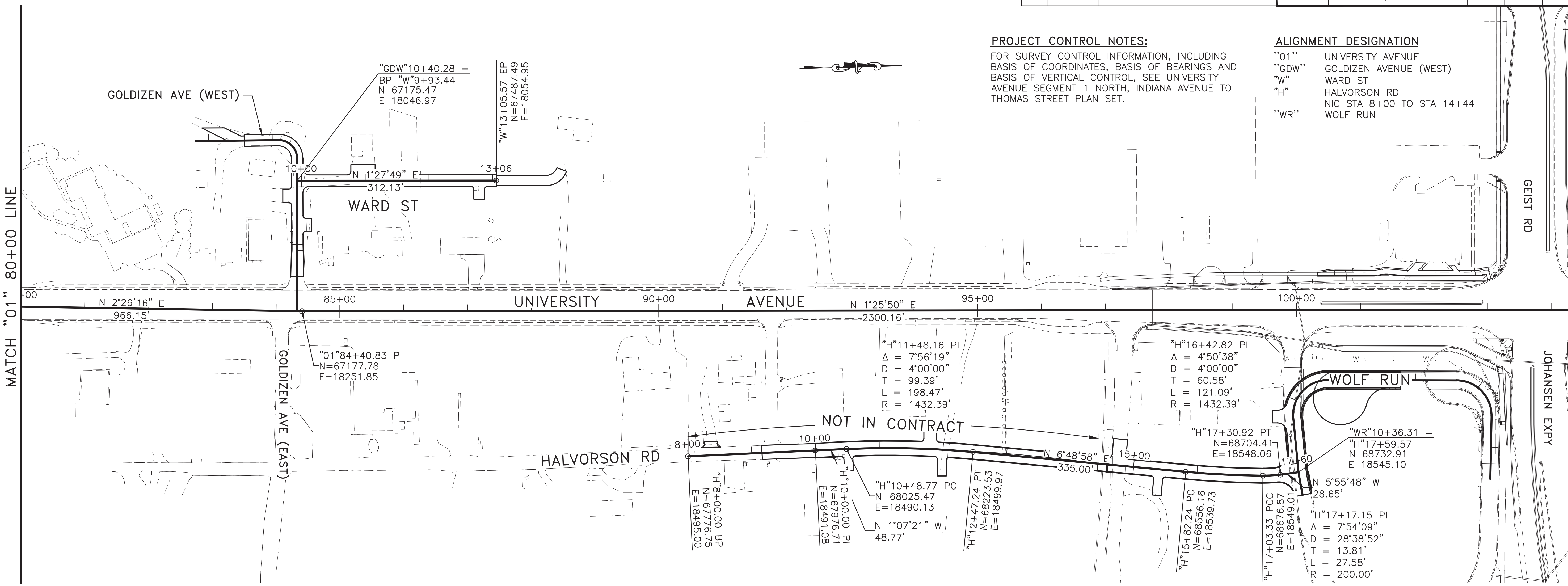
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	A4-SS	A4-SS

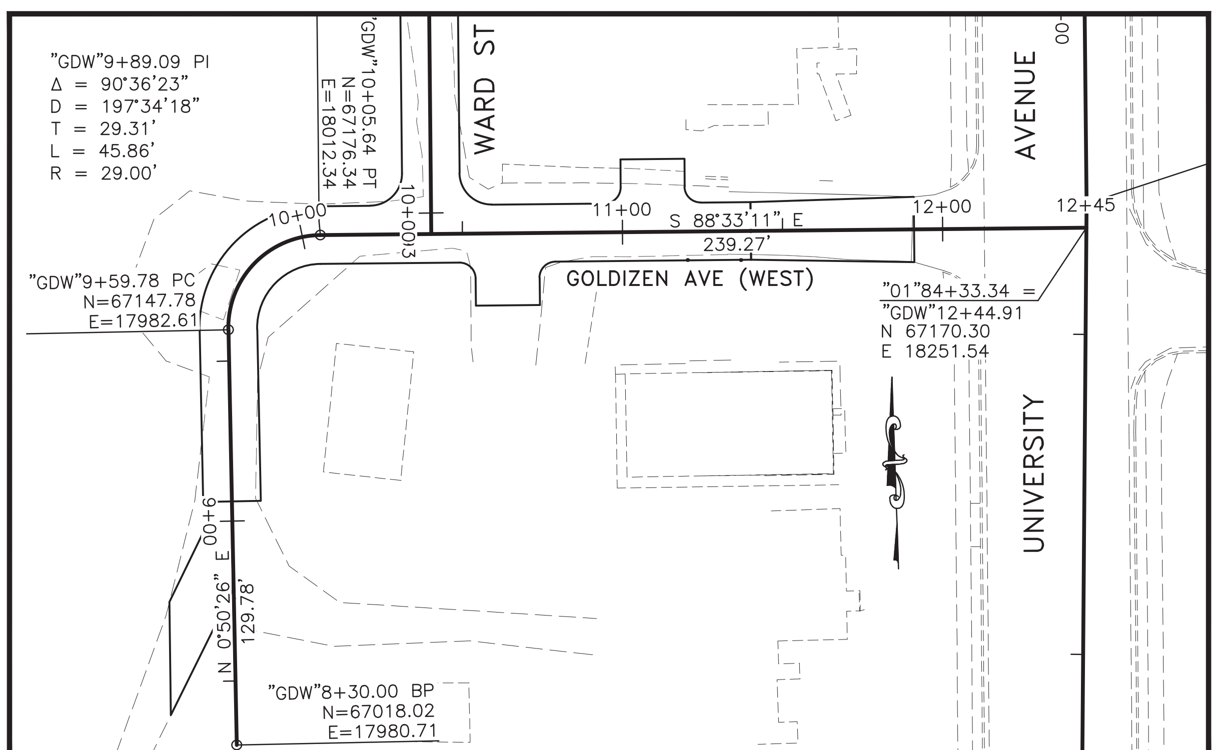
PROJECT CONTROL NOTES:

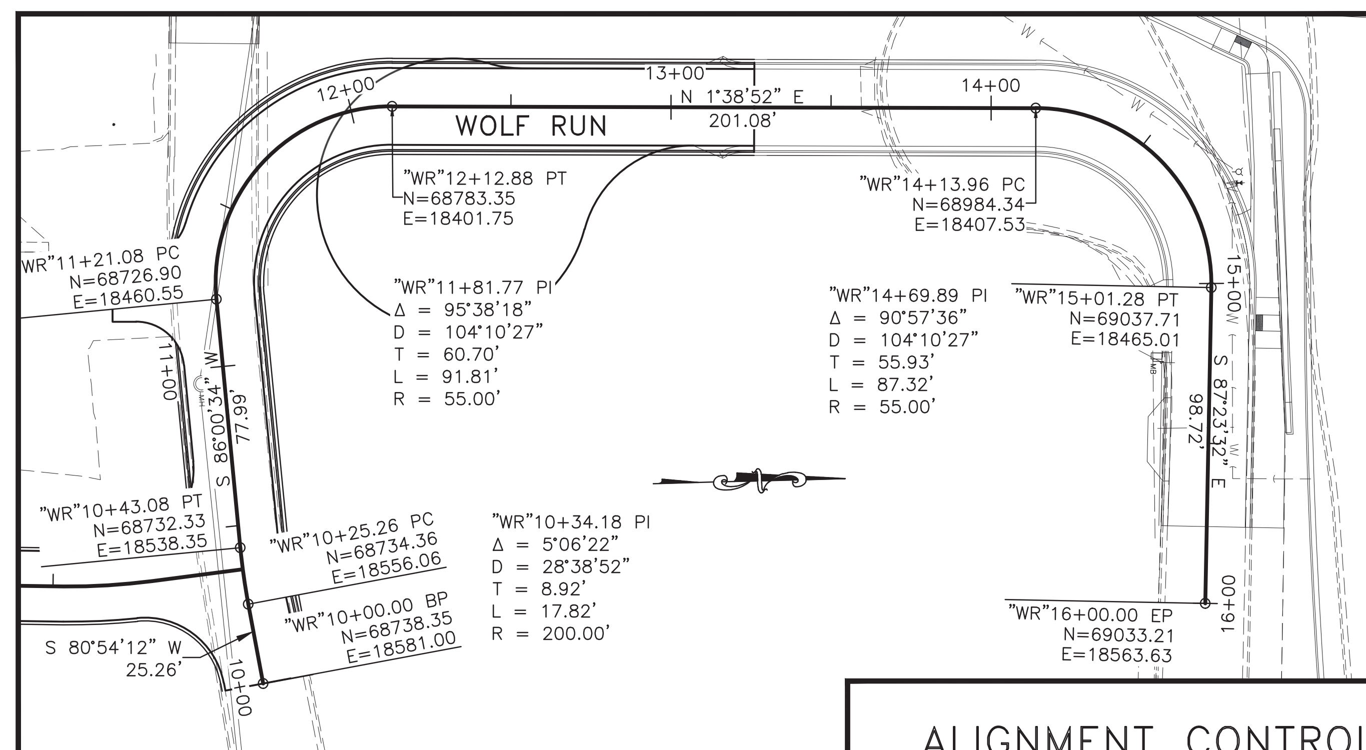
FOR SURVEY CONTROL INFORMATION, INCLUDING BASIS OF COORDINATES, BASIS OF BEARINGS AND BASIS OF VERTICAL CONTROL, SEE UNIVERSITY AVENUE SEGMENT 1 NORTH, INDIANA AVENUE TO THOMAS STREET PLAN SET.

ALIGNMENT DESIGNATION

"01"	UNIVERSITY AVENUE
"GDW"	GOLDIZEN AVENUE (WEST)
"W"	WARD ST
"H"	HALVORSON RD NIC STA 8+00 TO STA 14+44
"WR"	WOLF RUN







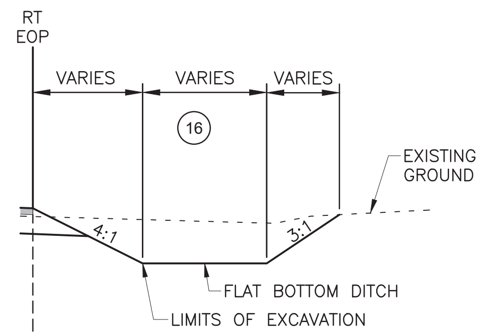
ALIGNMENT CONTROL

STATE OF ALASKA
49 TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\C\c0002cnst11147.01fb_1c-A4-SS Wed, Apr/24/19 04:38pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	B1-SS	B1-SS



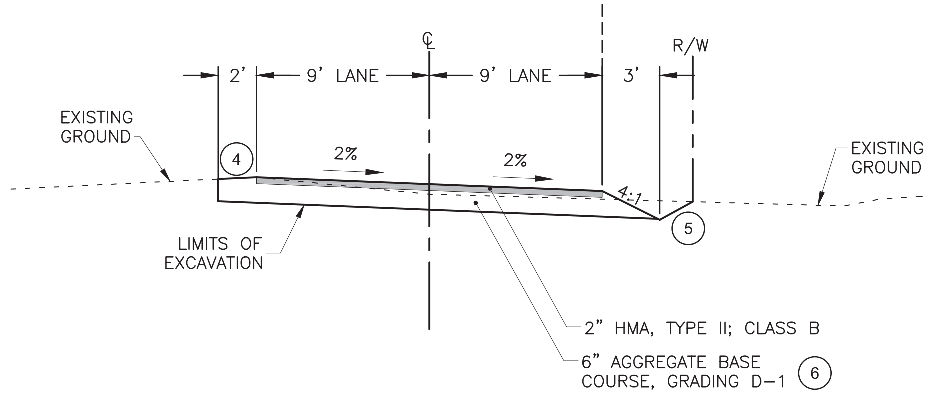
GOLDIZEN AVE (WEST) DITCH

"GDW" 11+25 TO "GDW" 11+88

(16) DITCH WIDTH VARIES ALONG GOLDIZEN AVE (WEST) SEE PROFILE FOR FINISHED GRADE DITCH PROFILE. SEE GRADING SHEETS G2-SS FOR FLAT BOTTOM DITCH CONTROL POINTS FOR LAYOUT.

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.



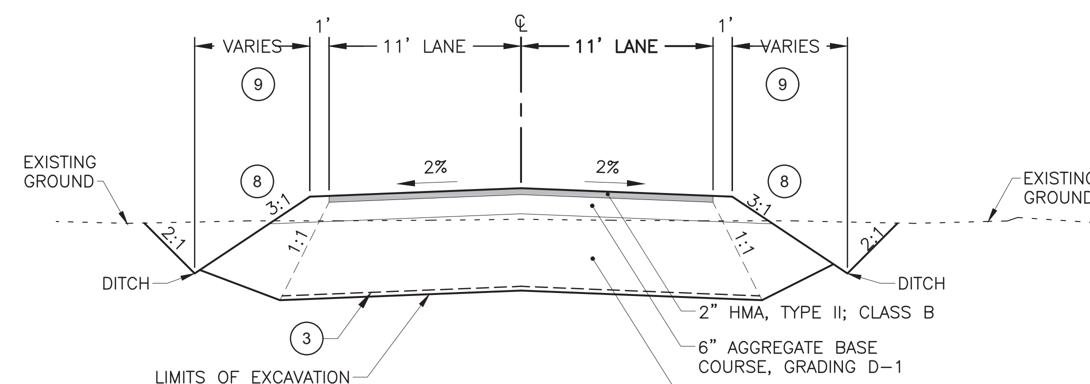
GOLDIZEN AVE (WEST)

"GDW" 9+06 TO "GDW" 11+91

(4) GRADE TO MATCH EXISTING GROUND AT 4:1 MAX. GRADE FORESLOPE AT -2% FROM EOP TO EXISTING GROUND BETWEEN "GDW" 9+50 TO "GDW" 10+00. WIDTH VARIES FOR THIS STATION RANGE.

(5) CATCH TO ROW LINE. BACKSLOPE NOT TO EXCEED 2:1.

(6) FROM "GDW" 11+91 OMIT D-1 LAYER, DITCHING, AND SHOULDERS, AND ONLY PAVE WITH 2" HMA, TYPE II; CLASS B.

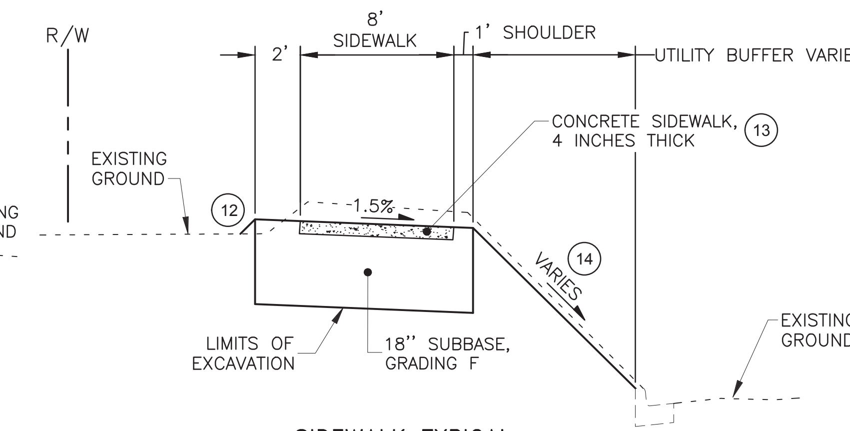


HALVORSON RD

"H" 10+00 TO "H" 17+25
NIC - STA 10+00 TO STA 14+44

(8) "H" 10+00 TO "H" 10+25 FILL TO EXISTING GROUND AND MAINTAIN FILL SLOPES WITHIN THE ROW.

(9) DITCH WIDTH VARIES ALONG HALVORSON, SEE HALVORSON PROFILE FOR FINISHED GRADE DITCH PROFILE.



SIDEWALK TYPICAL

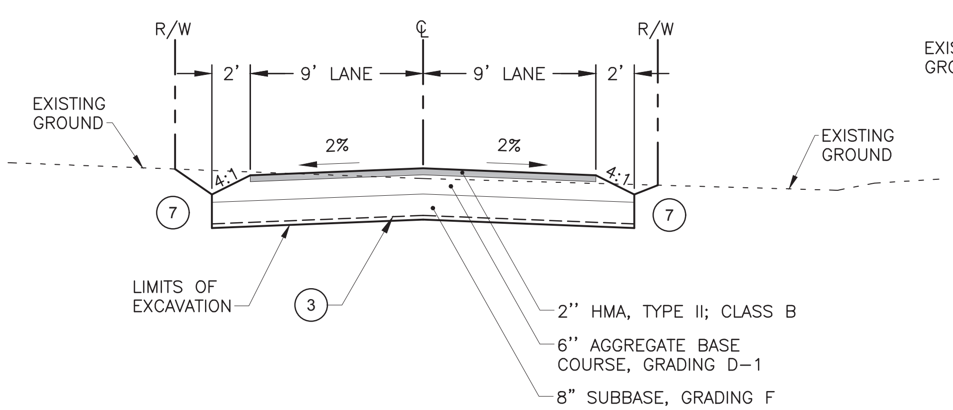
"01" 100+33 TO "01" 103+32

(12) CATCH TO EXISTING GROUND AT 2:1 IN BOTH A CUT AND FILL CONDITION.

(13) FROM "01" 100+32.96 TO "01" 100+57.27 SIDEWALK WILL BE CONSTRUCTED WITH 1.5" HMA, TYPE II; CLASS B MATERIAL.

(14) VARY GRADING SLOPE FROM NEW SIDEWALK TO EXISTING TOP BACK OF CURB.

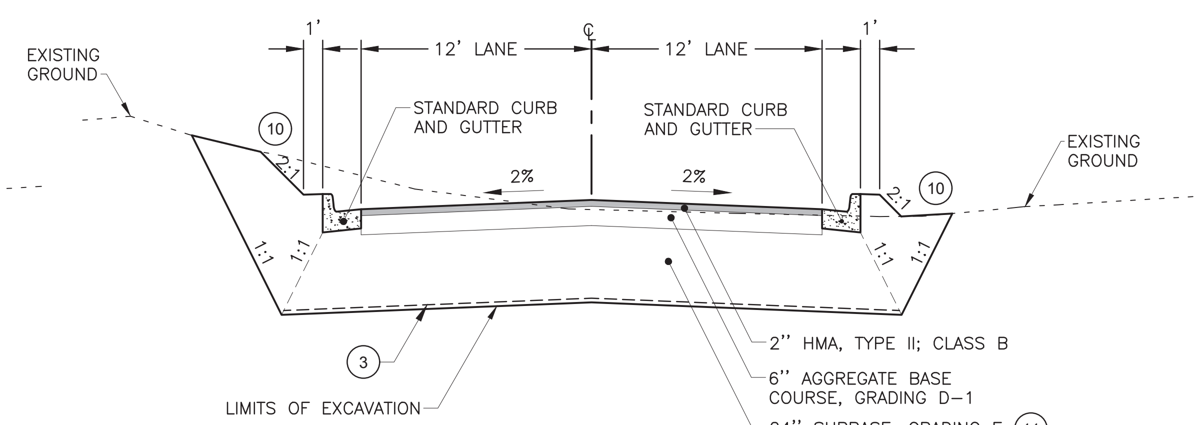
15. SEE GRADING SHEET G5-SS FOR GRADING PLAN AND LAYOUT CONTROL POINTS.



WARD ST

"W" 10+13 TO "W" 13+06

(7) CATCH TO ROW LINE. BACKSLOPE NOT TO EXCEED 2:1.



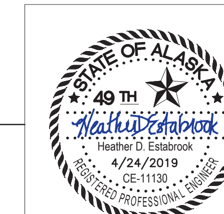
WOLF RUN

"WR" 10+00 TO "WR" 13+26

(10) MAINTAIN CUT/FILL SLOPES WITHIN THE ROW.

(11) FROM "WR" 10+00 TO 11+60 & "WR" 13+07 TO "WR" 13+26 PLACE CURB AND GUTTER, HMA AND AGGREGATE BASE COURSE. OMIT SUBBASE LAYER.

TYPICAL SECTIONS



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	2019	C1-SS	C2-SS

ESTIMATE OF QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL
	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	2,080
	202(3)	REMOVAL OF SIDEWALK	SQUARE YARD	234
	202(9)	REMOVAL OF CURB AND GUTTER	LINEAR FOOT	491
	202(10)	SINGLE MAIL BOX INSTALLATION	EACH	2
	203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD	2,340
	301(1)	AGGREGATE BASE COURSE, GRADING D-1	TON	1,225
	301(3)	AGGREGATE SURFACE COURSE, GRADING E-1	TON	20
	304(1)	SUBBASE, GRADING F	TON	6,570
	401(1B)	HMA, TYPE II; CLASS B	TON	550
	401(4)	ASPHALT BINDER, GRADE PG 52-40	TON	31
	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	1
NIC	~~603(1)-18~~	~~18 INCH CSP~~	~~LINEAR FOOT~~	~~52~~
	603(1)-24	24 INCH CSP	LINEAR FOOT	60
	603(1)-36	36 INCH CSP	LINEAR FOOT	64
NIC	~~603(20)-18~~	~~END SECTION FOR 18 INCH PIPE~~	~~EACH~~	~~4~~
	603(20)-24	END SECTION FOR 24 INCH PIPE	EACH	4
	607(4)	RECONSTRUCTED FENCE	LINEAR FOOT	865
	608(1A)	CONCRETE SIDEWALK, 4 INCHES THICK	SQUARE YARD	250
	608(2)	ASPHALT SIDEWALK	TON	2
	609(2)	CURB AND GUTTER, TYPE 1	LINEAR FOOT	560
	611(102)	RIPRAP, CLASS I	LUMP SUM	ALL REQUIRED
	613(2)	CULVERT MARKER POST	EACH	2
	614(1)	CONCRETE BARRIER	LINEAR FOOT	50
	615(1)	STANDARD SIGN	SQUARE FOOT	76
	615(2)	REMOVE AND RELOCATE EXISTING SIGN	EACH	3
	615(6)	SALVAGE SIGN	EACH	8
	618(2)	SEEDING	POUND	365

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
627(1)-14	14-INCH DUCTILE IRON WATER CONDUIT, CLASS 350	LINEAR FOOT	435
627(5)	FIRE HYDRANT INSTALLATION	EACH	3
627(8)	WATER SERVICE CONNECTION	EACH	2
627(103)	1-INCH COPPER WATER CONDUIT	LINEAR FOOT	300
627(109)	CASING EXTENSION, CMP 24 INCH	LINEAR FOOT	29
627(110)	INSTALL BUTTERFLY VALVE 14-INCH	EACH	1
630(2)	GEOTEXTILE, STABILIZATION	SQUARE YARD	2,700
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD	35
639(101)	APPROACH	EACH	12
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
642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642(3)	THREE PERSON SURVEY PARTY	HOUR	40
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(117)	PUBLIC INFORMATION	LUMP SUM	ALL REQUIRED
644(1)	FIELD OFFICE	LUMP SUM	ALL REQUIRED
644(6)	VEHICLES	LUMP SUM	ALL REQUIRED
646(1)	CPM SCHEDULING	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

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ESTIMATE OF QUANTITIES

STATE OF ALASKA
49TH
Heather D. Estabrook
4/26/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	C2-SS	C2-SS

ESTIMATING FACTORS

ITEM NO.	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
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 NO.	ITEM	QUANTITY
201(1B)	CLEARING	4 ACRES
201(2B)	GRUBBING	2 ACRES
202(1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	ALL REQUIRED
	BOULDER	3 EACH
	CULVERT	74 LINEAR FOOT
	LIGHT POLE	2 EACH
	MAILBOX	1 EACH
	POWER YARD POLE	1 EACH
	LIGHT POLE BASE	2 EACH
	WATER HYDRANT	1 EACH
	WATER VALVE	2 EACH
	FENCE	1,347 LINEAR FOOT
	GUARDRAIL	133 LINEAR FOOT
	SHED	1 EACH
	GUY ANCHOR	1 EACH
611(102)	RIPRAP, CLASS I	11 CUBIC YARD
665(102)	TELECOMMUNICATIONS-VAULT, DUCT BANK AND CONDUIT SYSTEM	
	ACS CONDUIT	16,150 LINEAR FOOT
	ACS HAND HOLES	4 EACH
	ACS PEDESTAL	14 EACH

NOTES

1. SEE SIGNING DETAILS AND PLAN SHEETS H1-SS TO H8-SS FOR SIGN SUMMARY.

ESTIMATE OF QUANTITIES

STATE OF ALASKA
49TH
Heather D. Estabrook
4/26/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C0006cnst11147.01FB_1C-C2-SS Fri, Apr/26/19 04:15pm

DEMOLITION INDEX:

- SANITARY SEWER DEMO
- SANITARY SEWER ABANDON IN PLACE
- WATER DEMO
- 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 & OVERHEAD UTILITY POLE
- SIGNS
- MAILBOX
- HAND CLEARING
- GRUBBING
- REMOVAL OF PAVEMENT, GRAVEL, CONCRETE, CURB & GUTTER

REMOVAL BY OWNERS

	ALIGNMENT	BEGIN	OFFSET	END	OFFSET	QUANTITY	UNIT	REMARKS
	W	12+68.86	8.63 RT	–	–	1	EA	SHED
	01	82+74.55	43.63 RT	83+09.54	43.08 RT	35	LF	CHAIN LINK FENCE
	01	83+81.79	307.90 RT	84+26.75	313.64 RT	45	LF	PRIVATE GATE
	01	85+87.07	47.01 LT	–	–	1	EA	MAILBOX
	01	86+93.62	45.23 LT	–	–	1	EA	MAILBOX
	01	88+33.89	46.39 LT	–	–	1	EA	MAILBOX
	01	92+03.23	55.46 LT	–	–	1	EA	WOODEN SIGN, UNIVERSITY DENTAL CENTER
	01	93+84.85	67.81 LT	–	–	1	EA	SERVICE CENTER SIGN U.S. DEPARTMENT OF AGRICULTURE
	01	94+83.47	57.17 RT	94+89.82	57.36 RT	13	LF	PRIVATE GATE
NIC	~~H~~	~~10+39.00~~	~~6.15 RT~~	~~–~~	~~–~~	~~4~~	~~EA~~	~~CONNEXS AND RECREATIONAL VEHICLES~~
	01	95+36.02	62.67 LT	–	–	1	EA	UNIVERSITY SIGN
	01	95+93.64	64.32 LT	–	–	1	EA	BUILDING ADDRESS SIGN
	01	98+64.42	55.61 LT	–	–	1	EA	OASIS PRIVATE SIGN
	01	100+89.27	62.42 LT	–	–	1	EA	WELLS FARGO SIGN

GENERAL DEMOLITION NOTES:

1. GRUBBING TO OCCUR IN LOCATIONS SHOWN IN THE DEMO PLANS. 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.
2. ALL UTILITIES MUST BE TEMPORARILY OR PERMANENTLY RELOCATED PRIOR TO DEMOLITION. SEE SPECIFICATIONS FOR ALLOWABLE OUTAGES AND OTHER REQUIREMENTS.
3. SUPPORT AND PROTECT OTHER UNDERGROUND UTILITIES, CONDUITS, AND STRUCTURES WHICH ARE NOT SCHEDULED FOR DEMOLITION OR ABANDONMENT.
4. 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.
5. 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.
6. EXISTING ACS DUCT BANK IS TO REMAIN IN PLACE UNTIL FULL RELOCATION CAN OCCUR. PROTECT ACS DUCT BANK AND STRUCTURES DURING CONSTRUCTION.
7. FOR MAILBOX REMOVAL REFER TO MAILBOX INSTALLATION SUMMARY TABLE ON G10-SS.

1 TABLE 1: HAND CLEARING LT SIDE

UNIVERSITY AVE. STATION	CLEARED AREA
"01" 67+47.93 TO "01" 72+77.15	5' OFFSET FROM ROW
"01" 75+59.39 TO "01" 77+55.00	5' OFFSET FROM ROW

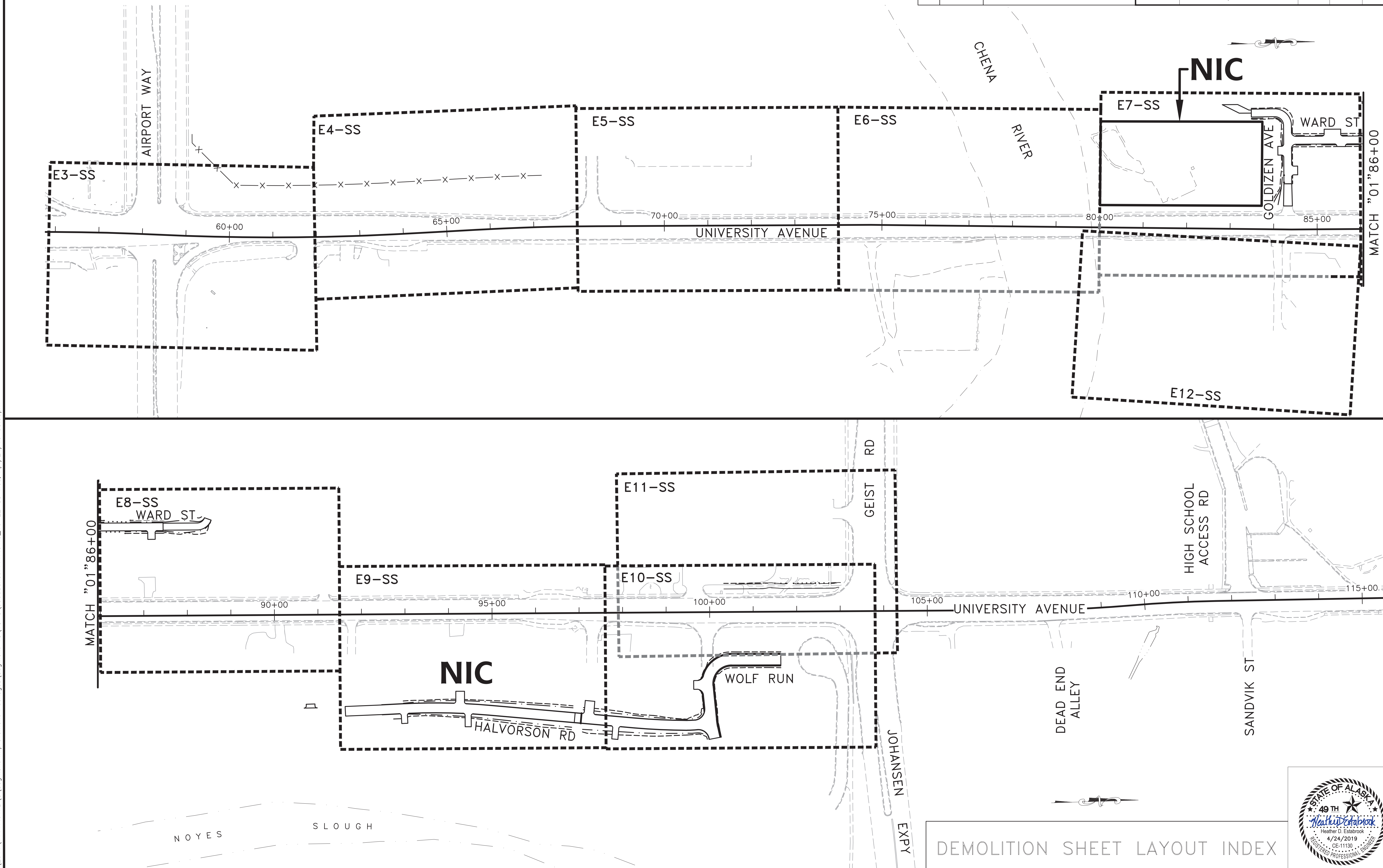
DEMOLITION DETAILS

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\c0007cnst11147.01fb_1c-E1-SS Wed, Apr/24/19 04:58pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E2-SS	E13-SS



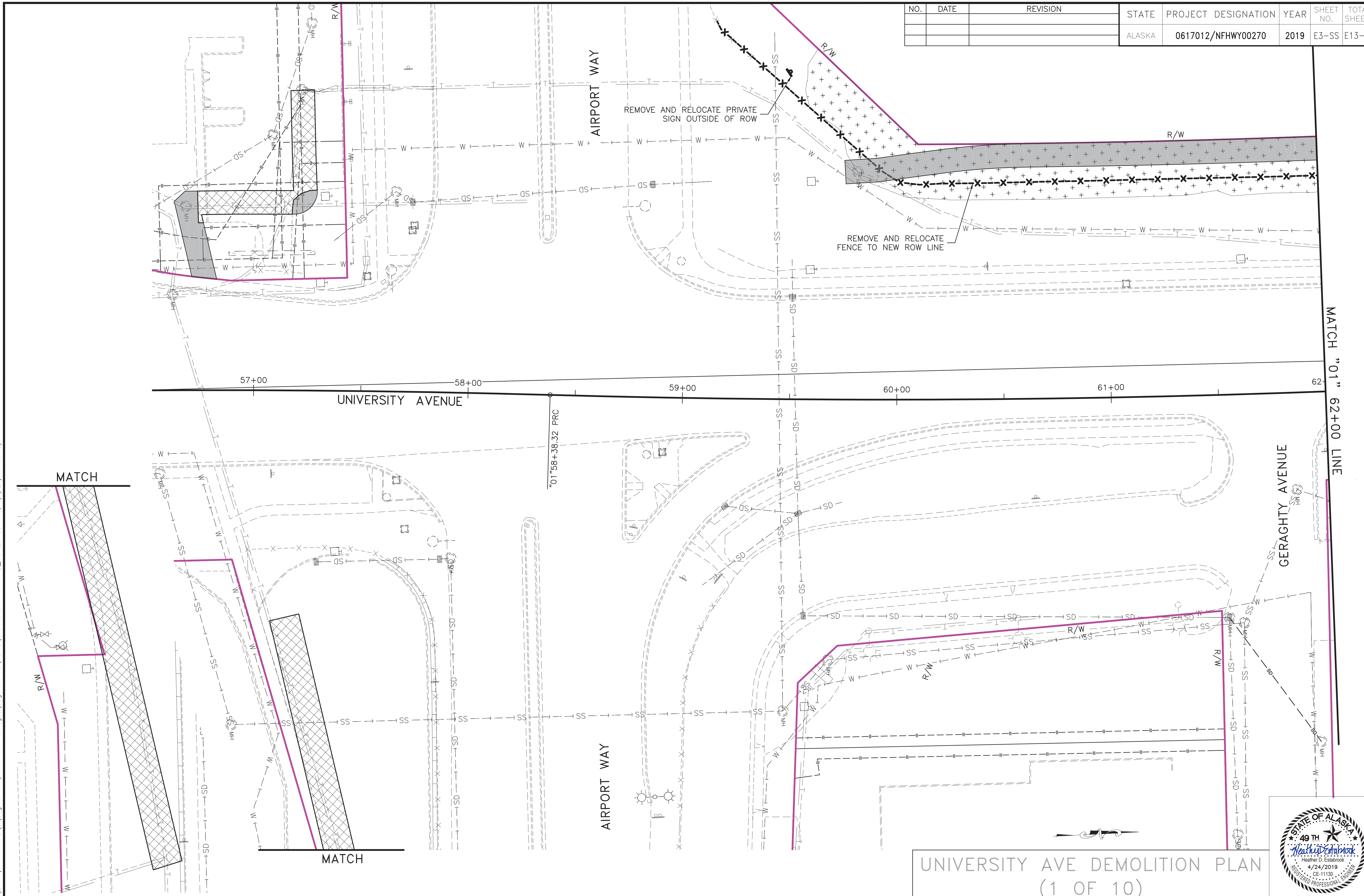
DEMOLITION SHEET LAYOUT INDEX

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\c0005cnst11147.01fb_1c-E2-SS Wed, Apr/24/19 05:00pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E3-SS	E13-SS



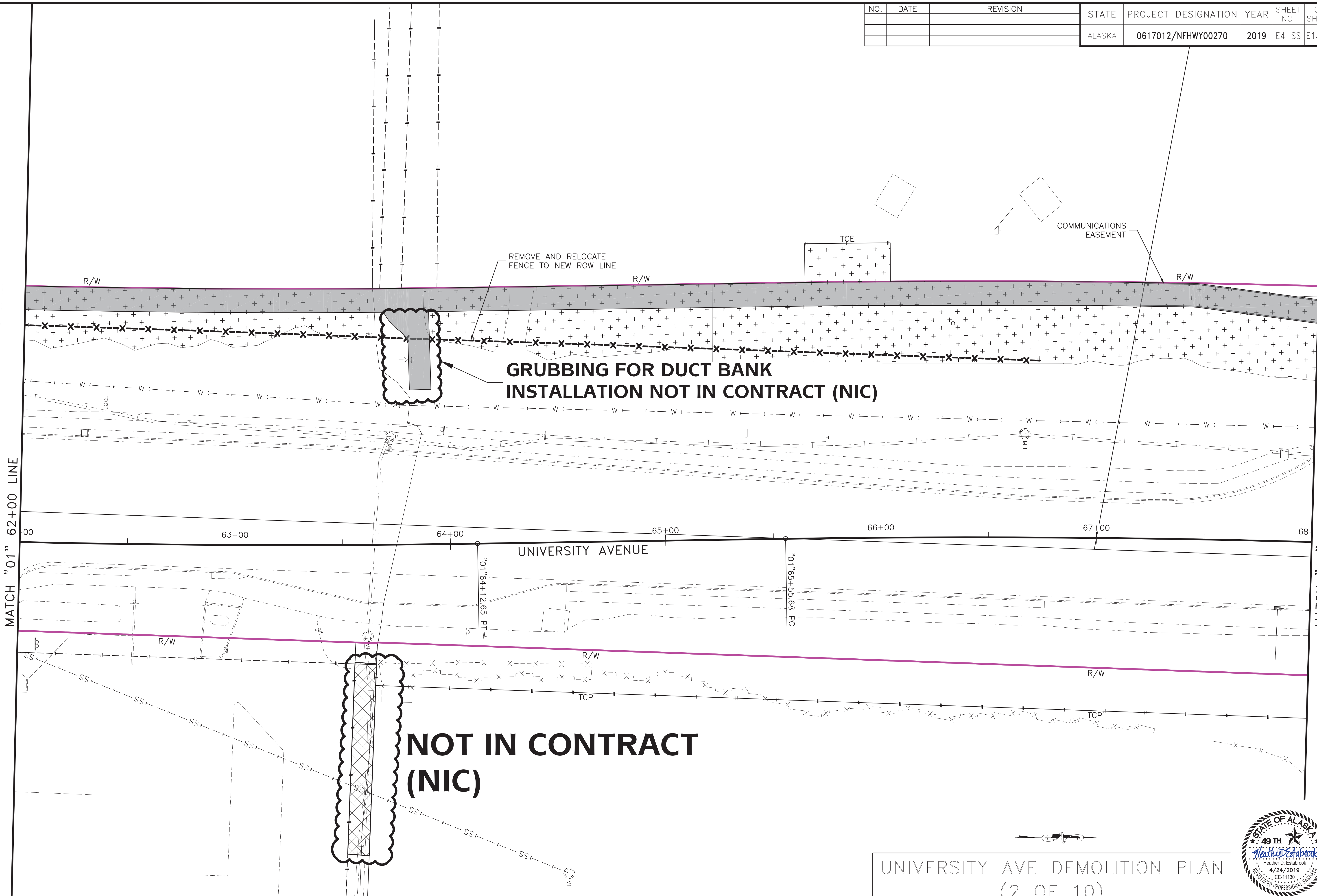
UNIVERSITY AVE DEMOLITION PLAN (1 OF 10)

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1001cnst\1147.01FB_1C-E3-SS Wed, Apr/24/19 05:05pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E4-SS	E13-SS



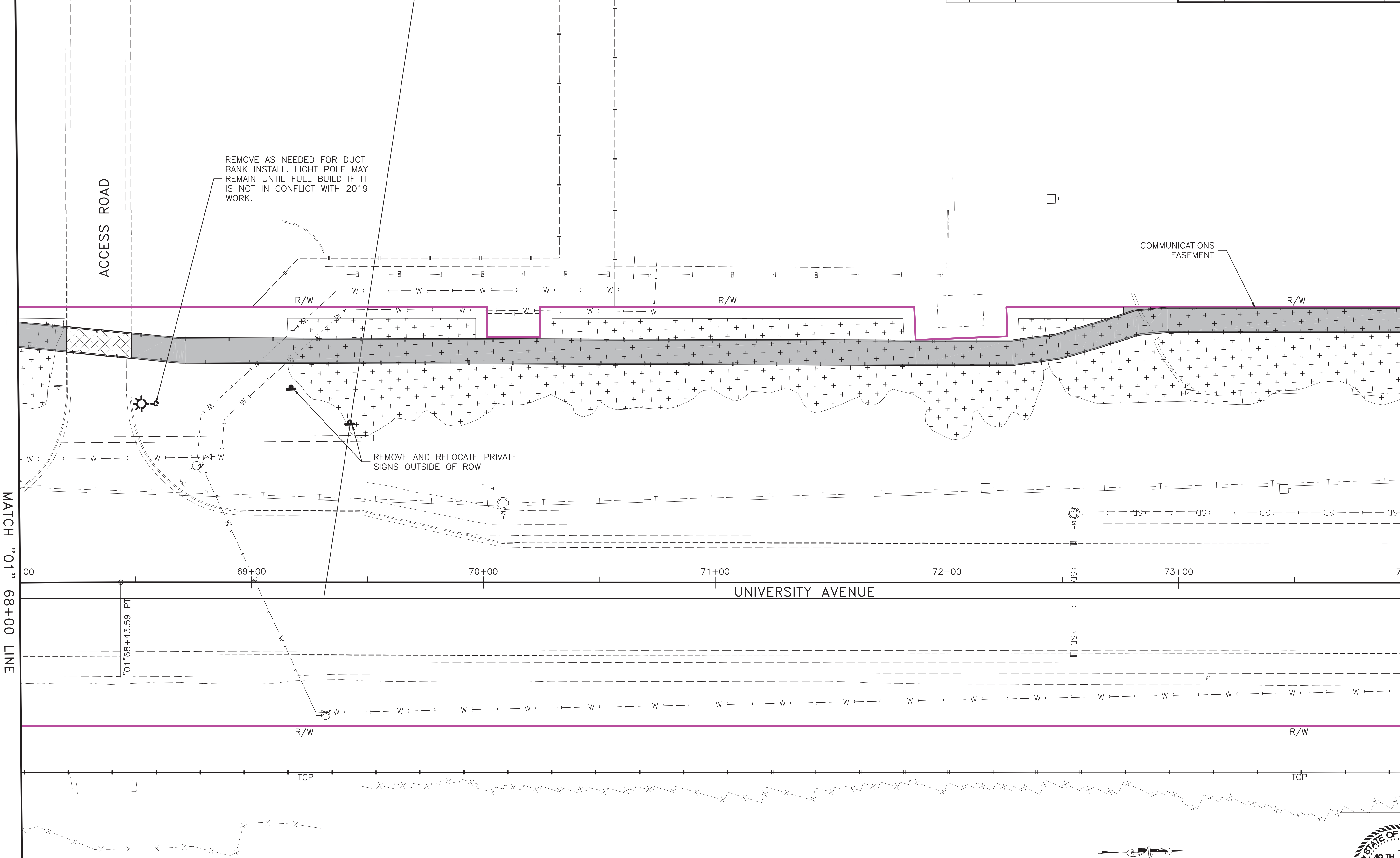
UNIVERSITY AVE DEMOLITION PLAN (2 OF 10)

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1001cnst\1147.01FB_1C-E4-SS Wed, Apr/24/19 05:06pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E5-SS	E13-SS



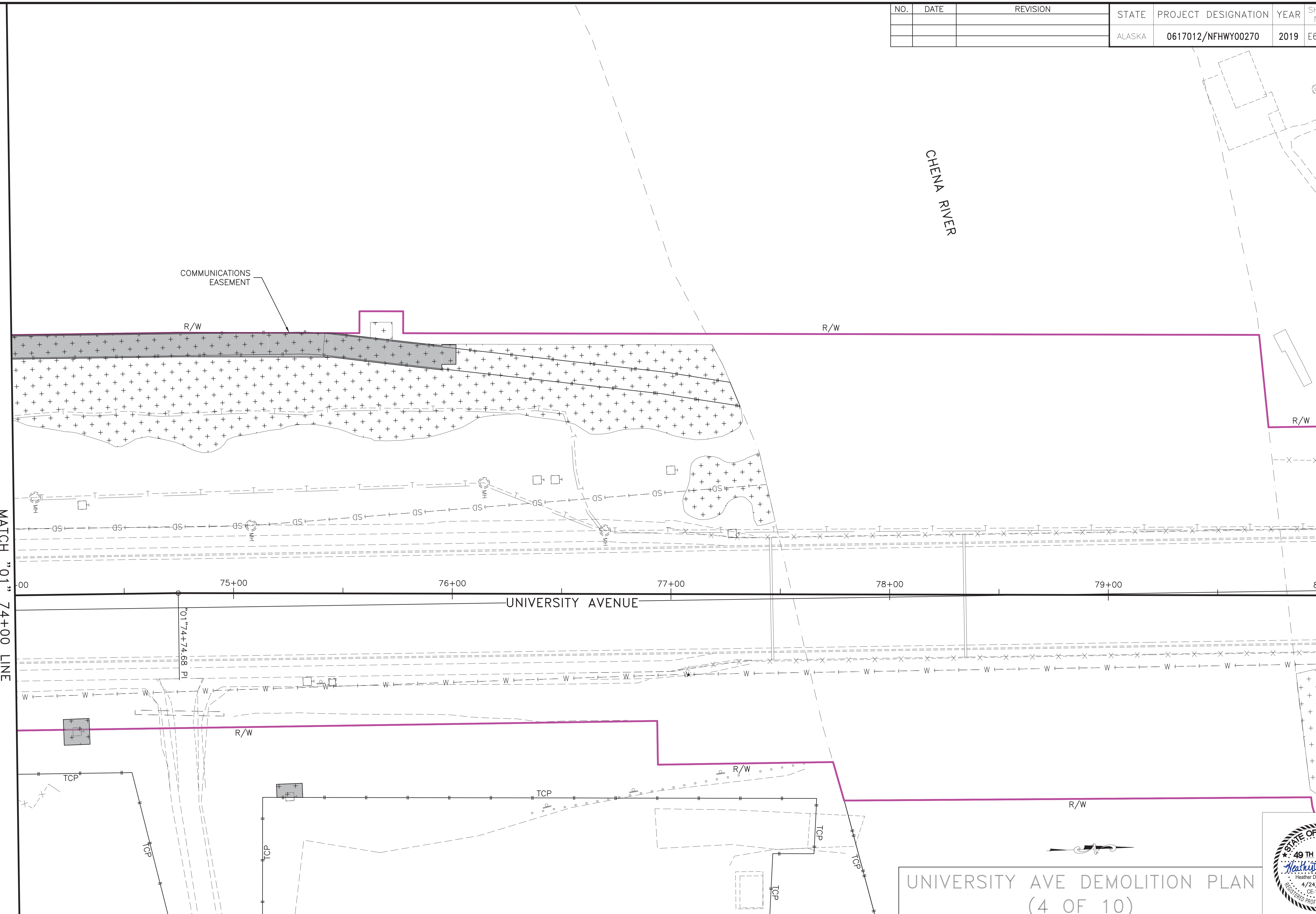
UNIVERSITY AVE DEMOLITION PLAN (3 OF 10)

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1001cnst11147.01FB_1C-E5-SS Wed, Apr/24/19 05:07pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E6-SS	E13-SS



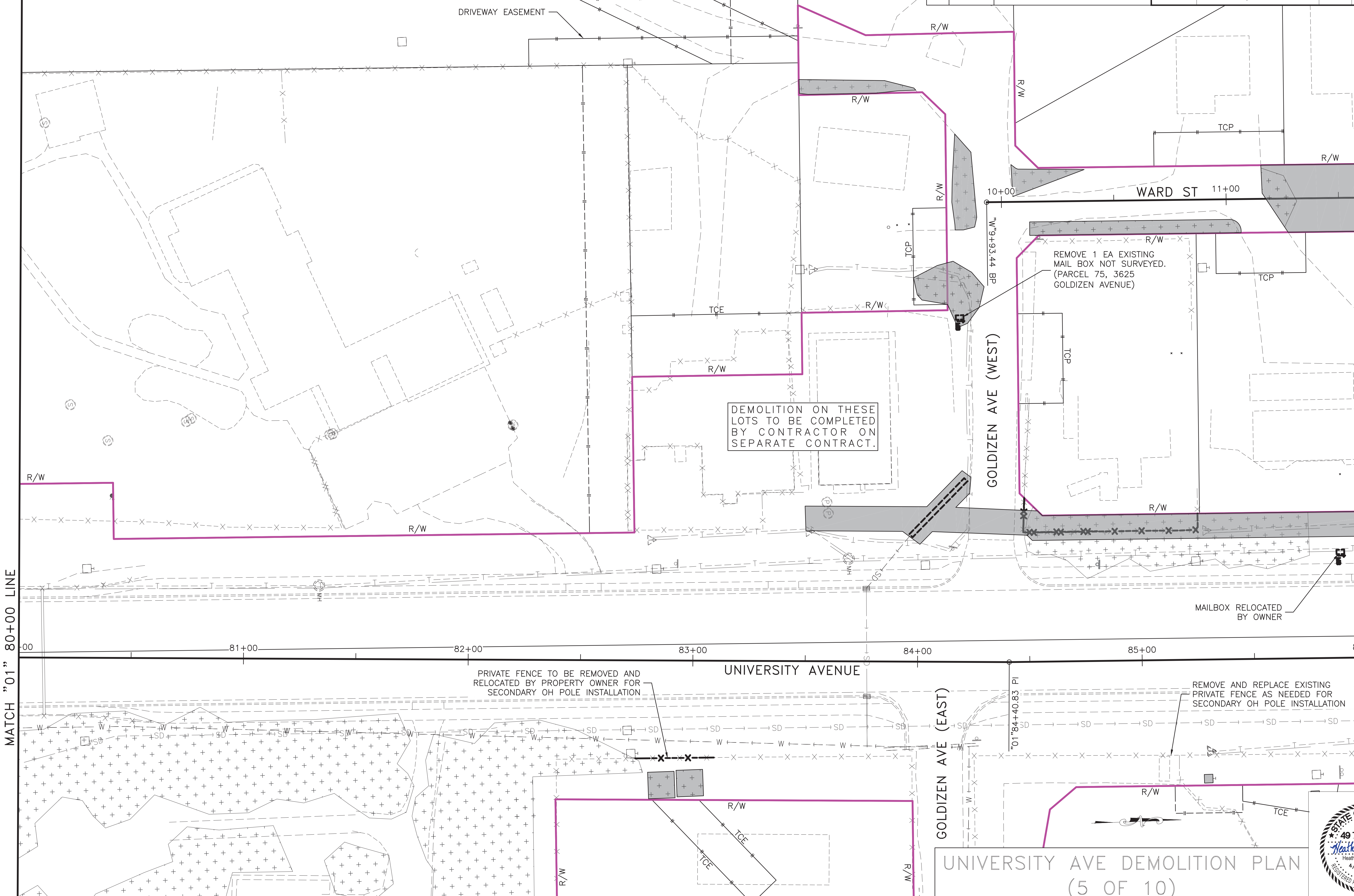
UNIVERSITY AVE DEMOLITION PLAN (4 OF 10)

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1001cnst1147.01FB_1C-E6-SS Wed, Apr/24/19 05:08pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E7-SS	E13-SS



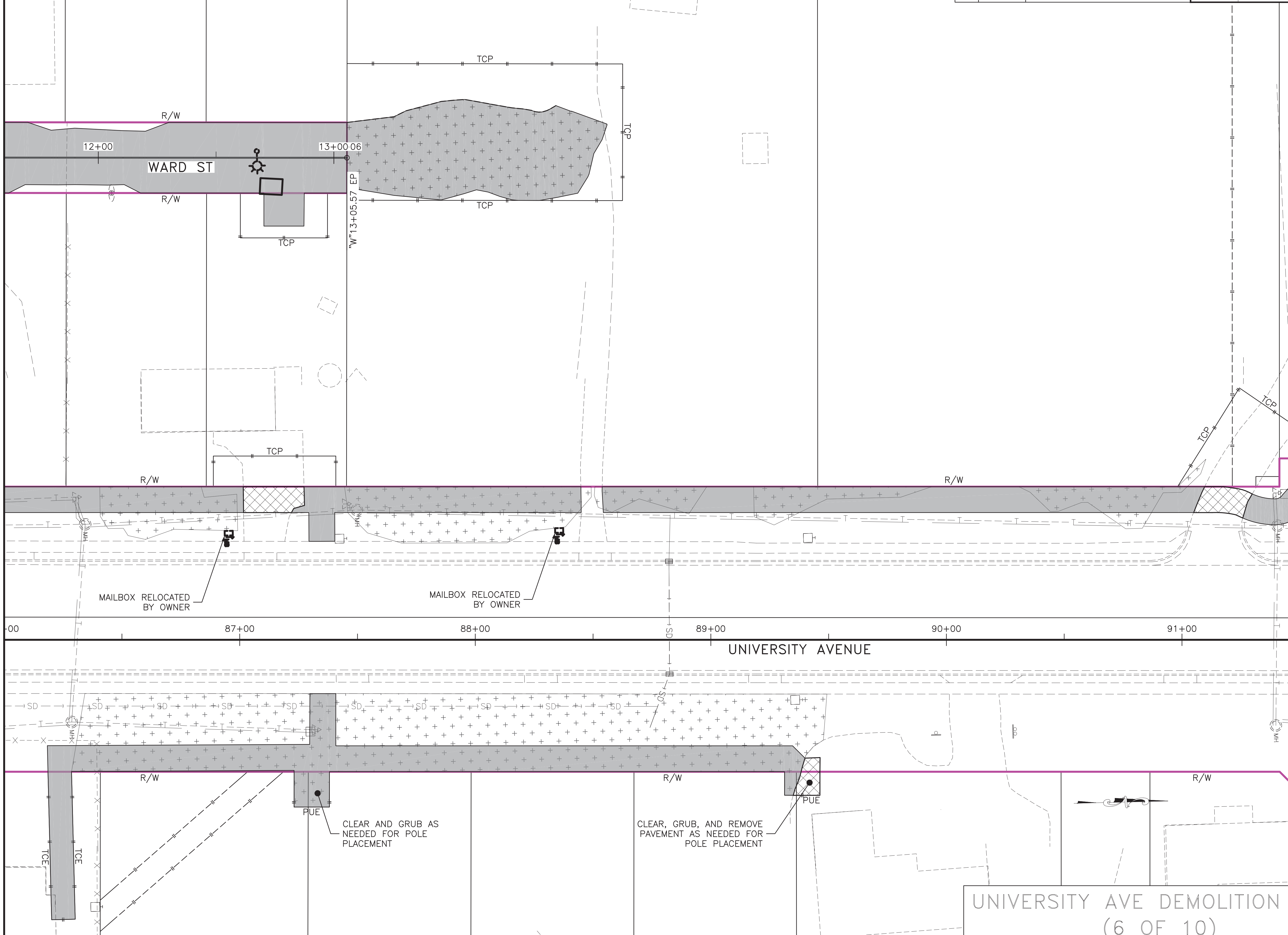
UNIVERSITY AVE DEMOLITION PLAN
(5 OF 10)

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

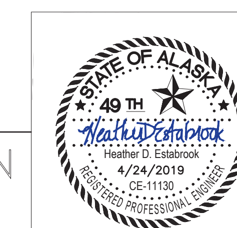
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\1C\C\Segment Improvement Packages\Segment 1C\1C-C\C1001cnst\11147.01FB_1C-E7-SS Wed, Apr/24/19 05:09pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E8-SS	E13-SS



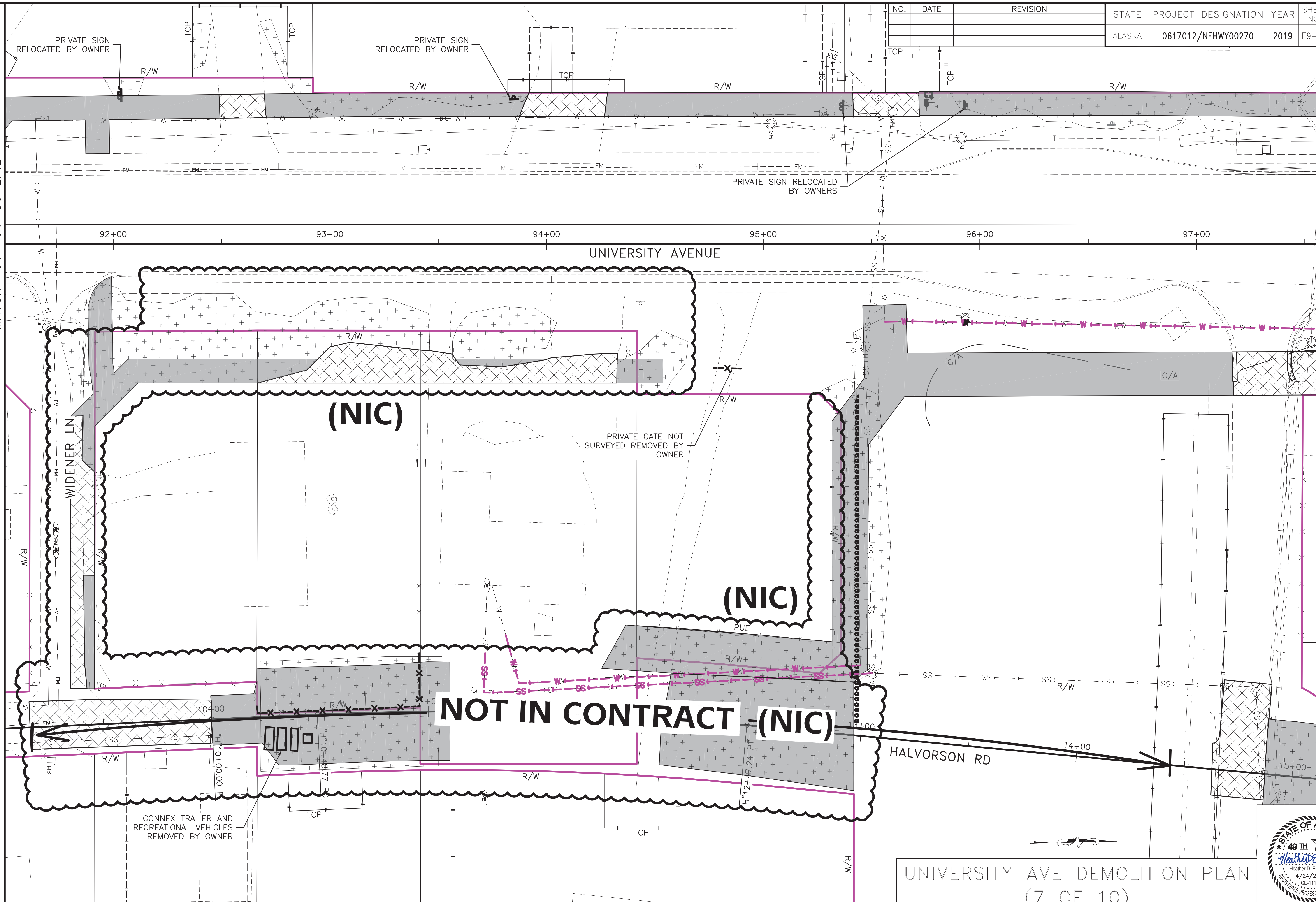
UNIVERSITY AVE DEMOLITION PLAN (6 OF 10)



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 1C\1C-C\C1001cnst11147.01FB_1C-E8-SS Wed, Apr/24/19 05:10pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E9-SS	E13-SS



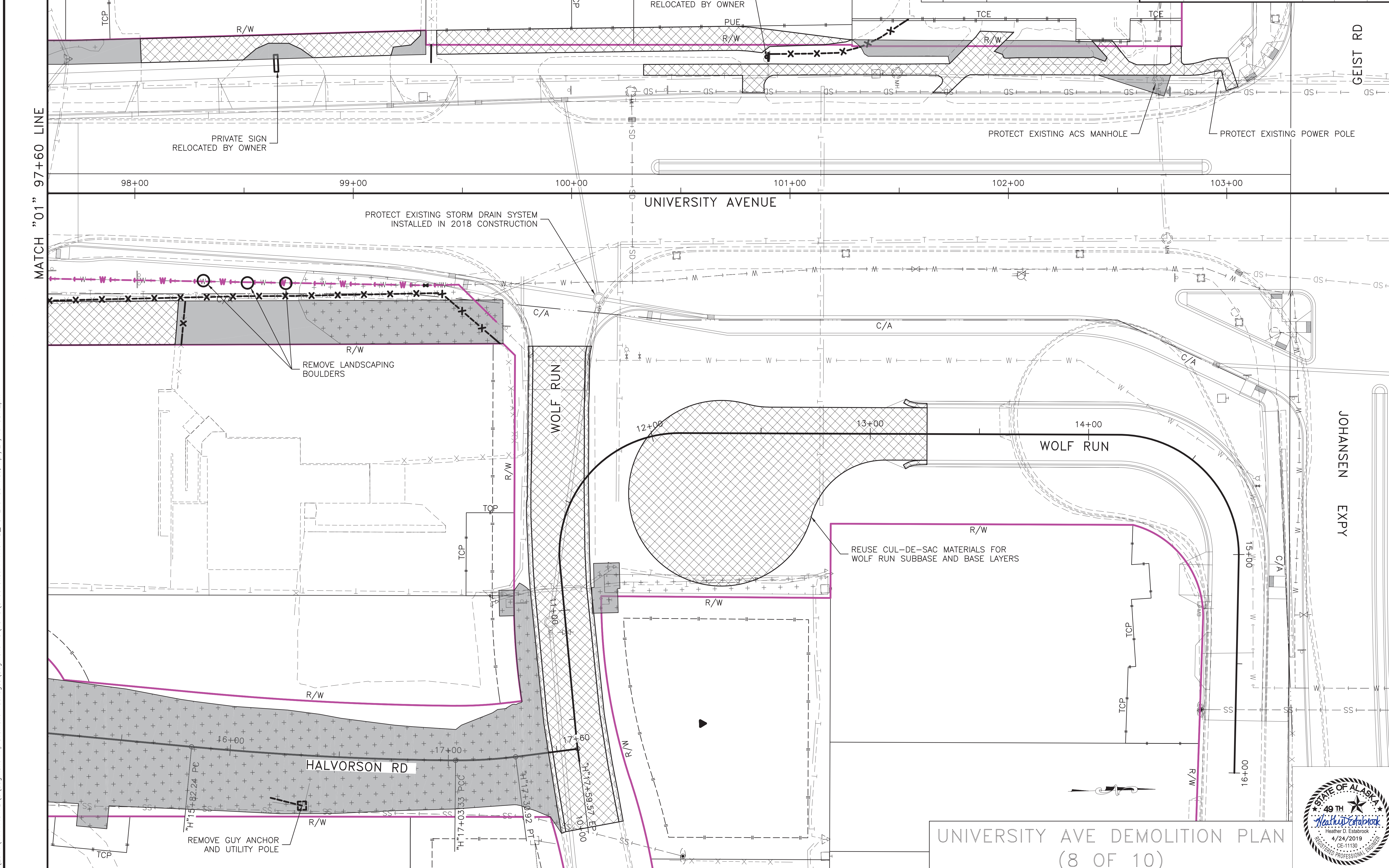
UNIVERSITY AVE DEMOLITION PLAN
(7 OF 10)

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1001cnst11147.01FB_1C-E9-SS Wed, Apr/24/19 05:11pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E10-SS	E13-SS



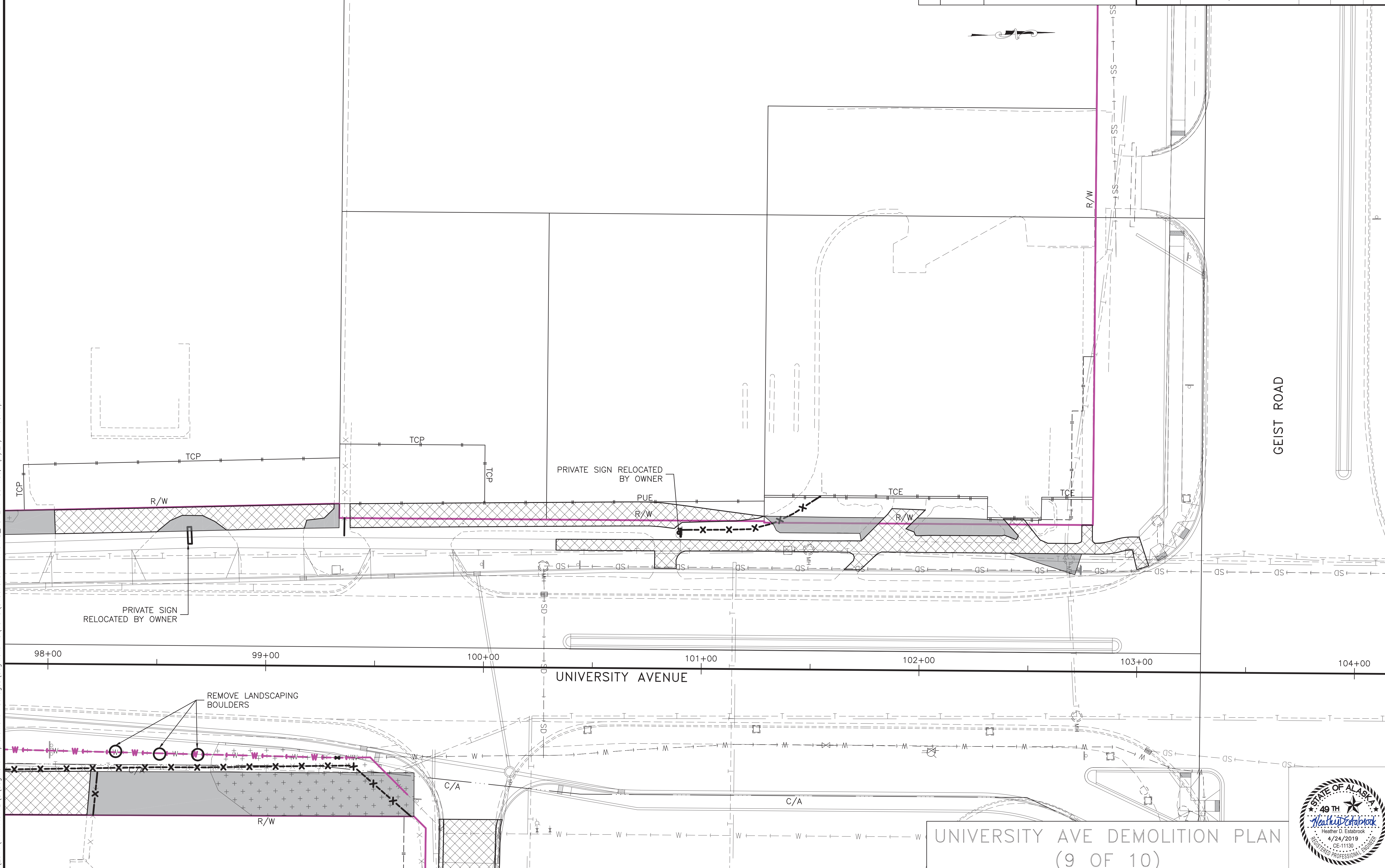
UNIVERSITY AVE DEMOLITION PLAN
(8 OF 10)

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1001cnst11147.01FB_1C-E10-SS Wed, Apr/24/19 05:12pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E11-SS	E13-SS

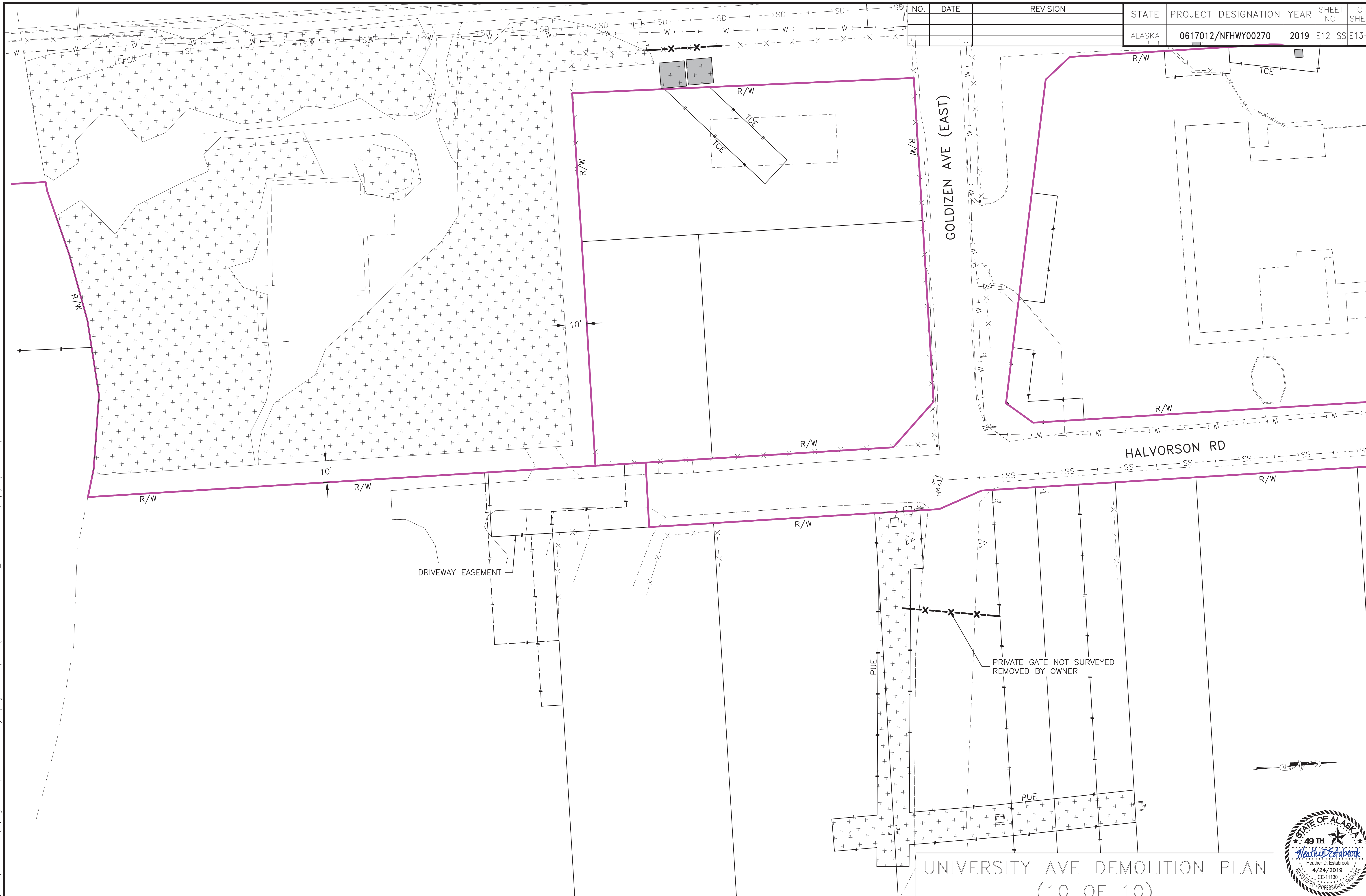


UNIVERSITY AVE DEMOLITION PLAN (9 OF 10)

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 1C\1C-C\C1001cnst\11147.01FB_1C-E11-SS Wed, Apr/24/19 05:13pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E12-SS	E13-SS



UNIVERSITY AVE DEMOLITION PLAN
(10 OF 10)

STATE OF ALASKA
49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

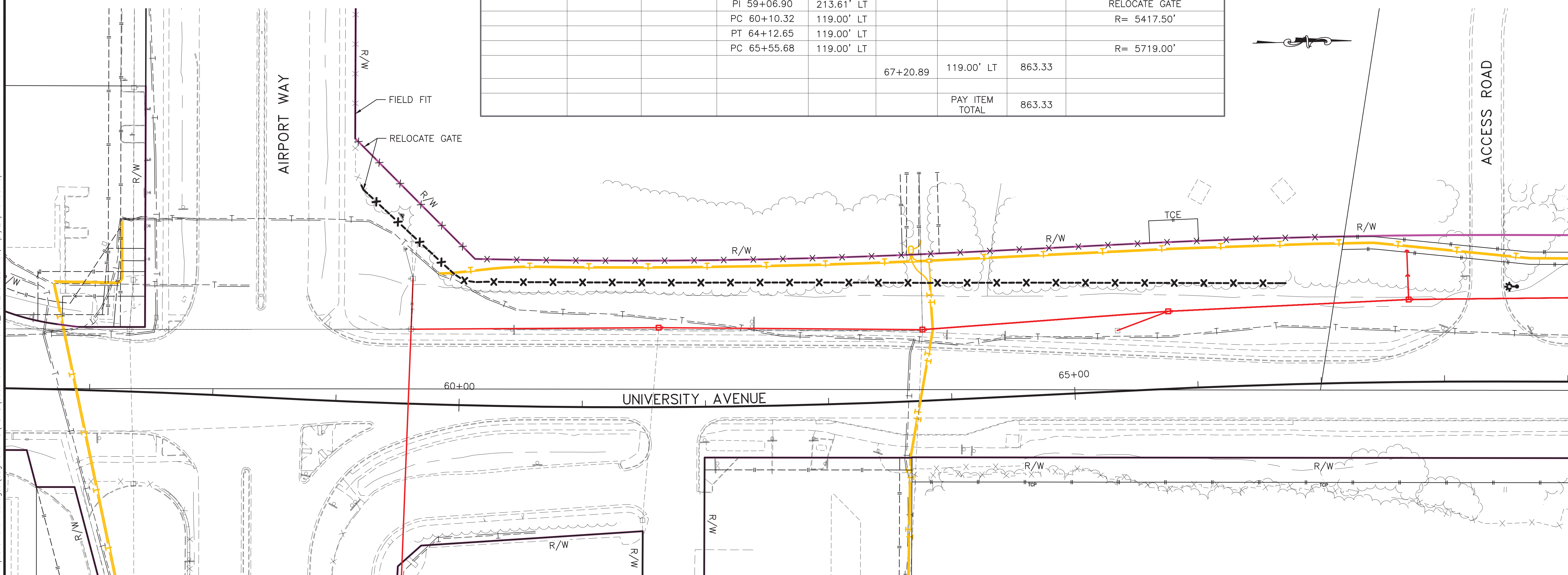
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C1001cnst11147.01FB_1C-E12-SS Wed, Apr/24/19 05:14pm

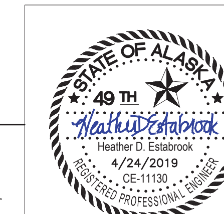
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	E13-SS	E13-SS

607(4) RECONSTRUCTED FENCE

ALIGNMENT	START		PI/PC/PT		END		LENGTH	REMARKS
	STATION	OFFSET	STATION	OFFSET	STATION	OFFSET	(FT)	
"01"	59+06.06	233.60' LT						FIELD FIT THIS SEGMENT
			PI 59+06.90	213.61' LT				RELOCATE GATE
			PC 60+10.32	119.00' LT				R= 5417.50'
			PT 64+12.65	119.00' LT				
			PC 65+55.68	119.00' LT				R= 5719.00'
					67+20.89	119.00' LT	863.33	
						PAY ITEM TOTAL	863.33	



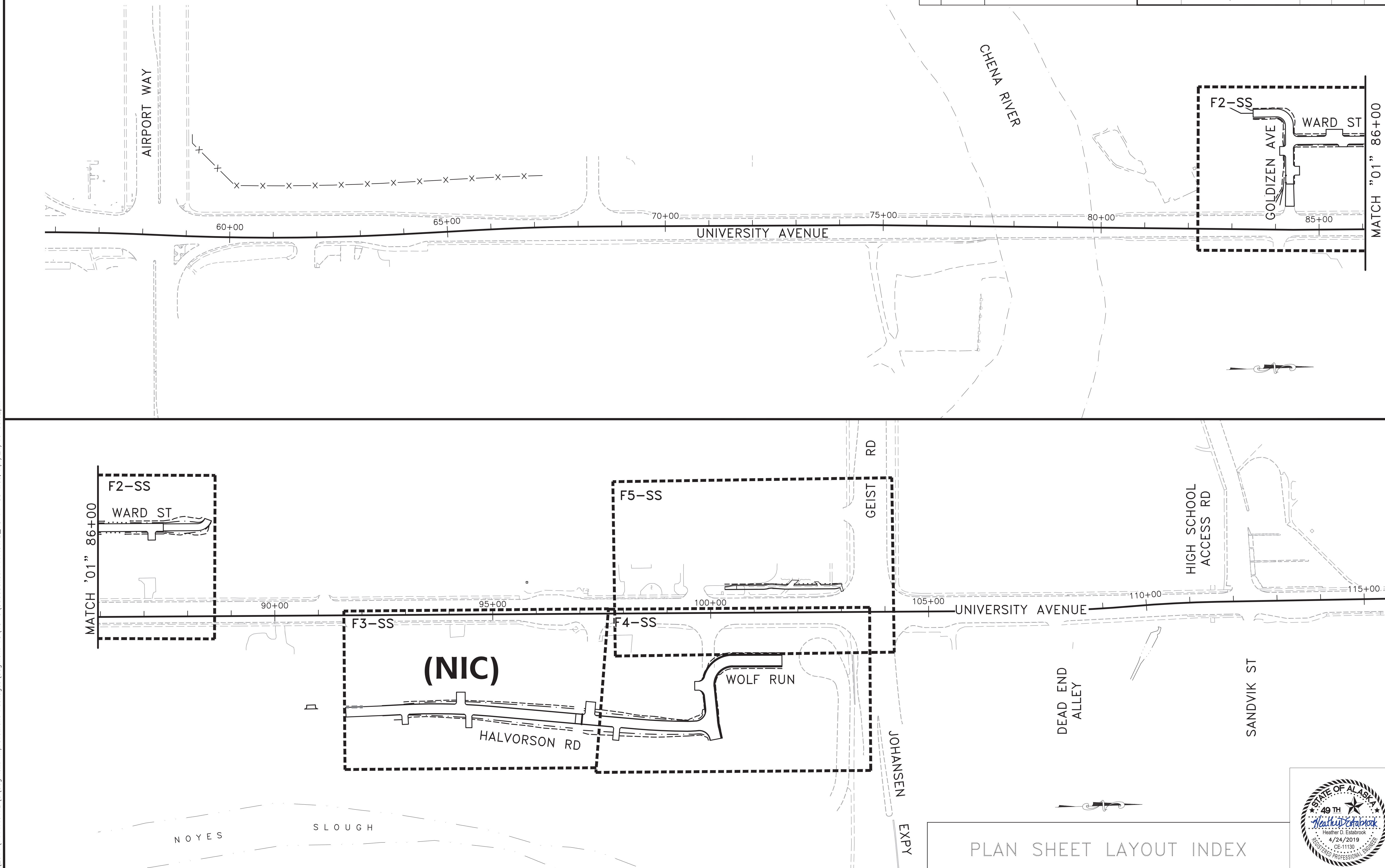


DEMOLITION
RECONSTRUCTED FENCE

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 1C\1C-C\c0007cnst11147.01fb_1c-E13-SS Wed, Apr/24/19 05:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F1-SS	F8-SS



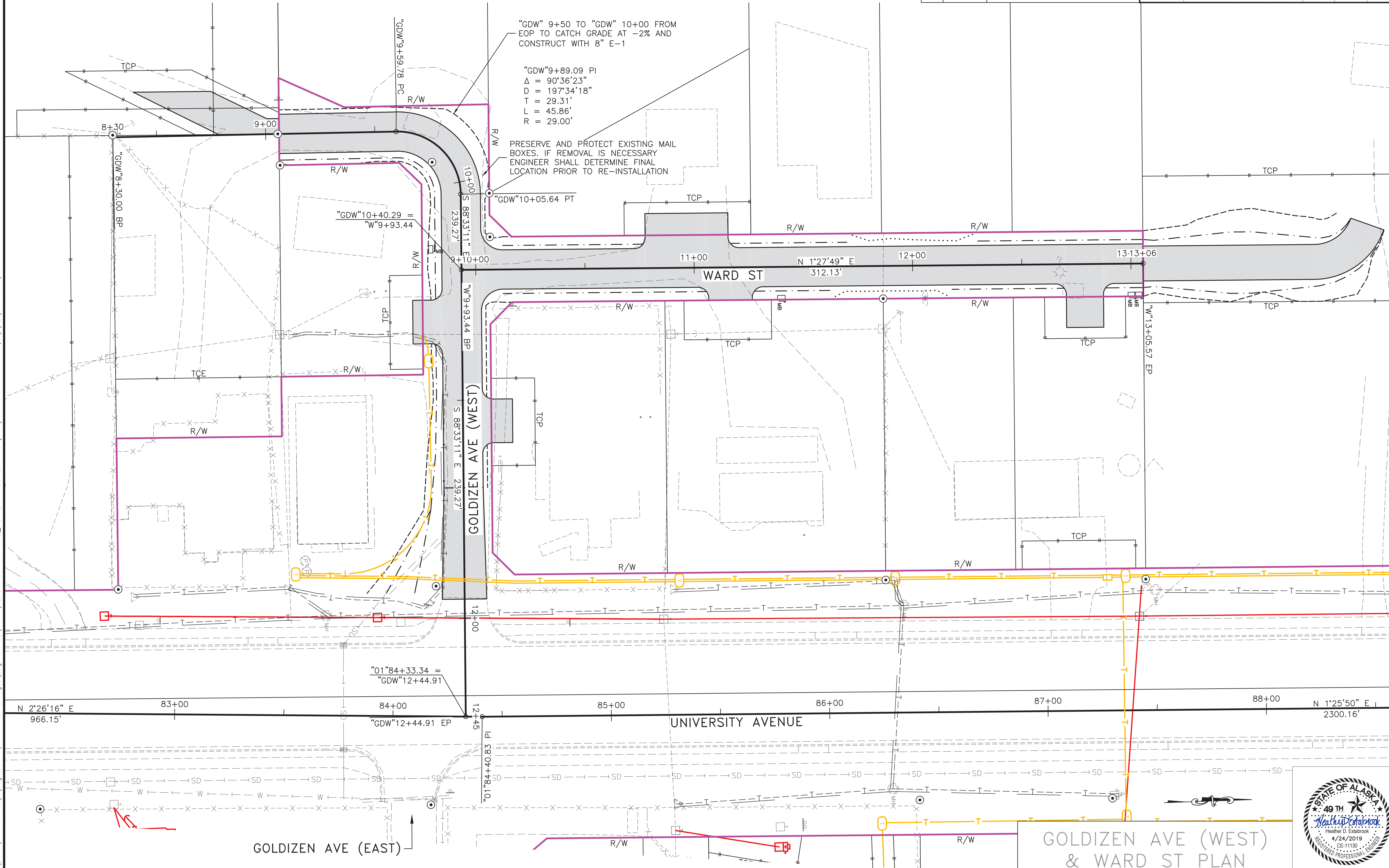
PLAN SHEET LAYOUT INDEX

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C0005cnst11147.01FB_1C-F1-SS Wed, Apr/24/19 03:02pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F2-SS	F8-SS



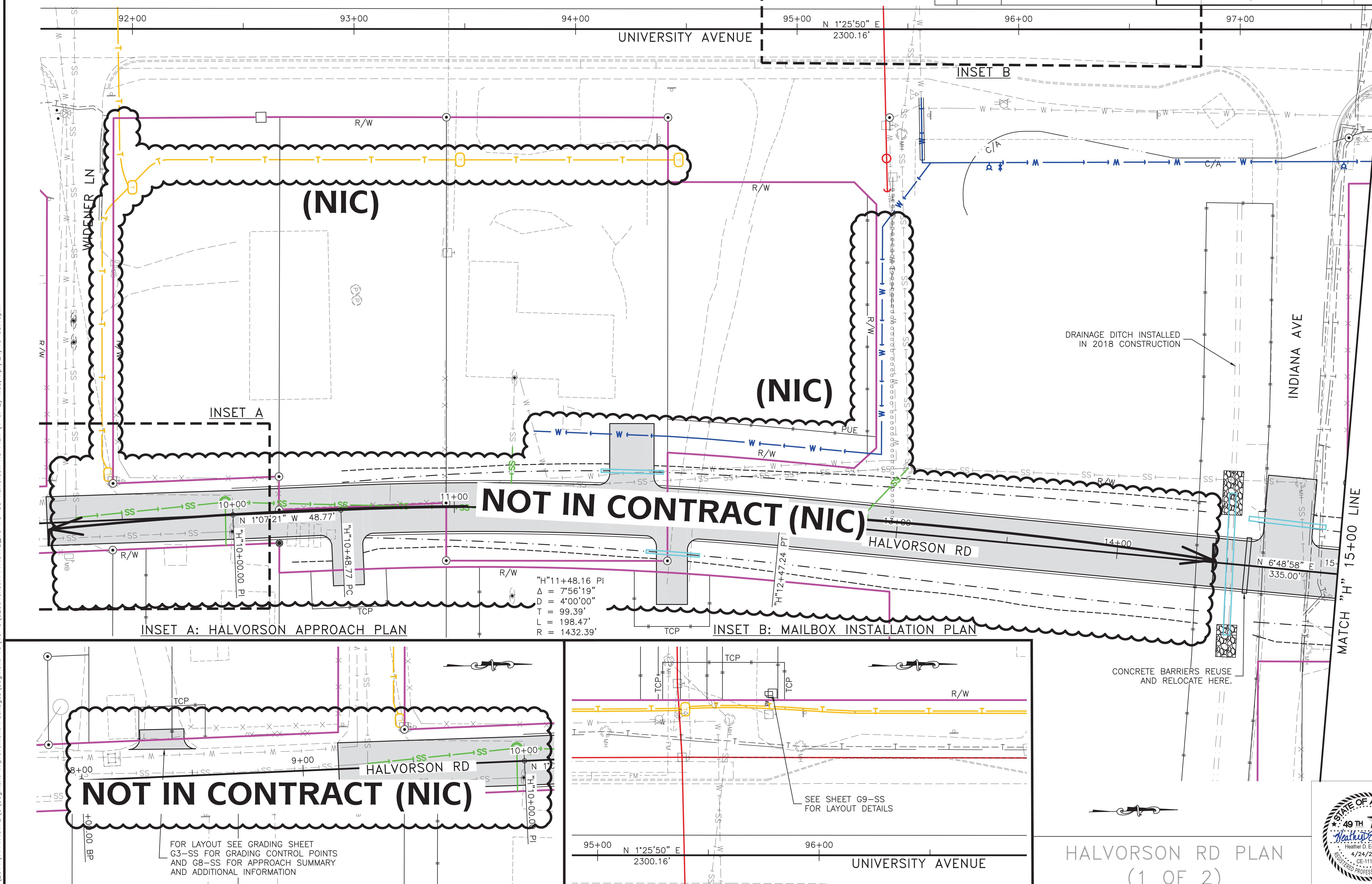
GOLDIZEN AVE (WEST) & WARD ST PLAN

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C2001cnst\1147.01FB_1C-C-F2-SS Goldizen Ave (West) & Ward St Plan Wed, Apr/24/19 03:09pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F3-SS	F8-SS



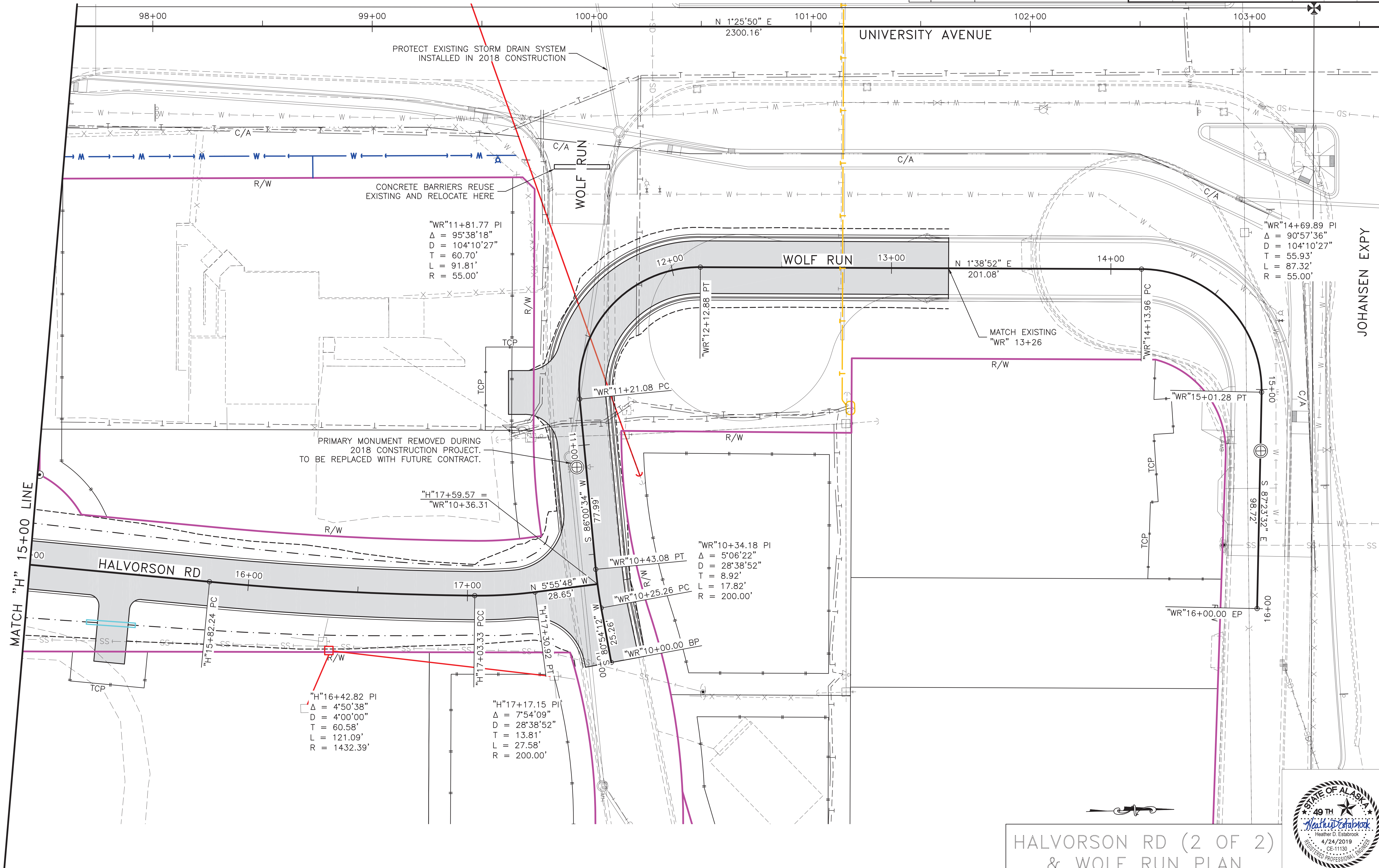
HALVORSON RD PLAN (1 OF 2)

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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\1C\Segment Improvement Packages\Segment 1C\1C-C\C2001cnst11147.01FB_1C-F3-SS Halvorson Rd Plan (1 of 2) Wed, Apr/24/19 03:10pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F4-SS	F8-SS

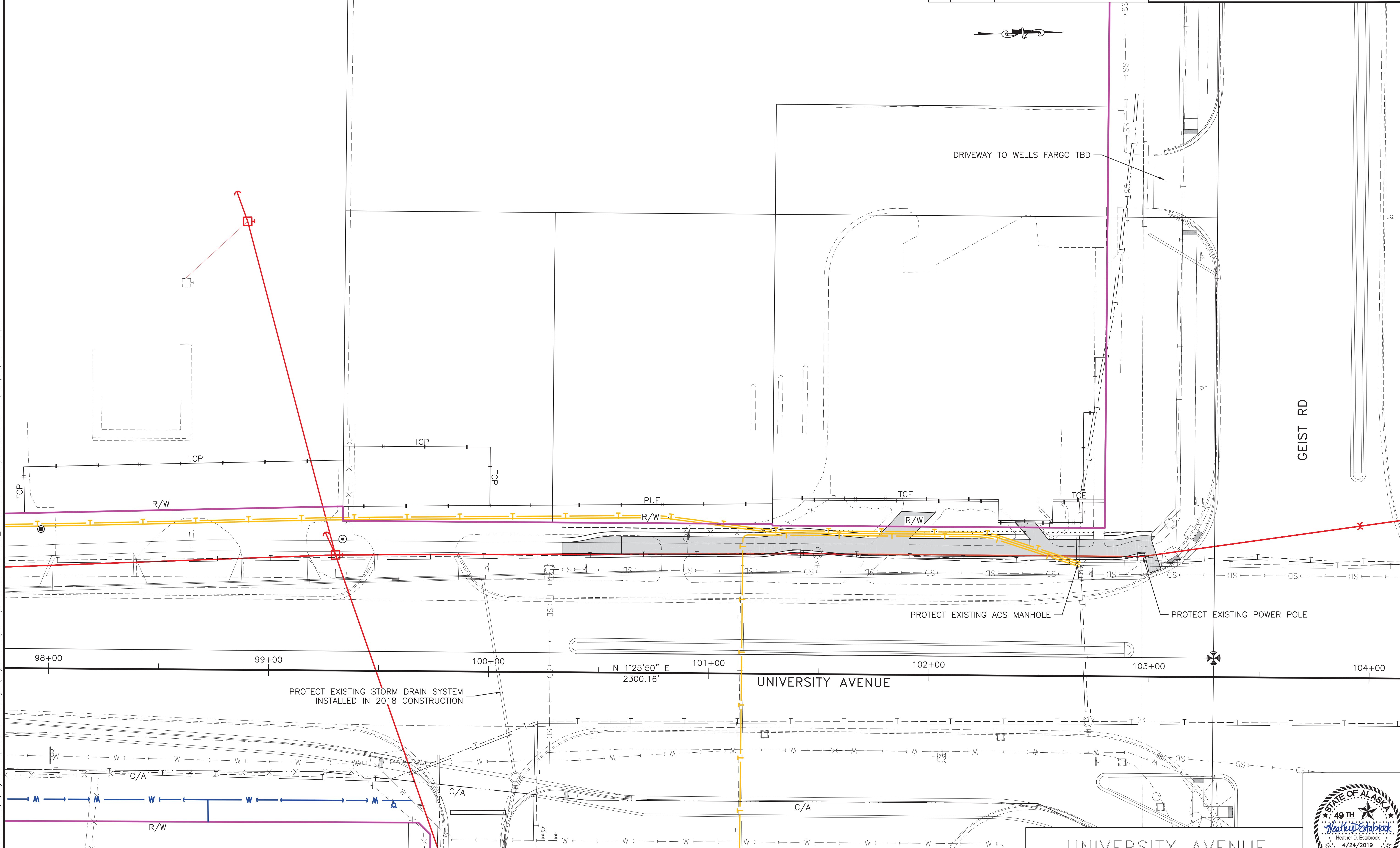


HALVORSON RD (2 OF 2)
& WOLF RUN PLAN

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\C\Segment Improvement Packages\Segment 1C\1C-C\C2001cnst11147.01FB_1C-F4-SS Halvorson Rd (2 OF 2) & Wolf Run Plan Wed, Apr/24/19 03:11pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F5-SS	F8-SS



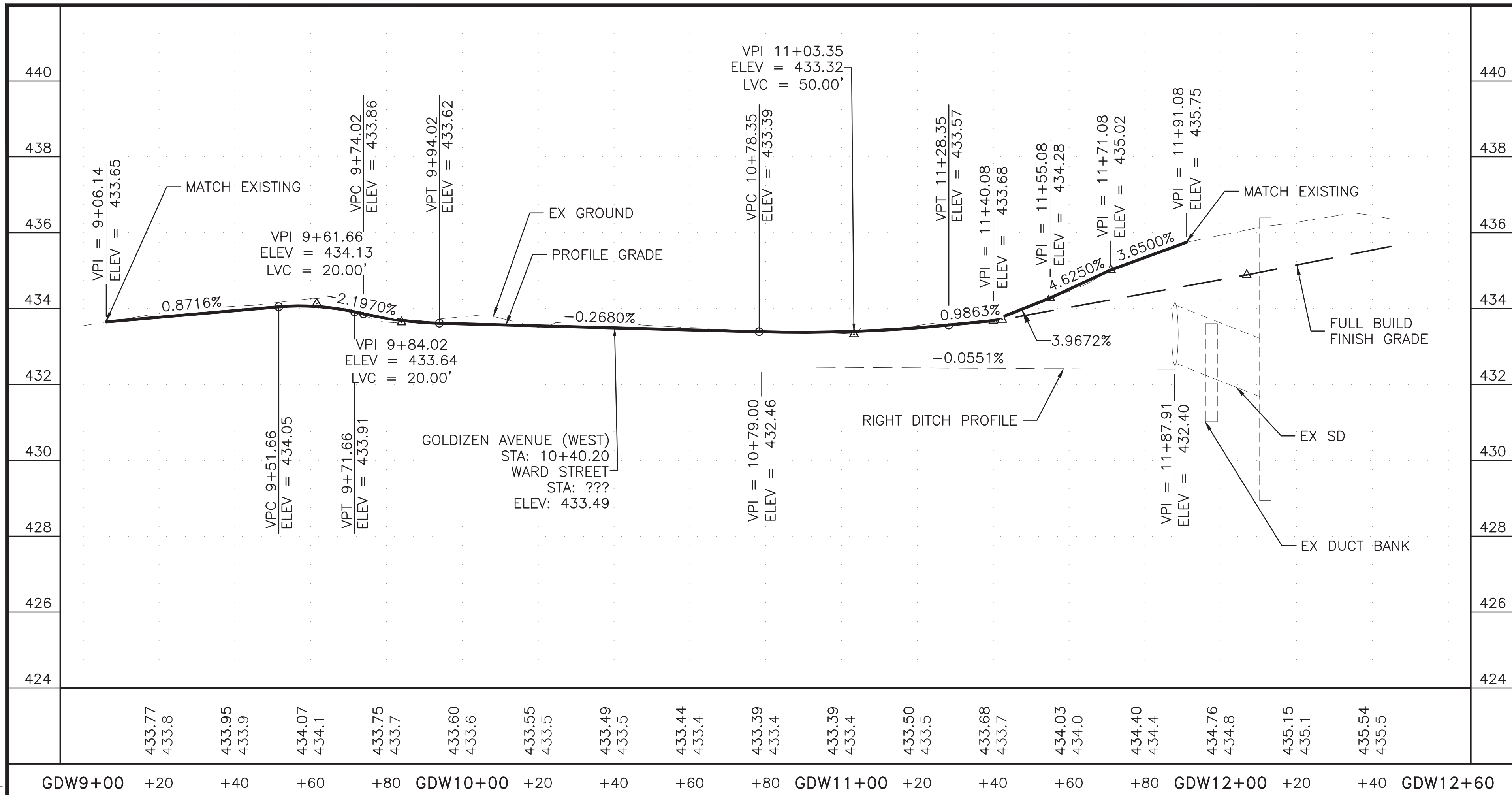
UNIVERSITY AVENUE SIDEWALK PLAN

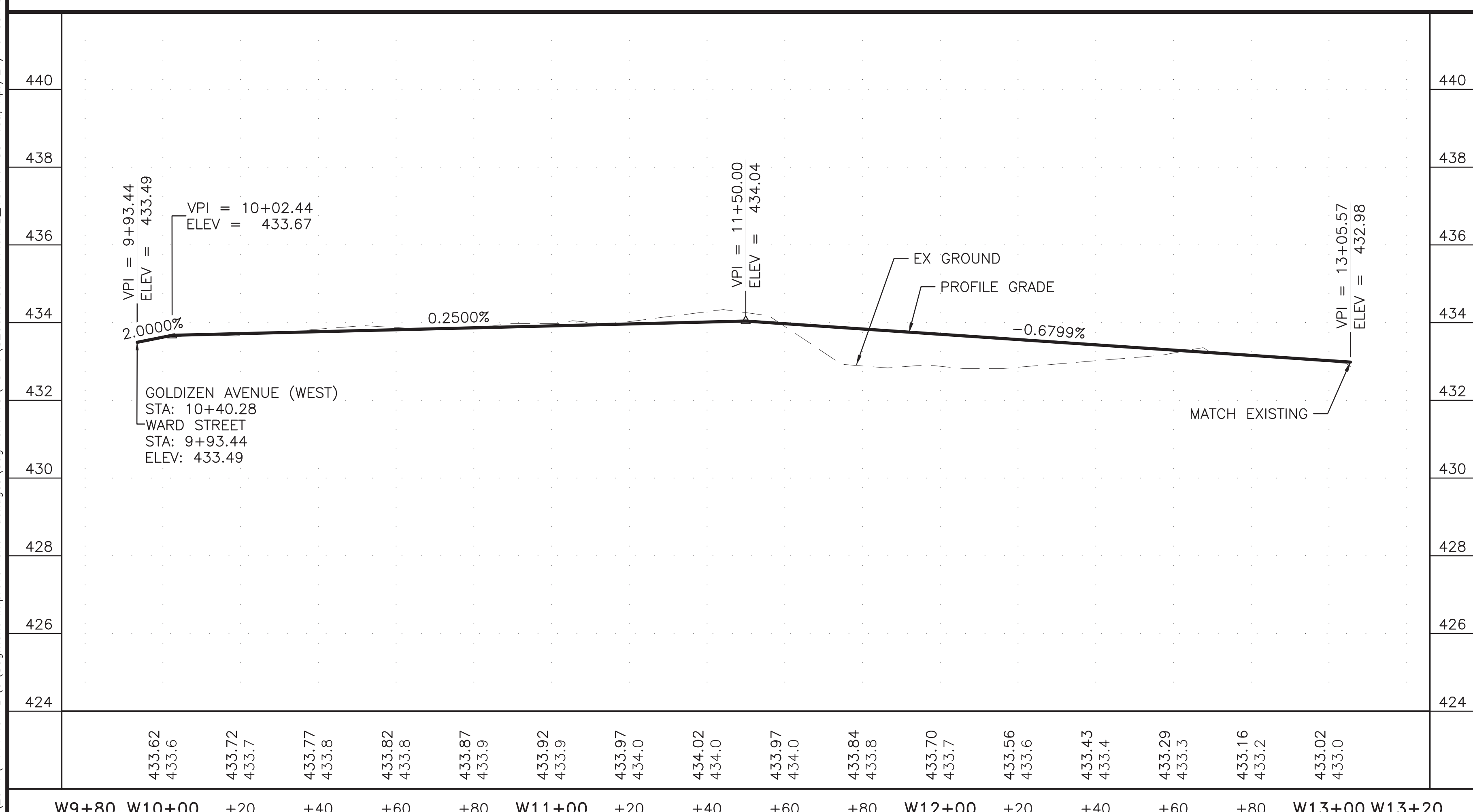
STATE OF ALASKA
49 TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C2001cnst\1147.01FB_1C-F5-SS University Avenue Plan Wed, Apr/24/19 03:12pm

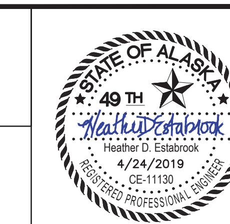
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F6-SS	F8-SS





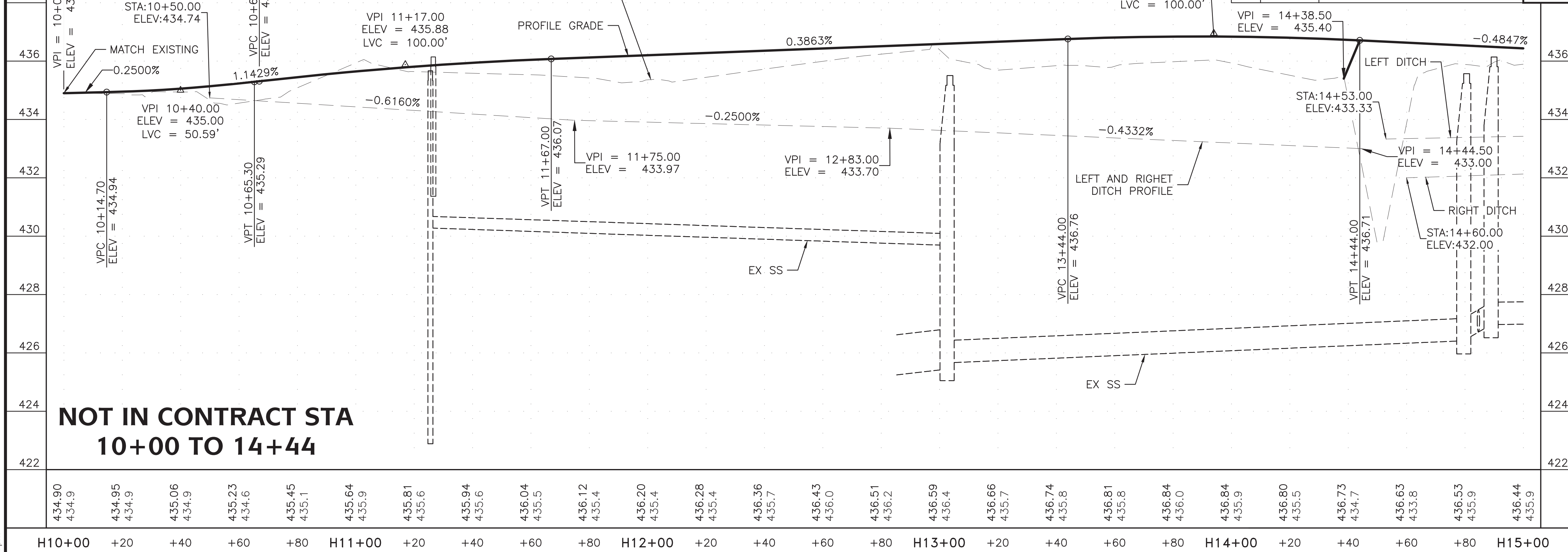
GOLDIZEN AVE (WEST) AND WARD ST PROFILES



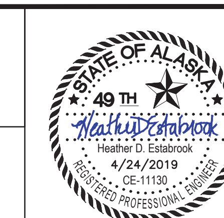
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C2004cnst1147.01FB_1C-F6-SS Wed, Apr/24/19 03:16pm

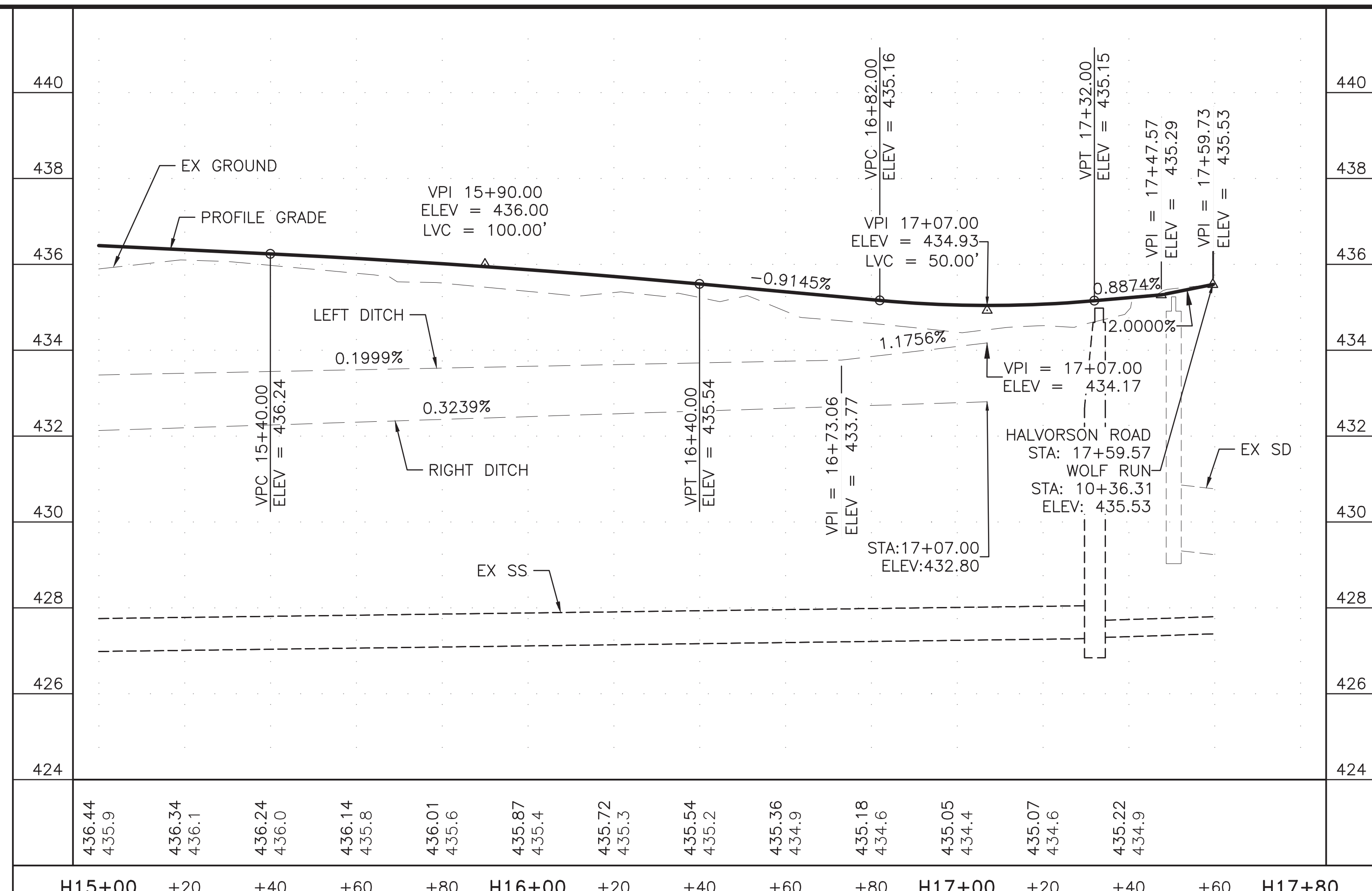
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F7-SS	F8-SS



HALVORSON RD PROFILE

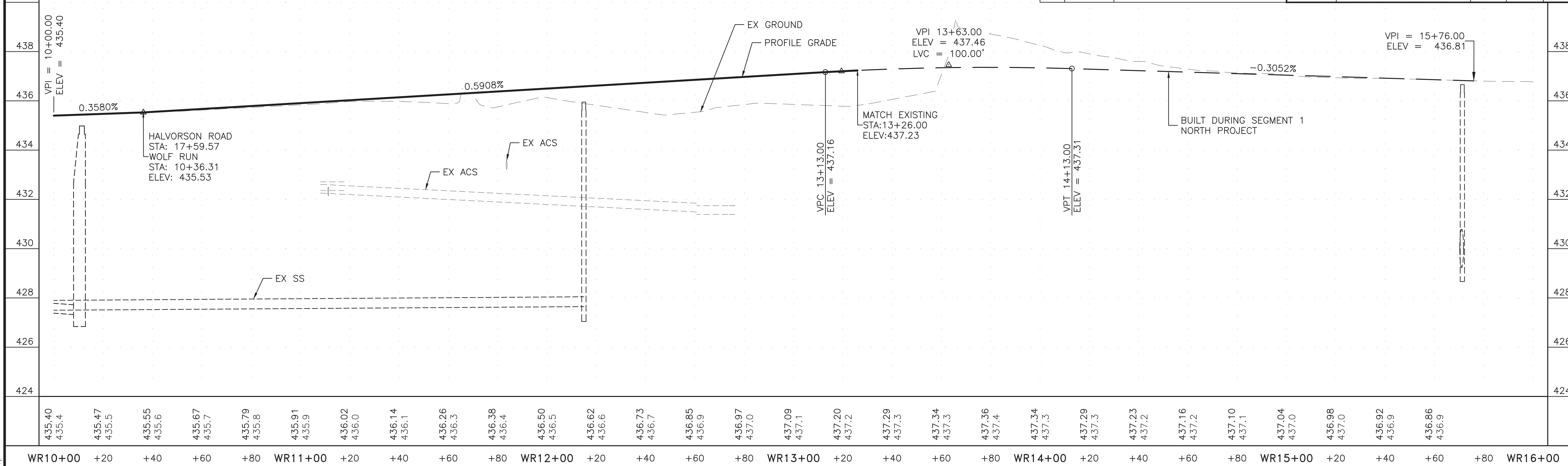




PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C2004cnst1147.01FB_1C-F7-SS Wed, Apr/24/19 03:17pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	F8-SS	F8-SS



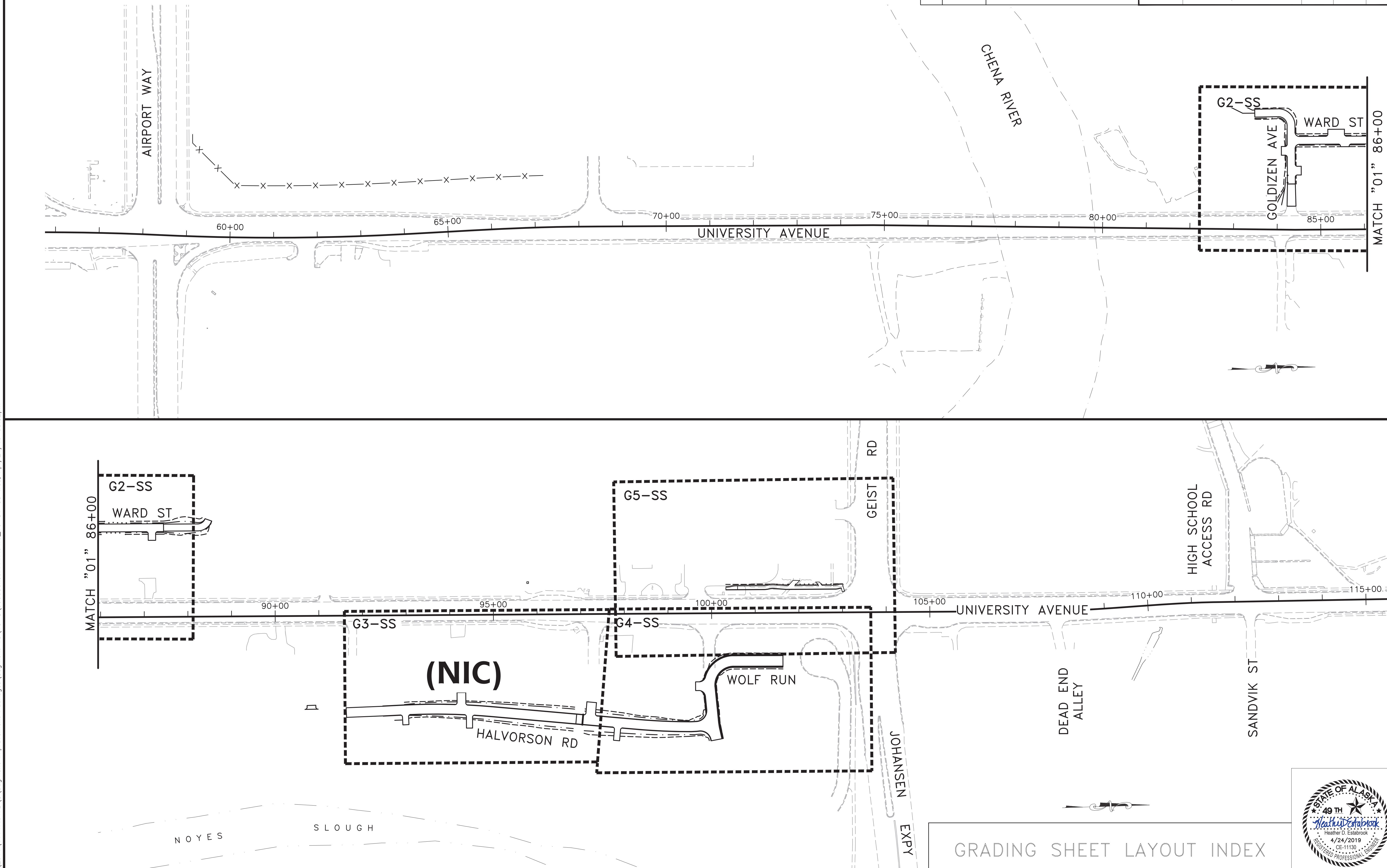
WOLF RUN PROFILE

STATE OF ALASKA
49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C2004cnst11147.01FB_1C-F8-SS Wed, Apr/24/19 03:18pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G1-SS	G9-SS



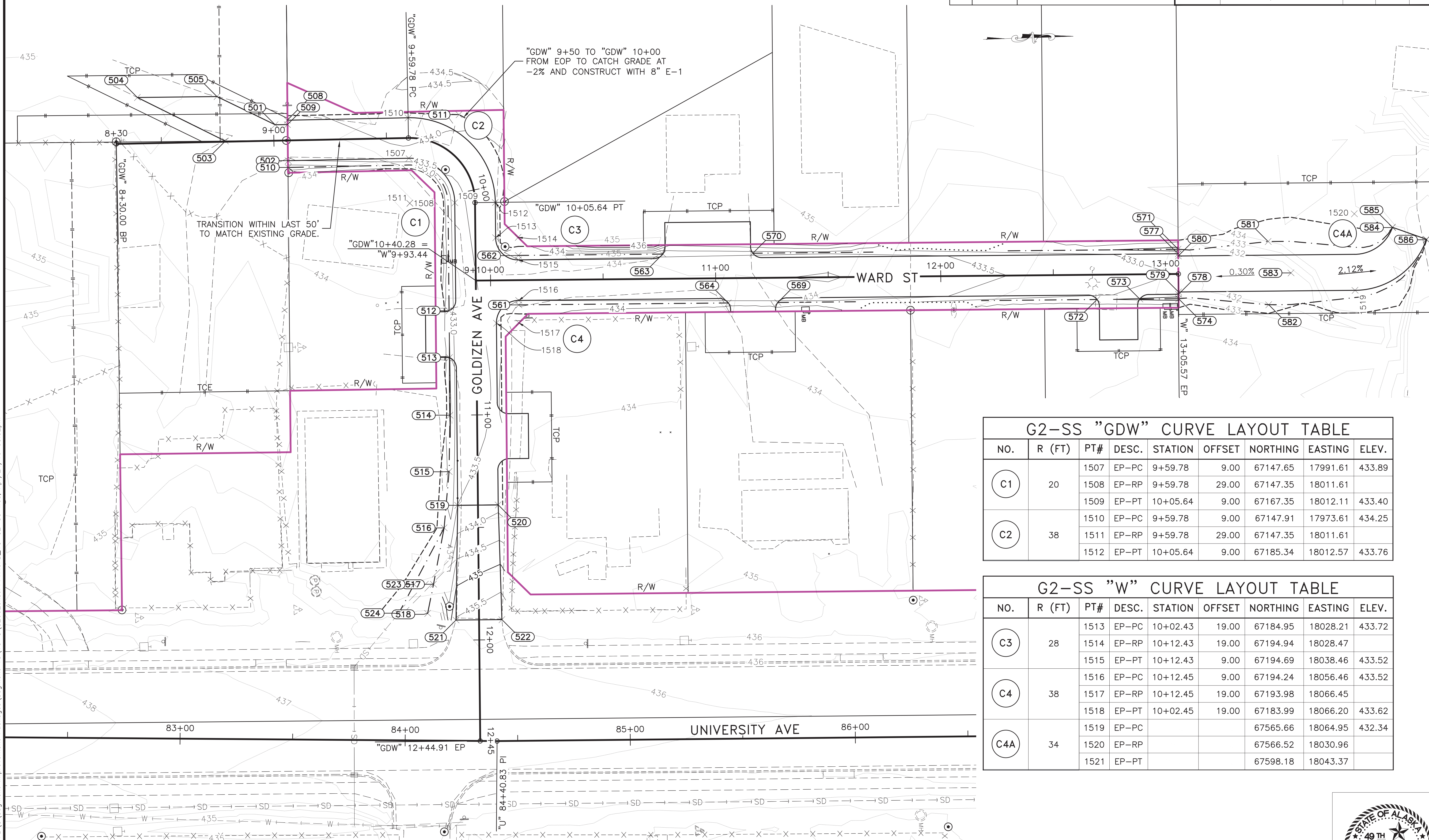
GRADING SHEET LAYOUT INDEX

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\0005cnst11147.01fb_1c-G1-SS Wed, Apr/24/19 03:52pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G2-SS	G9-SS



G2-SS "GDW" CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C1	20	1507	EP-PC	9+59.78	9.00	67147.65	17991.61	433.89
		1508	EP-RP	9+59.78	29.00	67147.35	18011.61	
		1509	EP-PT	10+05.64	9.00	67167.35	18012.11	433.40
C2	38	1510	EP-PC	9+59.78	9.00	67147.91	17973.61	434.25
		1511	EP-RP	9+59.78	29.00	67147.35	18011.61	
		1512	EP-PT	10+05.64	9.00	67185.34	18012.57	433.76

G2-SS "W" CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C3	28	1513	EP-PC	10+02.43	19.00	67184.95	18028.21	433.72
		1514	EP-RP	10+12.43	19.00	67194.94	18028.47	
		1515	EP-PT	10+12.43	9.00	67194.69	18038.46	433.52
C4	38	1516	EP-PC	10+12.45	9.00	67194.24	18056.46	433.52
		1517	EP-RP	10+12.45	19.00	67193.98	18066.45	
		1518	EP-PT	10+02.45	19.00	67183.99	18066.20	433.62
C4A	34	1519	EP-PC			67565.66	18064.95	432.34
		1520	EP-RP			67566.52	18030.96	
		1521	EP-PT			67598.18	18043.37	

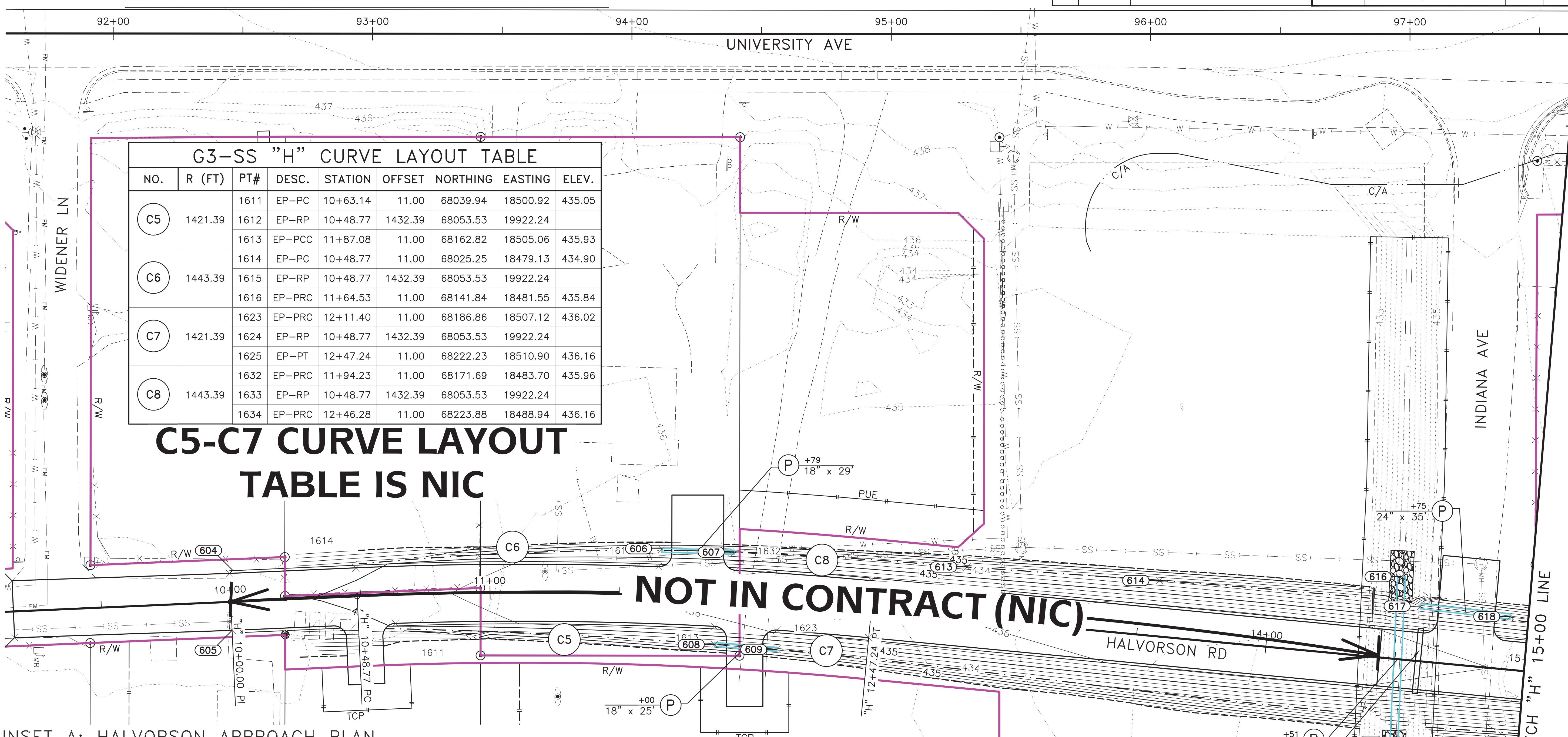
GOLDIZEN AVE (WEST) & WARD ST GRADING

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C2002cnst11147.01FB_1C-G2-SS Wed, Apr/24/19 03:52pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G3-SS	G9-SS

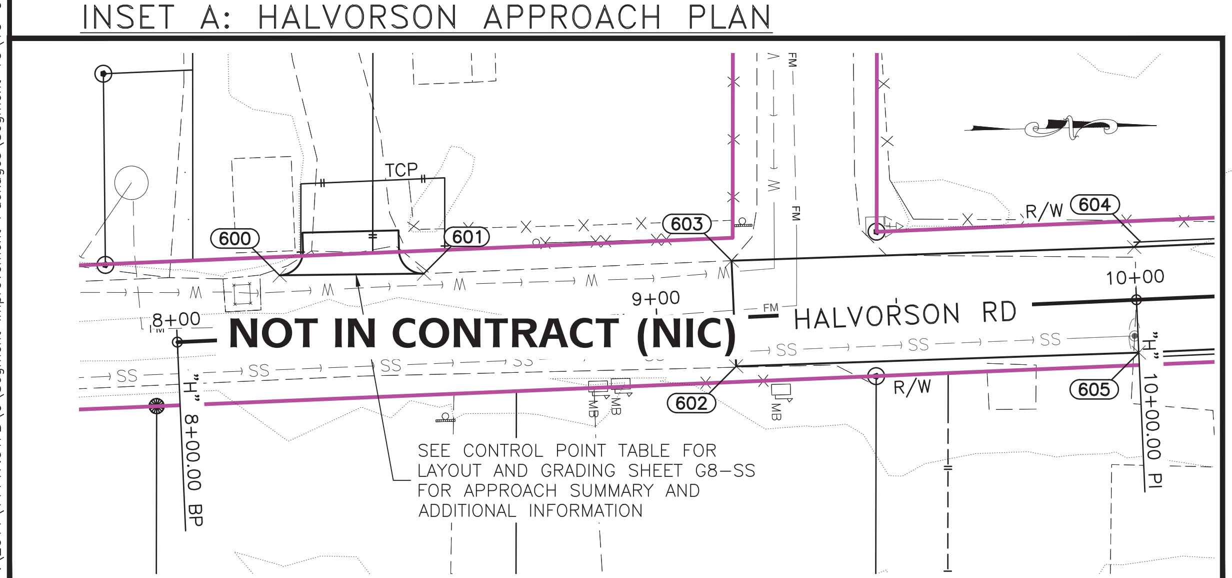


G3-SS "H" CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C5	1421.39	1611	EP-PC	10+63.14	11.00	68039.94	18500.92	435.05
		1612	EP-RP	10+48.77	1432.39	68053.53	19922.24	
		1613	EP-PCC	11+87.08	11.00	68162.82	18505.06	435.93
C6	1443.39	1614	EP-PC	10+48.77	11.00	68025.25	18479.13	434.90
		1615	EP-RP	10+48.77	1432.39	68053.53	19922.24	
		1616	EP-PRC	11+64.53	11.00	68141.84	18481.55	435.84
C7	1421.39	1623	EP-PRC	12+11.40	11.00	68186.86	18507.12	436.02
		1624	EP-RP	10+48.77	1432.39	68053.53	19922.24	
		1625	EP-PT	12+47.24	11.00	68222.23	18510.90	436.16
C8	1443.39	1632	EP-PRC	11+94.23	11.00	68171.69	18483.70	435.96
		1633	EP-RP	10+48.77	1432.39	68053.53	19922.24	
		1634	EP-PRC	12+46.28	11.00	68223.88	18488.94	436.16

C5-C7 CURVE LAYOUT TABLE IS NIC

INSET A: HALVORSON APPROACH PLAN



NOTES:

1. SEE SHEET G7-SS FOR RIPRAP DETAILS.
2. CURVE LAYOUT POINTS 1612,1615,1624,1633 ARE OUTSIDE OF PROJECT EXTENTS AND NOT SHOWN ON GRADING PLAN SHEETS.

HALVORSON RD GRADING (1 OF 2)

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

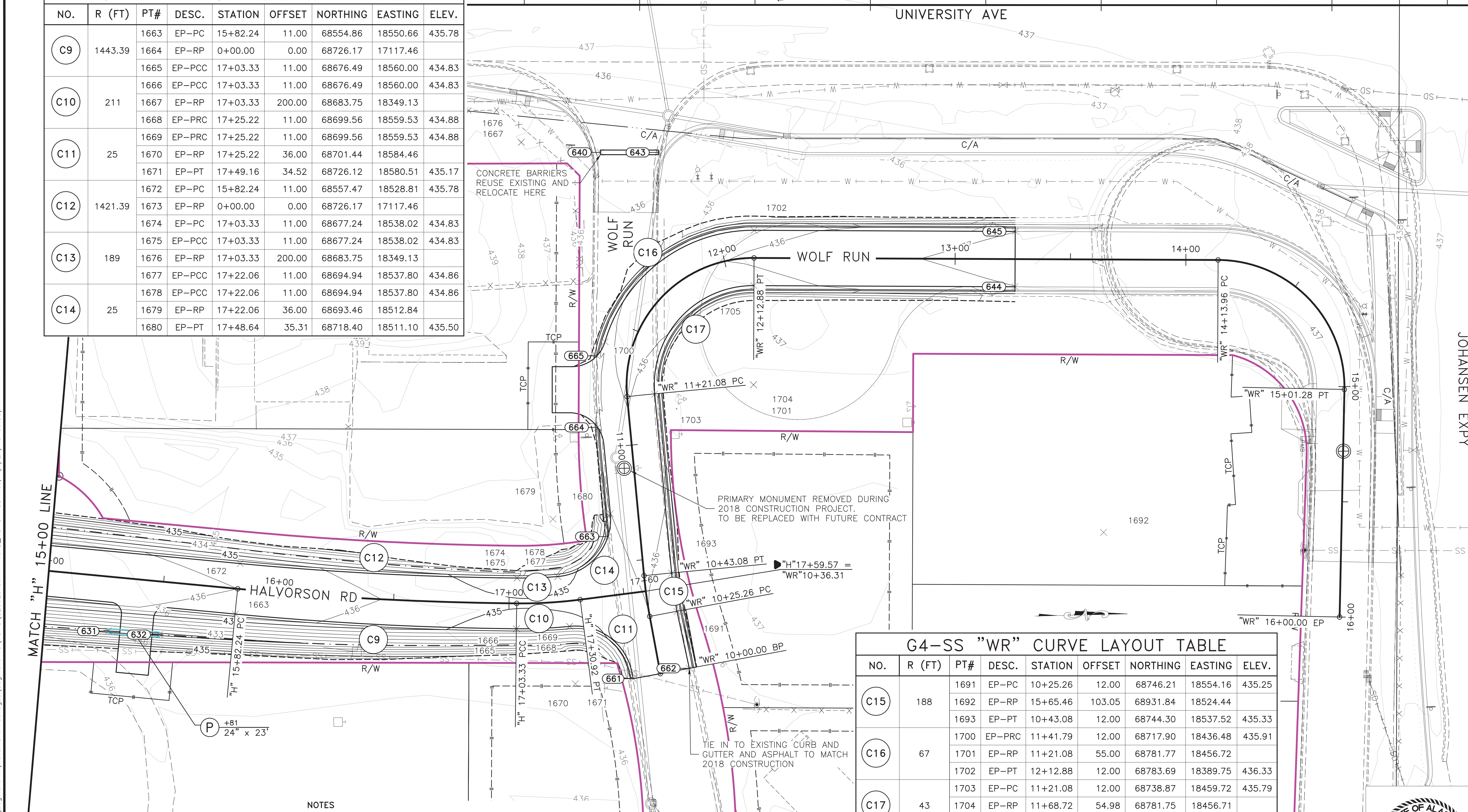
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C2002cnst11147.01FB_1C-G3-SS Wed, Apr/24/19 03:53pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G4-SS	G9-SS

G4-SS "H" CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C9	1443.39	1663	EP-PC	15+82.24	11.00	68554.86	18550.66	435.78
		1664	EP-RP	0+00.00	0.00	68726.17	17117.46	
		1665	EP-PCC	17+03.33	11.00	68676.49	18560.00	434.83
C10	211	1666	EP-PCC	17+03.33	11.00	68676.49	18560.00	434.83
		1667	EP-RP	17+03.33	200.00	68683.75	18349.13	
		1668	EP-PRC	17+25.22	11.00	68699.56	18559.53	434.88
C11	25	1669	EP-PRC	17+25.22	11.00	68699.56	18559.53	434.88
		1670	EP-RP	17+25.22	36.00	68701.44	18584.46	
		1671	EP-PT	17+49.16	34.52	68726.12	18580.51	435.17
C12	1421.39	1672	EP-PC	15+82.24	11.00	68557.47	18528.81	435.78
		1673	EP-RP	0+00.00	0.00	68726.17	17117.46	
		1674	EP-PC	17+03.33	11.00	68677.24	18538.02	434.83
C13	189	1675	EP-PCC	17+03.33	11.00	68677.24	18538.02	434.83
		1676	EP-RP	17+03.33	200.00	68683.75	18349.13	
		1677	EP-PCC	17+22.06	11.00	68694.94	18537.80	434.86
C14	25	1678	EP-PCC	17+22.06	11.00	68694.94	18537.80	434.86
		1679	EP-RP	17+22.06	36.00	68693.46	18512.84	
		1680	EP-PT	17+48.64	35.31	68718.40	18511.10	435.50



G4-SS "WR" CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C15	188	1691	EP-PC	10+25.26	12.00	68746.21	18554.16	435.25
		1692	EP-RP	15+65.46	103.05	68931.84	18524.44	
		1693	EP-PT	10+43.08	12.00	68744.30	18537.52	435.33
C16	67	1700	EP-PRC	11+41.79	12.00	68717.90	18436.48	435.91
		1701	EP-RP	11+21.08	55.00	68781.77	18456.72	
		1702	EP-PT	12+12.88	12.00	68783.69	18389.75	436.33
C17	43	1703	EP-PC	11+21.08	12.00	68738.87	18459.72	435.79
		1704	EP-RP	11+68.72	54.98	68781.75	18456.71	
		1705	EP-PT	12+12.88	12.00	68783.00	18413.74	436.33

NOTES

1. CURVE LAYOUT POINTS 1664,1673 ARE OUTSIDE OF PROJECT EXTENTS AND NOT SHOWN ON GRADING PLAN SHEETS.
2. CURVE LAYOUT POINTS 1664,1674 ARE OUTSIDE OF HALVORSON ALIGNMENT LIMITS, USE NORTHING AND EASTING FOR LAYOUT.

HALVORSON RD GRADING (2 OF 2) & WOLF RUN GRADING

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C2002cnst11147.01FB_1C-G4-SS Wed, Apr/24/19 03:53pm

NO.	DATE	REVISION

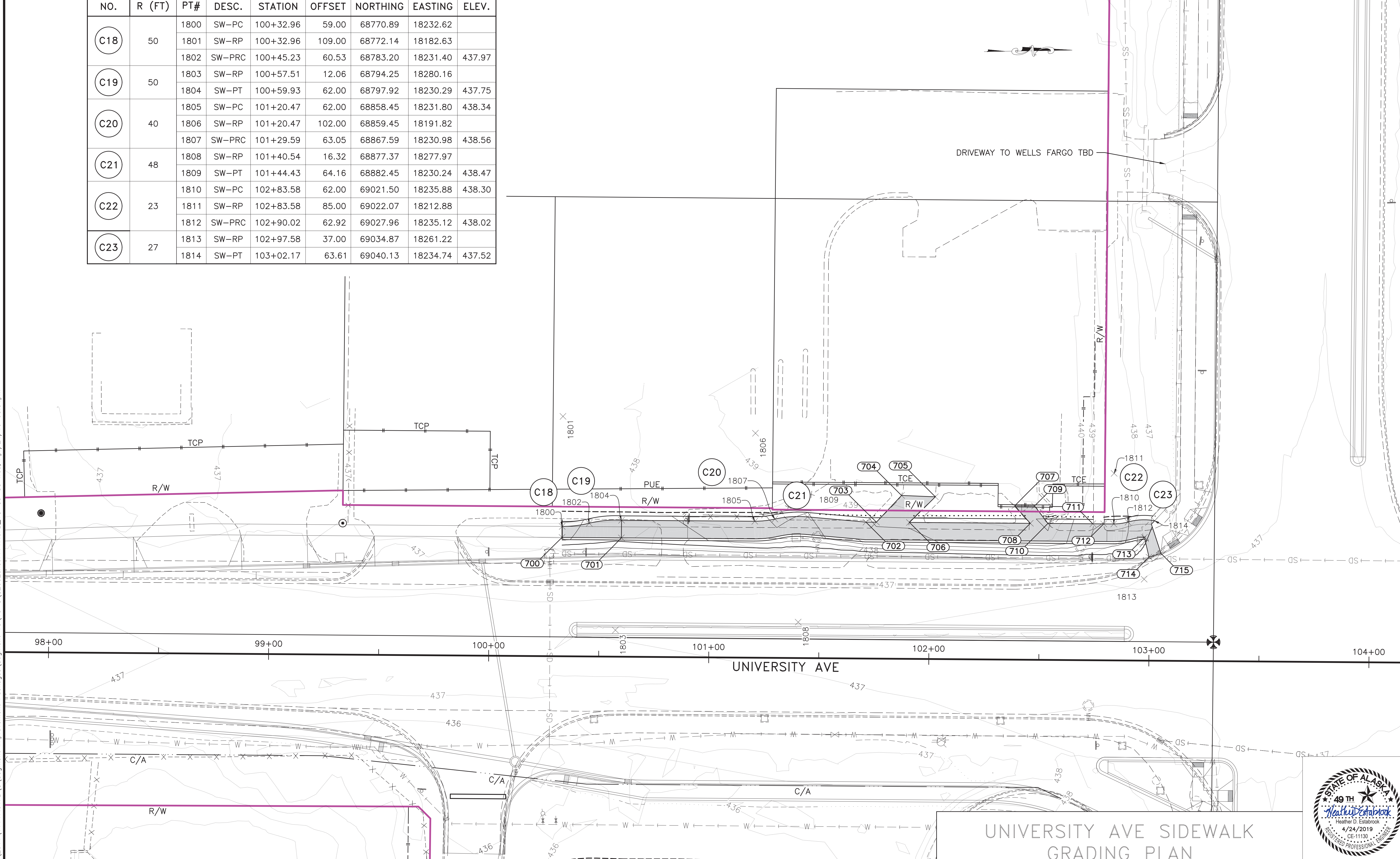
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G5–SS	G9–SS

G5–SS CURVE LAYOUT TABLE

NO.	R (FT)	PT#	DESC.	STATION	OFFSET	NORTHING	EASTING	ELEV.
C18	50	1800	SW–PC	100+32.96	59.00	68770.89	18232.62	
		1801	SW–RP	100+32.96	109.00	68772.14	18182.63	
		1802	SW–PRC	100+45.23	60.53	68783.20	18231.40	437.97
C19	50	1803	SW–RP	100+57.51	12.06	68794.25	18280.16	
		1804	SW–PT	100+59.93	62.00	68797.92	18230.29	437.75
C20	40	1805	SW–PC	101+20.47	62.00	68858.45	18231.80	438.34
		1806	SW–RP	101+20.47	102.00	68859.45	18191.82	
		1807	SW–PRC	101+29.59	63.05	68867.59	18230.98	438.56
C21	48	1808	SW–RP	101+40.54	16.32	68877.37	18277.97	
		1809	SW–PT	101+44.43	64.16	68882.45	18230.24	438.47
C22	23	1810	SW–PC	102+83.58	62.00	69021.50	18235.88	438.30
		1811	SW–RP	102+83.58	85.00	69022.07	18212.88	
		1812	SW–PRC	102+90.02	62.92	69027.96	18235.12	438.02
C23	27	1813	SW–RP	102+97.58	37.00	69034.87	18261.22	
		1814	SW–PT	103+02.17	63.61	69040.13	18234.74	437.52

NOTES:

1. CURVE LAYOUT REFERENCES UNIVERSITY AVENUE "01" ALIGNMENT.



UNIVERSITY AVE SIDEWALK GRADING PLAN

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C2002cnst11147.0FB_1C-G5-SS Wed, Apr/24/19 03:54pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G6-SS	G9-SS

SHEET G2-SS "GDW" CONTROL POINTS

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
501	9+00.70	7.09 L	67088.81	17974.66		EP
502	9+06.14	9.00 R	67094.02	17990.82		EP
503	8+78.43	0.29 L	67066.44	17981.13		EP
504	8+39.77	20.44 L	67028.08	17960.41		EP
505	8+75.12	20.14 L	67063.42	17961.23		EP
508	9+06.14	9.00 L	67094.28	17972.83		EP
509	9+06.14	7.04 L	67094.25	17974.79		EP
510	9+06.14	12.00 R	67093.97	17993.82	432.72	FL
511	9+75.08	16.05 L	67170.60	17973.02		GRAVEL
512	10+53.60	12.00 R	67163.14	18059.98	432.53	FL
513	10+74.43	12.00 R	67162.61	18080.81	432.47	FL
514	11+00.08	12.05 R	67161.91	18106.45	432.45	FL
515	11+25.08	12.69 R	67160.64	18131.42	432.44	FL
516	11+50.08	15.13 R	67157.57	18156.35	432.42	FL
517	11+75.08	20.09 R	67151.98	18181.22	432.41	FL
518	11+88.00	22.82 R	67148.93	18194.06	432.40	FL
519	11+40.08	9.00 R	67163.95	18146.51	433.50	EP
520	11+40.08	9.00 L	67181.95	18146.97	433.86	EP
521	11+91.08	10.25 R	67161.41	18197.46		EP
522	11+91.08	10.15 L	67181.81	18197.98		EP
523	11+75.08	28.72 R	67143.35	18181.00	432.41	FL

SHEET G2-SS "W" CONTROL POINTS

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
561	10+12.45	11.00 R	67194.19	18058.46	433.02	FL
562	10+12.43	11.00 L	67194.74	18036.46	433.02	FL
563	10+76.64	11.00 L	67258.92	18038.10	433.18	FL
564	11+05.50	11.00 R	67287.21	18060.83	433.25	FL
569	11+27.50	11.00 R	67309.20	18061.39	433.30	FL
570	11+16.64	11.00 L	67298.91	18039.12	433.28	FL
571	13+05.57	11.00 L	67487.77	18043.95	432.30	FL
572	12+69.32	11.00 R	67450.98	18065.02	432.55	FL
573	12+88.32	11.00 R	67469.97	18065.50	432.42	FL
574	13+05.56	11.00 R	67487.20	18065.94	432.30	FL
577	13+05.57	9.00 L	67487.72	18045.95	432.80	EP
578	13+05.56	9.00 R	67487.26	18063.94	432.80	EP
579	13+05.56	8.00 R	67487.28	18062.94	432.82	EP
580	13+05.57	8.00 L	67487.70	18046.95	432.82	EP
581			67527.84	18041.92	431.40	FL
582			67527.12	18070.02	431.40	FL
583			67537.48	18056.22	433.13	FG CL
584			67583.22	18037.64	431.64	FL
585			67583.28	18037.53		EP
586			67598.11	18043.60	431.64	FL

SHEET G3-SS "H" CONTROL POINTS

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
600	8+21.88	12.96 L	67798.37	18481.61	434.84	EP
601	8+51.94	11.99 L	67828.44	18481.99	434.86	EP
602	9+16.08	10.15 R	67893.01	18502.87		EP
603	9+16.08	11.85 L	67892.57	18480.88		EP
604	10+00.00	11.00 L	67976.49	18480.08		EP
605	10+00.00	11.00 R	67976.92	18502.08		EP
606	11+65.65	17.99 L	68143.41	18474.65	434.33	FL
607	11+93.31	18.00 L	68171.34	18476.64	433.93	FL
608	11+87.59	18.03 R	68162.78	18512.11	433.99	FL
609	12+11.99	18.39 R	68186.75	18514.53	433.88	FL
613	12+82.42	19.73 L	68260.81	18484.56	433.70	FL
614	13+56.75	21.54 L	68334.83	18491.59	433.38	FL
615	14+52.63	32.00 R	68423.67	18556.13	429.76	FL
616	14+49.53	31.82 L	68428.17	18492.39	429.84	FL
617	14+57.93	21.20 L	68435.25	18503.93	433.34	FL
618	14+92.72	20.47 L	68469.70	18508.79	433.41	FL

SHEET G4-SS "H" CONTROL POINTS

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
631	15+28.15	23.52 R	68499.67	18556.67	432.22	FL
632	15+50.45	22.97 R	68521.87	18558.77	432.29	FL

SHEET G4-SS "WR" CONTROL POINTS

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
640	99+83.04	64.00 R	68717.91	18354.33		CONC BARRIER
643	100+08.21	64.00 R	68743.07	18354.96		CONC BARRIER
644	13+26.00	12.00 R	68896.08	18416.99		EP
645	13+26.00	12.00 L	68896.77	18393.00		EP
661	10+00.01	12.00 L	68726.50	18582.89		EP
662	10+00.01	12.75 R	68750.94	18578.98		EP
663	10+61.44	14.00 L	68717.08	18521.01	435.33	TBC
664	11+09.04	14.00 L	68713.77	18473.54	436.15	TBC
665	11+36.31	14.00 L	68714.25	18442.52	436.08	TBC

SHEET G5-SS "01" CONTROL POINTS

POINT #	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
700	100+32.96	54.00 L	68770.76	18237.62		SW
701	100+59.93	54.00 L	68797.72	18238.29	437.63	SW
702	101+70.98	62.00 L	68908.94	18233.07	438.95	SW
703	101+75.73	62.00 L	68913.69	18233.18	439.03	SW
704	101+87.07	74.22 L	68925.33	18221.25	439.28	SW
705	102+02.43	73.71 L	68940.67	18222.14	439.29	SW
706	101+90.74	62.00 L	68928.69	18233.56	439.04	SW
707	102+38.54	69.91 L	68976.68	18226.85	439.59	SW
708	102+45.66	62.00 L	68983.60	18234.93	439.43	SW
709	102+47.54	69.91 L	68985.67	18227.07	439.70	SW
710	102+53.66	62.00 L	68991.60	18235.13	439.55	SW
711	102+74.06	62.00 L	69011.98	18235.64	438.55	SW
712	102+79.02	62.00 L	69016.94	18235.76	438.49	SW
713	102+97.58	56.00 L	69035.35	18242.22	437.50	SW
714	102+99.73	47.05 L	69037.27	18251.22		TBC
715	103+05.13	48.79 L	69042.72	18249.62		TBC

GRADING PLAN
CONTROL TABLES

STATE OF ALASKA
49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

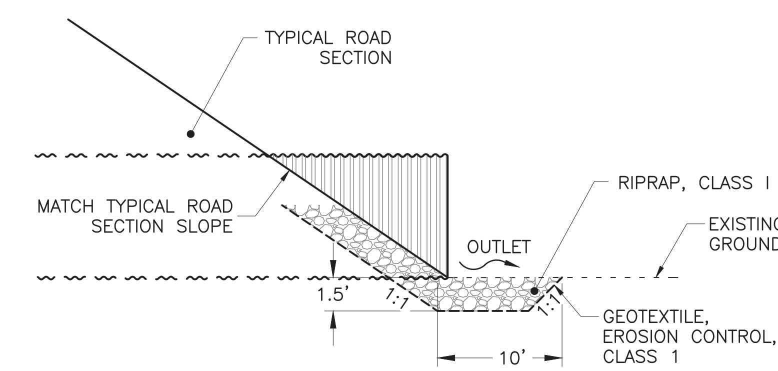
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\c008cnst11147.01fb_1c-G6-SS Wed, Apr/24/19 03:54pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G7-SS	G9-SS

CULVERT SUMMARY

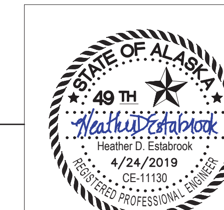
	STATION	LT/C/RT	603(1)-18	603(1)-24	603(1)-36	INVERT		613(2) CULVERT MARKER POST	END SECTION		SKEW ANGLE	REMARKS
			18"	24"	36"	IN	OUT		603(20)-18 (EA)	603(20)-24 (EA)		
NIC	~~"H" 11+79.48~~	~~LT~~	~~28~~			~~434.03~~	~~433.92~~		~~2~~			~~APPROACH LT~~
NIC	~~"H" 11+99.79~~	~~RT~~	~~24~~			~~433.94~~	~~433.88~~		~~2~~			~~APPROACH RT~~
	"H" 14+51.07	C			64	429.84	429.76	2			3° RHF	RIP RAP INLET AND OUTLET
	"H" 14+75.30	LT		36		433.41	433.34			2		APPROACH LT
	"H" 15+39.27	RT		24		432.29	432.22			2		APPROACH RT
		TOTAL:	0	60	64			2	0	4		



RIPRAP OUTLET AT CULVERT OUTLET

NTS

1. INSTALL RIPRAP TO A WIDTH OF THREE TIMES CULVERT DIAMETER.
2. INLET: INSTALL RIPRAP UP FILL SLOPE TO CULVERT CROWN.
   OUTLET: INSTALL RIPRAP UP FILL SLOPE TO CULVERT SPRING LINE.
3. SEE CULVERT PIPE SUMMARY FOR RIPRAP OUTLET LOCATIONS.



CULVERT 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 1C\1C-C\c0008cnst11147.01fb_1c-G7-SS Wed, Apr/24/19 03:55pm

639(101) APPROACH

STATION	OFFSET	SKEW ANGLE (90° TYP.)	(1) APPROACH PLAN TYPE	WIDTH (FT)	LENGTH (FT)	RADIUS (FT)	LANDING LENGTH (FT)	REMARKS
"GDW" 9+06.00	LT	–	1	7	54.37		14	(LOT 1) J. & G. GIBLING
"GDW" 10+63.63	RT	90°	1	20	13.50	5	10	(LOT 10-B)
"GDW" 11+09.50	LT	90°	1	20	13.75	5	10	D & D HOLLEMAN
"W" 10+96.64	LT	90°	1	38	16	5	10	(LOT 3-B)
"W" 11+15.17	RT	90°	1	20	6	5	10 (2)	J. GREENWAY
"W" 12+78.82	RT	90°	1	17	20	5	10	K & P WEAVER
"W" 13+05.57	–	–	1	16	110.30	–	10	P MAY (SEE NOTE 3)
NIC ~~"H" 8+37.05~~	~~LT~~	~~90°~~	~~1~~	~~20~~	~~8.03~~	~~5~~	~~8.03 (2)~~	~~(LOT 3 & 4) HALVORSON RD (SEE NOTE 4)~~
NIC ~~"H" 10+51.00~~	~~RT~~	~~90°~~	~~1~~	~~14~~	~~23~~	~~5~~	~~10~~	~~(LOT 11)~~
NIC ~~"H" 11+78.35~~	~~LT~~	~~90°~~	~~1~~	~~20~~	~~28.25~~	~~5~~	~~10~~	~~MAY CLINIC INC.~~
NIC ~~"H" 12+01.03~~	~~RT~~	~~90°~~	~~1~~	~~14~~	~~30.25~~	~~5~~	~~10~~	~~ALASKA RIVER WAYS INC.~~
"H" 14+75.75	LT	90°	1	22	30.50	5	10	(OLD) INDIANA AVE
"H" 15+40.15	RT	90°	1	14	30	5	10	(LOT 2)
"WR" 10+18.00	RT	90°	4	24'	2'	–	2' (2)	WOLF RUN RESTURANT BACK PARKING LOT
"WR" 11+24.87	LT	90°	1	20	20.25	15	10	DRIVEWAY W/ CURBING
"GJ" TBD	RT	TBD	TBD	TBD	TBD	TBD	TBD	WELLS FARGO TBD
TOTAL			12					

APPROACH NOTES:

(1) PLEASE REFER TO SEGMENT 1 NORTH PLAN SET, UNIVERSITY AVENUE REHABILITATION – INDIANA AVENUE TO THOMAS STREET, FOR APPROACH PLAN TYPE AND DETAILS.

(2) APPROACH LENGTH TIES INTO EXISTING CONDITIONS PRIOR TO FULL LANDING LENGTH.

(3) UTILIZE TYPICAL FOR WARD ST TO CONSTRUCT THIS APPROACH. SEE APPROACH DETAILS FOR WIDTH, AND BACKSLOPES SHALL BE 3:1 OR FLATTER WHILE FITTING WITHIN TCP. SEE GRADING SHEET G2-SS FOR LAYOUT AND DRAINAGE CONTROL.

(4) FOR LAYOUT SEE GRADING SHEET G3-SS FOR GRADING CONTROL POINTS.

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

APPROACH SUMMARY

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 1C\1C-C\c008cnst11147.01fb_1c-G9-SS Wed, Apr/24/19 03:55pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	G9-SS	G9-SS

202(10) SINGLE MAIL BOX INSTALLATION

ALIGNMENT	EXISTING LOCATION STATION	OFFSET (FT)	PROPOSED LOCATION STATION	OFFSET (FT)	QUANTITY (EACH)	REMARKS
"GDW"	10+85	14.00 RT	10+29.00	14.00 RT	1	(2)
"01"/"W"	88+40.00	42.00' LT	13+05.00	14.00 RT		(2) (7) RELOCATING FROM ALONG UNIVERSITY AVE TO WARD ST
"01"	95+78.50	70.62' LT	95+79.00	73.00' LT	1	(4) USPS courier drop box
"W"	11+50.00	163.00' RT	11+41.50	14.00' RT		(2) (7) RELOCATING FROM ALONG UNIVERSITY AVE TO WARD ST
"W"	12+60.00	163.00' RT	13+02.00	14.00' RT		(2) (7) RELOCATING FROM ALONG UNIVERSITY AVE TO WARD ST
PAY ITEM TOTALS					2	

608(2) ASPHALT SIDEWALK

ALIGNMENT	BEGIN STATION	END STATION	OFFSET	QUANTITY (TONS)	REMARKS
"01"	100+32.96	100+59.93	LT	1.63	
			PAY ITEM TOTALS	1.63	

609(2) CURB AND GUTTER, TYPE I

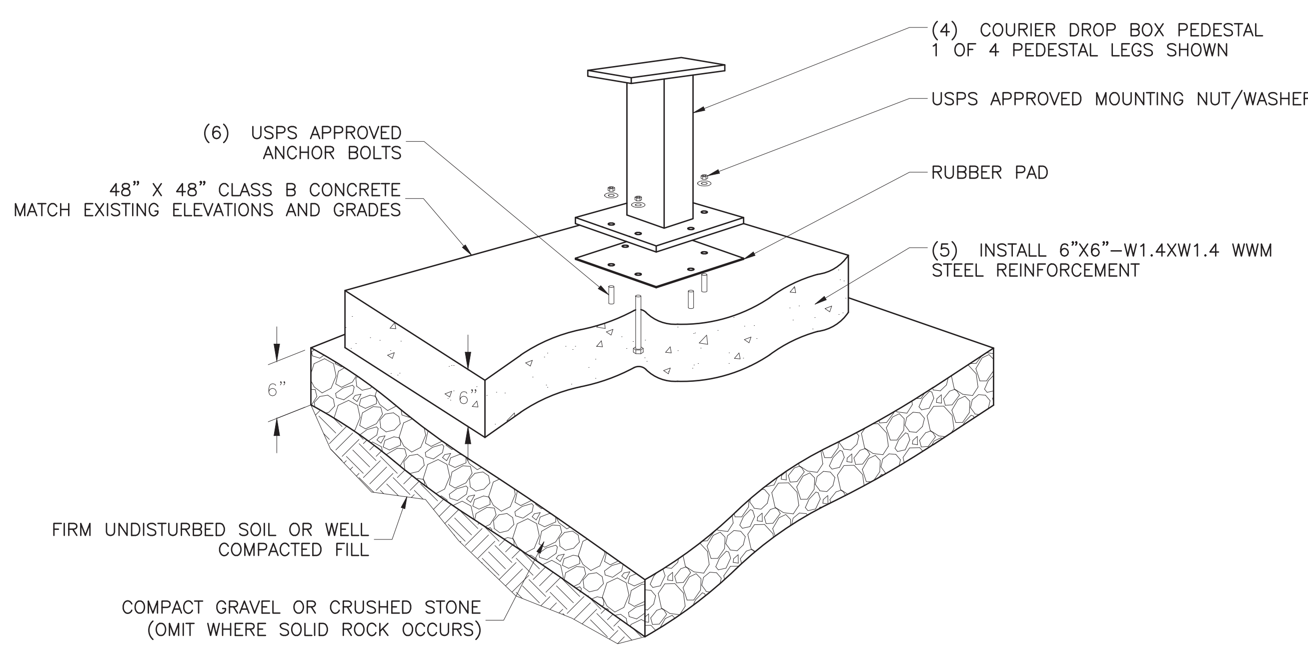
ALIGNMENT	BEGIN STATION	END STATION	OFFSET	QUANTITY (LINEAR FOOT)	SHAPE	REMARKS
"WR"	10+00.0	13+26.00	RT	302.27	STANDARD	
"WR"	10+61.44	11+09.04	LT	47.59	STANDARD	
"WR"	11+36.99	13+26.00	LT	207.64	STANDARD	
			PAY ITEM TOTALS	557.51		

608(1A) CONCRETE SIDEWALK, 4 INCHES THICK

ALIGNMENT	BEGIN STATION	END STATION	OFFSET	QUANTITY (SQUARE YARD)	REMARKS
"01"	100+59.93	103+05.13	LT	248.20	
"01"	95+79.00	95+79.00	LT	1.80	6" X 48"X48" USPS FOUNDATION
			PAY ITEM TOTALS	250.00	

614(1) CONCRETE BARRIER

ALIGNMENT	BEGIN STATION	END STATION	OFFSET	QUANTITY (LINER FOOT)	REMARKS
"01"	99+83.04	100+08.21	63' RT	25	(3) REUSE EXISTING
"H"	14+58.00	14+60.00	0' C	25	(3) REUSE EXISTING
PAY ITEM TOTALS				50	



USPS COURIER DROP BOX CONCRETE FOUNDATION DETAIL

NOTES:

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

(2) MAILBOXES ARE NOT INCLUDED IN SURVEY. SUMMARY TABLE DESCRIBES APPROXIMATE EXISTING LOCATION AND PROPOSED INSTALLATION LOCATION.

(3) INSTALL REFLECTIVE MATERIAL ON BARRIER OR PLACE TYPE III BARRICADES IN FRONT OF BARRIER.

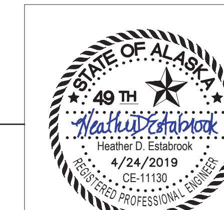
(4) USPS COURIER DROP BOX TO BE REUSED AND RELOCATED TO NEWLY CONSTRUCTED 6"X48"X48" CONCRETE FOUNDATION SEE DETAIL ON THIS SHEET FOR MORE INFORMATION. INSTALLATION AND HARDWARE IS PAID FOR UNDER 202(10) AND CONCRETE FOUNDATION MATERIAL PAID FOR UNDER 608(1A).

(5) WWM STEEL REINFORCEMENT SHALL BE 6" X 6"-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 CONCRETE FOUNDATION.

(6) INSTALL USPS APPROVED MOUNTING NUTS, WASHERS, RUBBER PADS, AND ANCHOR BOLTS PER MANUFACTURER'S RECOMMENDATIONS.

(7) PROPERTY OWNERS FOR THESE MAILBOXES HAVE ALREADY BEEN COMPENSATED TO RELOCATE THEM PRIOR TO CONSTRUCTION. RELOCATION AND QUANTITY ARE NOT INCLUDED IN CONSTRUCTION.

SUMMARY TABLES



NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	H1-SS	H8-SS

ABBREVIATIONS

ABBREVIATIONS APPLY TO H AND K 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 K 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

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
H1-SS	TRAFFIC LEGEND, NOTES AND SHEET INDEX
H2-SS TO H4-SS	SIGNING AND STRIPING PLANS
H5-SS	SIGN SUMMARY
H6-SS	SALVAGE SIGN SUMMARY
H7-SS TO H8-SS	SIGN DETAILS

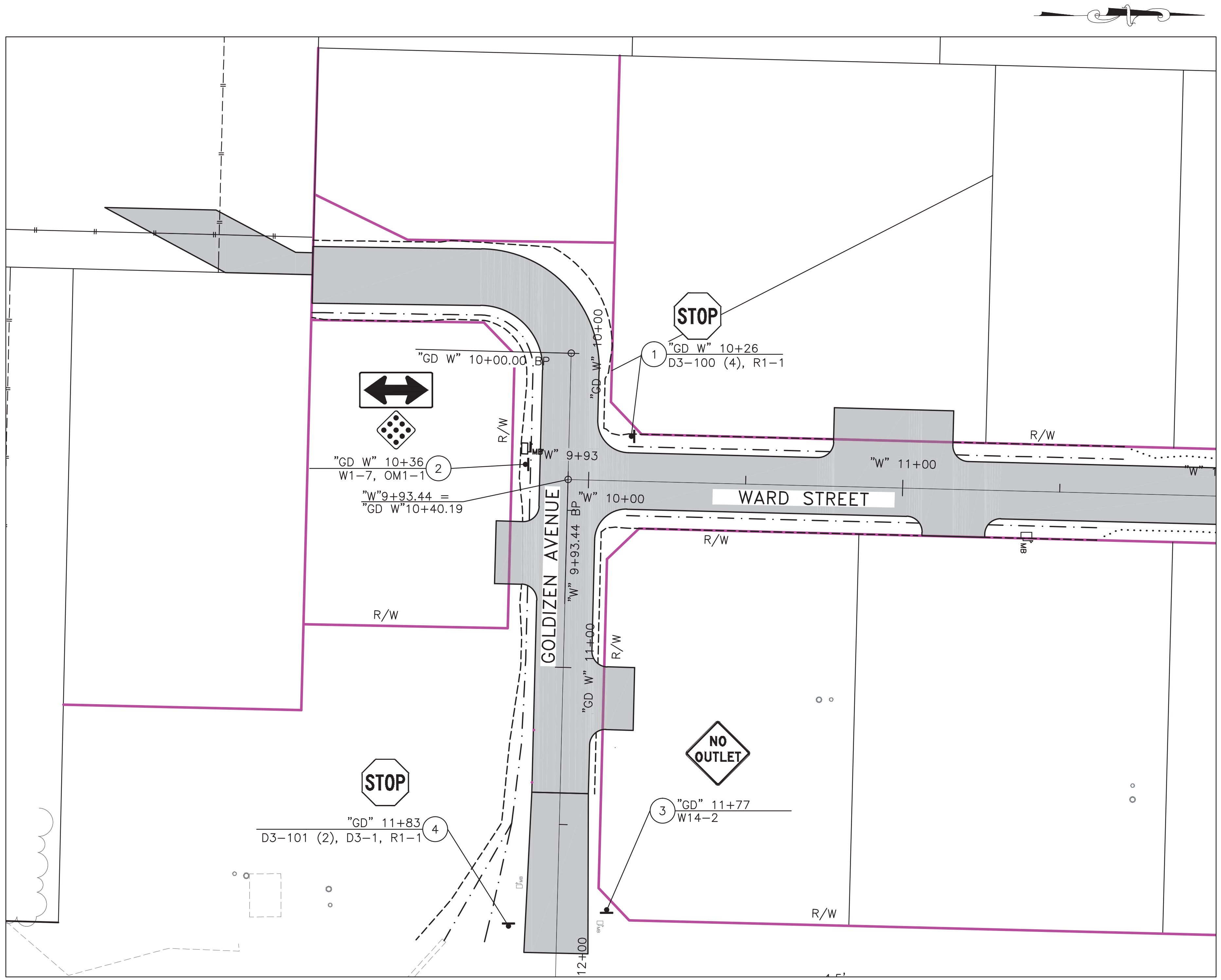
TRAFFIC LEGEND, NOTES AND SHEET INDEX

STATE OF ALASKA 49TH
IAIN S. MCPHERSON
CE-13131
REGISTERED PROFESSIONAL ENGINEER
4/26/2019

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-SIDES\Production\06173_S_H1_LEGD-H1-SS Fri, Apr/26/19 04:05pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	H2-SS	H8-SS



SIGNING KEY

\# STATION
SIGN CODE(S)
SIGN LOCATION #

SIGNING PLANS
1 OF 3

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER

4/26/2019

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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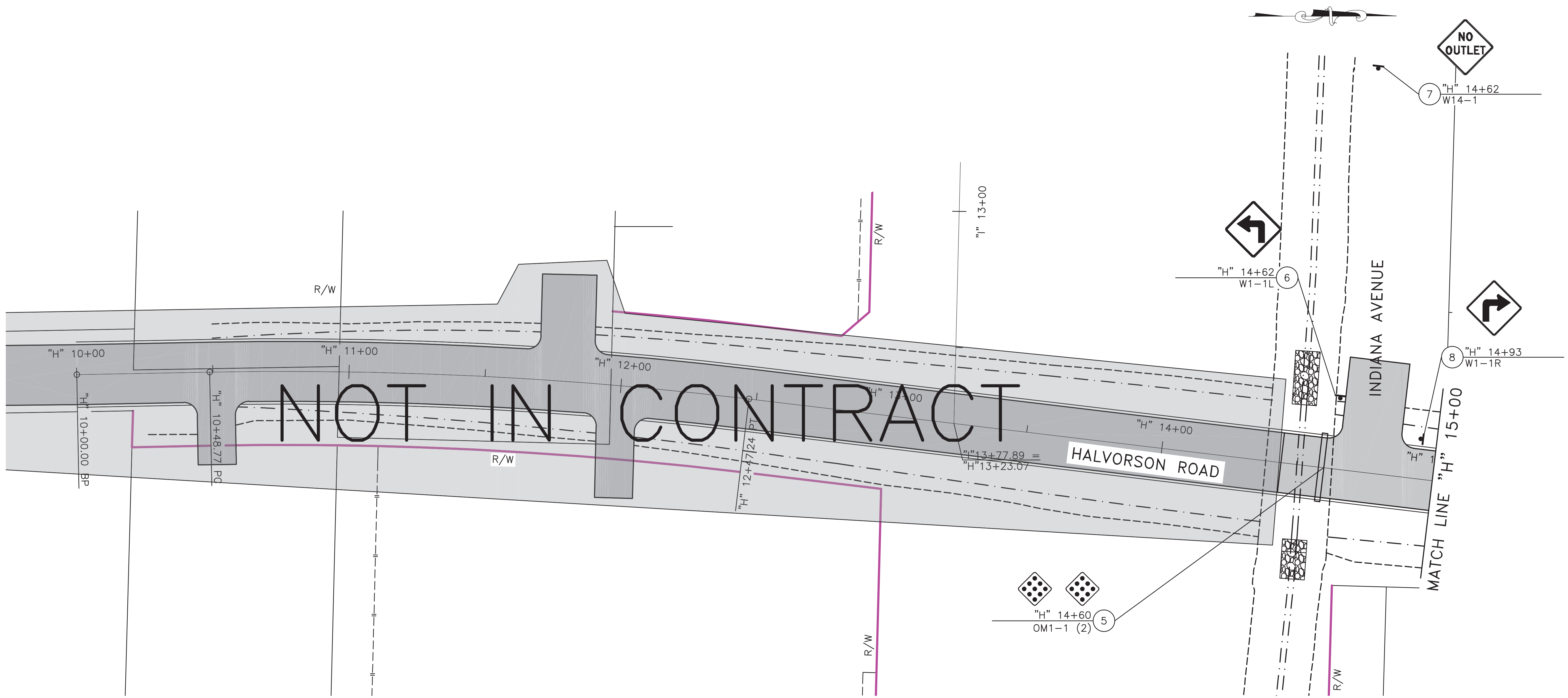
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	H3-SS	H8-SS



SIGNING KEY

STATION
SIGN CODE(S)
SIGN LOCATION #

SIGNING PLANS
2 OF 3

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER
4/26/2019

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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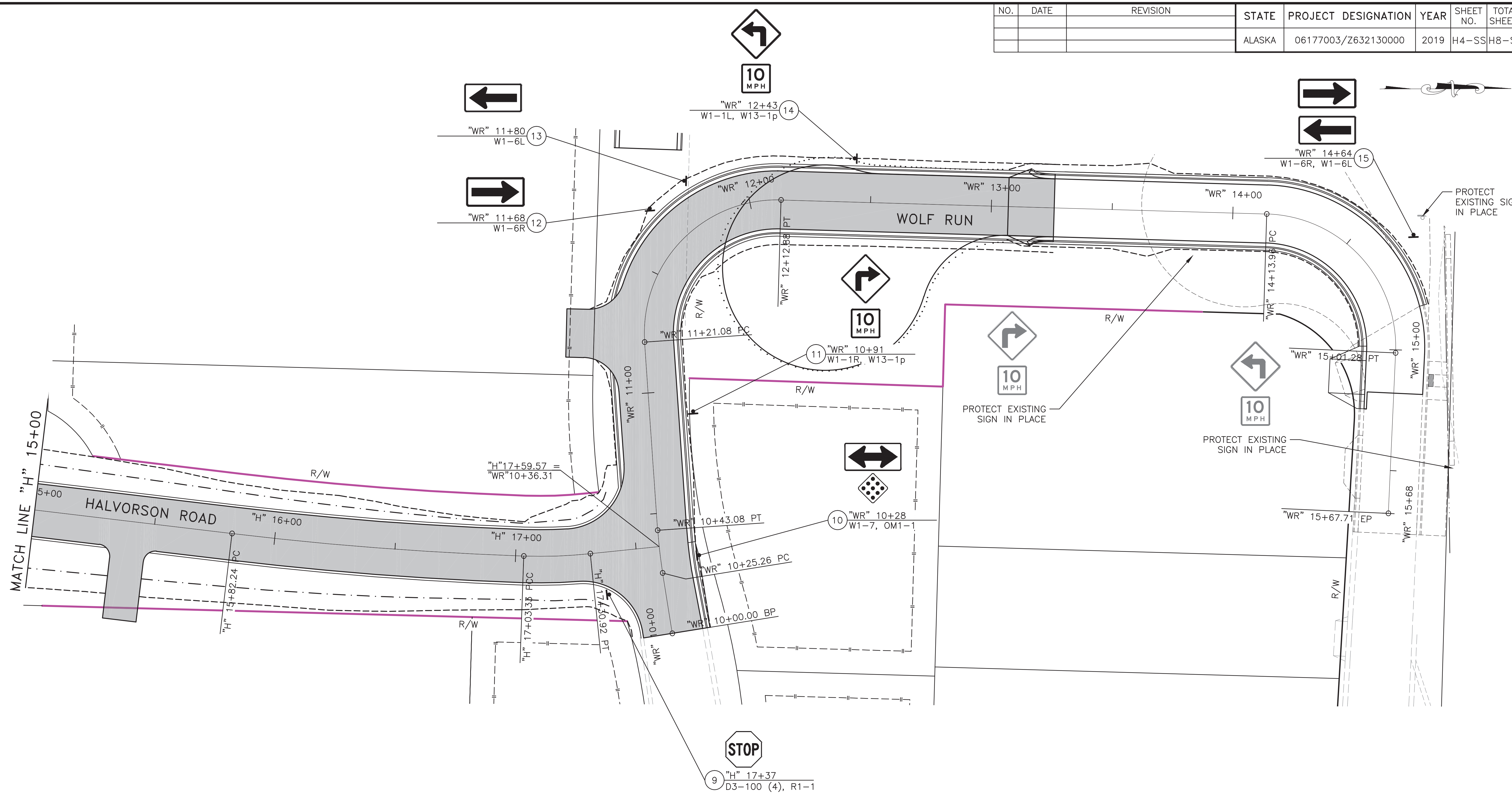
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	H4-SS	H8-SS



SIGNING KEY

STATION
SIGN CODE(S)
SIGN LOCATION #

SIGNING PLANS
3 OF 3

STATE OF ALASKA 49TH
IAIN S. McPHERSON
CE-12281
REGISTERED PROFESSIONAL ENGINEER
4/26/2019

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	06177003/Z632130000	2019	H5-SS	H8-SS

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
1	"GD W" 10+26	X		D3-100(2)	GOLDIZEN AVE	36 X 8	X		4.00		N/S	PST	2.5	1	SEE INSTALLATION DETAIL ON SHEET H7-SS
				D3-100(2)	WARD ST	24 X 8	X		2.67		E/W				
				R1-1	STOP	30 X 30	X		6.25		N				
2	"GD W" 10+36		X	W1-7	LEFT-RIGHT (ARROW) TURN	48 X 24	X		8.00		N	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25		N				
3	"O1"84+49	X		W14-2	NO OUTLET	30 X 30	X		6.25		E	PST	2.5	1	
4	"O1"84+17	X		D3-1	GOLDIZEN AVE	48 X 12	X				N/S	PST	2.5	1	INSTALL EXISTING SIGN PANELS ON NEW POST AND FOUNDATION.
				R1-1	STOP	30 X 30	X				W				
5	"H"14+60			OM1-1 (2)	OBJECT MARKER	18 X 18			4.50		N				MOUNT ON FACE OF CONCRETE BARRIER
6	"H"14+62	X		W1-1L	LEFT TURN	30 X 30	X		6.25		W	PST	2.5	1	
7	"H"14+62	X		W14-2	NO OUTLET	30 X 30	X		6.25		W	PST	2.5	1	LOCATE 100 FT FROM UNIVERSITY AVENUE APPROACH
8	"H"14+93	X		W1-1R	RIGHT TURN	30 X 30	X		6.25		N	PST	2.5	1	
9	"H"17+37		X	D3-100(2)	WOLF RUN	24 X 8	X		2.67		N/S	PST	2.5	1	SEE INSTALLATION DETAIL ON SHEET H7-SS
				D3-100(2)	HALVORSON RD	36 X 8	X		4.00		E/W				
				R1-1	STOP	30 X 30	X		6.25		S				
10	"WR"10+31		X	W1-7	LARGE ARROW (TWO-DIRECTIONS)	48 X 24	X		8.00		S	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25		S				
11	"WR"10+91		X	W1-1R	RIGHT TURN	30 X 30	X		6.25		W	PST	2.5	1	
				W13-1p	10 MPH SPEED PLAQUE	24 X 24			4.00		W				
12	"WR"11+68	X		W1-6R	LARGE (RIGHT) ARROW	48 X 24	X		8.00		W	TS	3	1	SEE NOTE 19
13	"WR"11+80	X		W1-6L	LARGE (LEFT) ARROW	48 X 24	X		8.00		N	TS	3	1	SEE NOTE 19
14	"WR"12+43	X		W1-1L	LEFT TURN	30 X 30	X		6.25		N	PST	2.5	1	
				W13-1p	10 MPH SPEED PLAQUE	24 X 24			4.00		N				
15	"WR"14+64	X		W1-6R	LARGE (RIGHT) ARROW	48 X 24	X		8.00		S	TS	3	1	SEE NOTE 19
				W1-6L	LARGE (LEFT) ARROW	48 X 24	X		8.00		W				
						SUBTOTAL =			76.00						
						SIGNAL SIGN SUBTOTAL =			0.00						
						TOTAL SIGN AREA =			76.00						

SIGNING NOTES:

1. REMOVE AND DISPOSE OF ALL EXISTING SIGNS AND SIGN POST FOUNDATIONS WITHIN THE PROJECT LIMITS, EXCEPT SIGNS DESIGNATED FOR REINSTALLATION, SALVAGE, OR OTHERWISE NOTED.
2. 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.
3. 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.
4. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
5. INSTALL 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.
6. PROVIDE "TUBE POST BRACING" AS SHOWN ON STANDARD DRAWING S-01.01 FOR ALL SIGNS MOUNTED ON A SINGLE POST AND HAVING A HORIZONTAL DIMENSION OF 30 INCHES OR GREATER, EXCEPT D3-100 SERIES SIGNS. INSTEAD OF 5/8" DIA. GALVANIZED BOLTS AND NYLON LOCKING NUTS SHOWN ON STANDARD DRAWING S-01.01, USE GALVANIZED 3/8" DIA. BOLTS, SPLIT LOCK WASHERS AND NUTS. 1/4" T X 1-1/2" W ALUMINUM ALLOY 6061-T6 BAR MAY ALSO BE USED TO FABRICATE SIGN BRACES.
7. 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.
8. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" ON SHEET H7-SS.
9. 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).
10. 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.
11. 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 H7-SS FOR DETAIL.
12. 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 H7-SS AND STANDARD DRAWING S-01.01.
13. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
14. ALL SIGNS NOTED FOR REMOVAL AND REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF THEY ARE DAMAGED DURING THE RELOCATION EFFORT.
15. 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. THIS MODIFIES THE ASDS.
16. 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.
17. CLEARING AS DIRECTED BY THE ENGINEER MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF SIGNS. THIS WORK IS SUBSIDIARY TO PAY ITEM 615(1).
18. PROVIDE WEATHER TIGHT CAPS ON ALL TUBE POSTS, EXCEPT PERFORATED STEEL TUBES.
19. PROVIDE FRANGIBLE COUPLING SYSTEMS IN ACCORDANCE WITH STANDARD DRAWING S-31.01.
20. 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.
21. 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.

POST TYPE CODING:

TS = SQUARE STRUCTURAL STEEL TUBING
PST = PERFORATED STEEL TUBING

SIGN SUMMARY

STATE OF ALASKA
49TH
Iain McPherson
IAIN S. MCPHERSON
CE-13131
REGISTERED PROFESSIONAL ENGINEER
4/26/2019

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-SIDES\Production\06173_S_H5-H6_Sign&Salv Smry-H5-SS Fri, Apr/26/19 04:14pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	H6-SS	H8-SS

SALVAGE SIGN SUMMARY

ALIGNMENT	STATION	CL REF	ASDS CODE	LEGEND	REMARKS
GD	11+94	17.5' RT	D3-1	GOLDIZEN AVE	RELOCATE
			R1-1	STOP	
WR	11+77	68.8' LT	W14-1	DEAD END	
WR	11+96	53.1' LT	D3-101(2)	UNIVERSITY AVE	
			D3-101(2)	WOLF RUN	
			R1-1	STOP	

SIGN SALVAGE AND DISPOSAL NOTES:

1. 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.

2. SALVAGED SIGNS WILL BE PAID PER EACH SIGN PANEL DELIVERED IN ACCEPTABLE CONDITION.

3. SIGNS NOTED AS RELOCATE SHALL REUSE SIGN PANEL ON NEW POST AS IDENTIFIED IN THE SIGN SUMMARY TABLES.

SALVAGE SIGN SUMMARY

STATE OF ALASKA
49TH
IAIN S. MCPHERSON
CE-13131
REGISTERED PROFESSIONAL ENGINEER
4/26/2019

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-SIDES\Production\06173_S_H5-H6_Sign&Salv Smry-H6-SS Fri, Apr/26/19 04:14pm

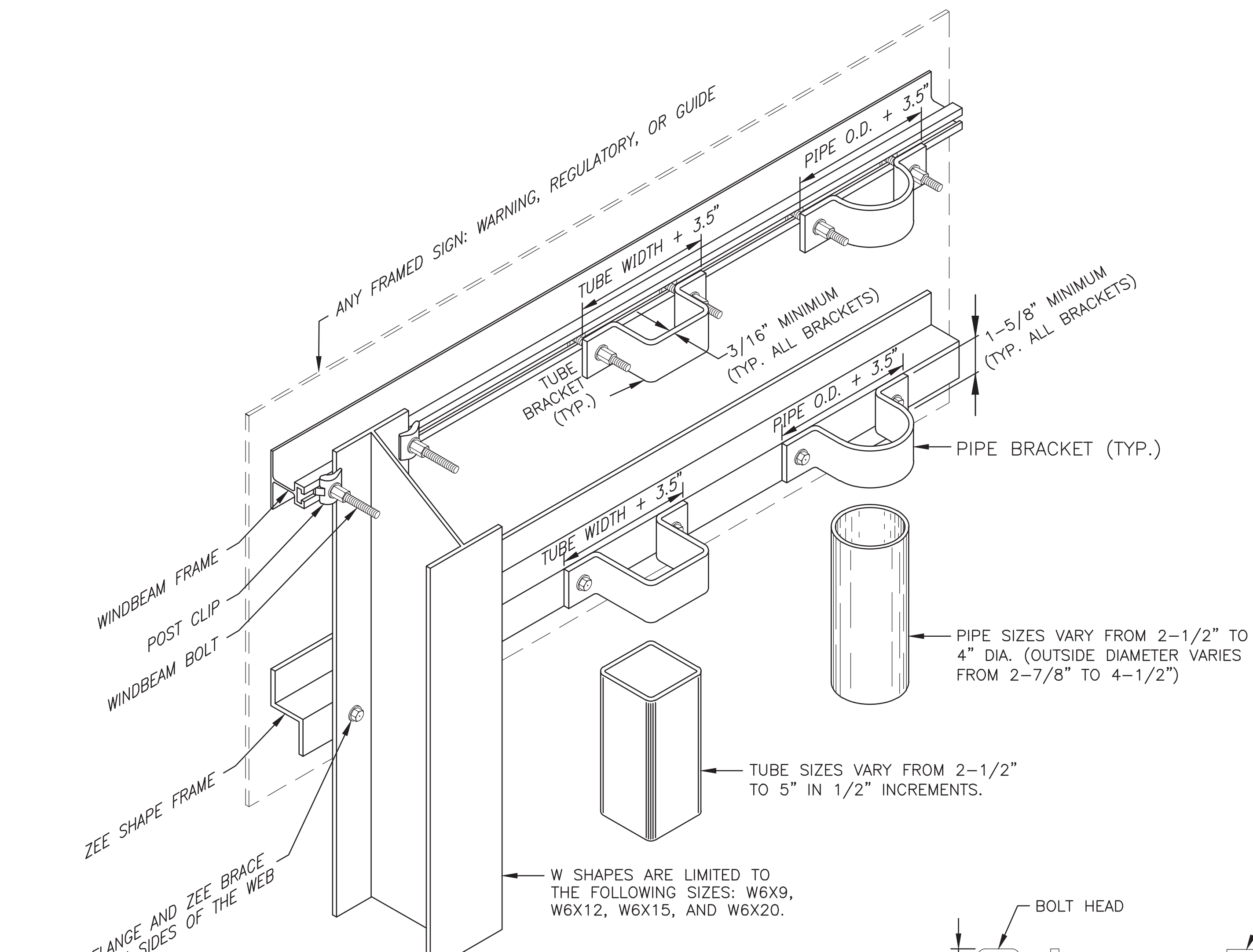
FRAMED SIGN & BRACKET DETAIL NOTES:

1. 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.
2. THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
3. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
4. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR ZEE SHAPE FRAMING AND RIVETS.

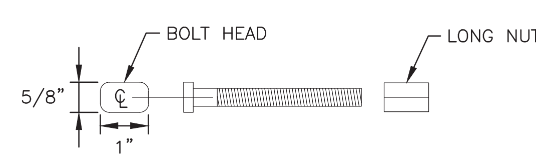
FASTENER SPECIFICATION TABLE

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

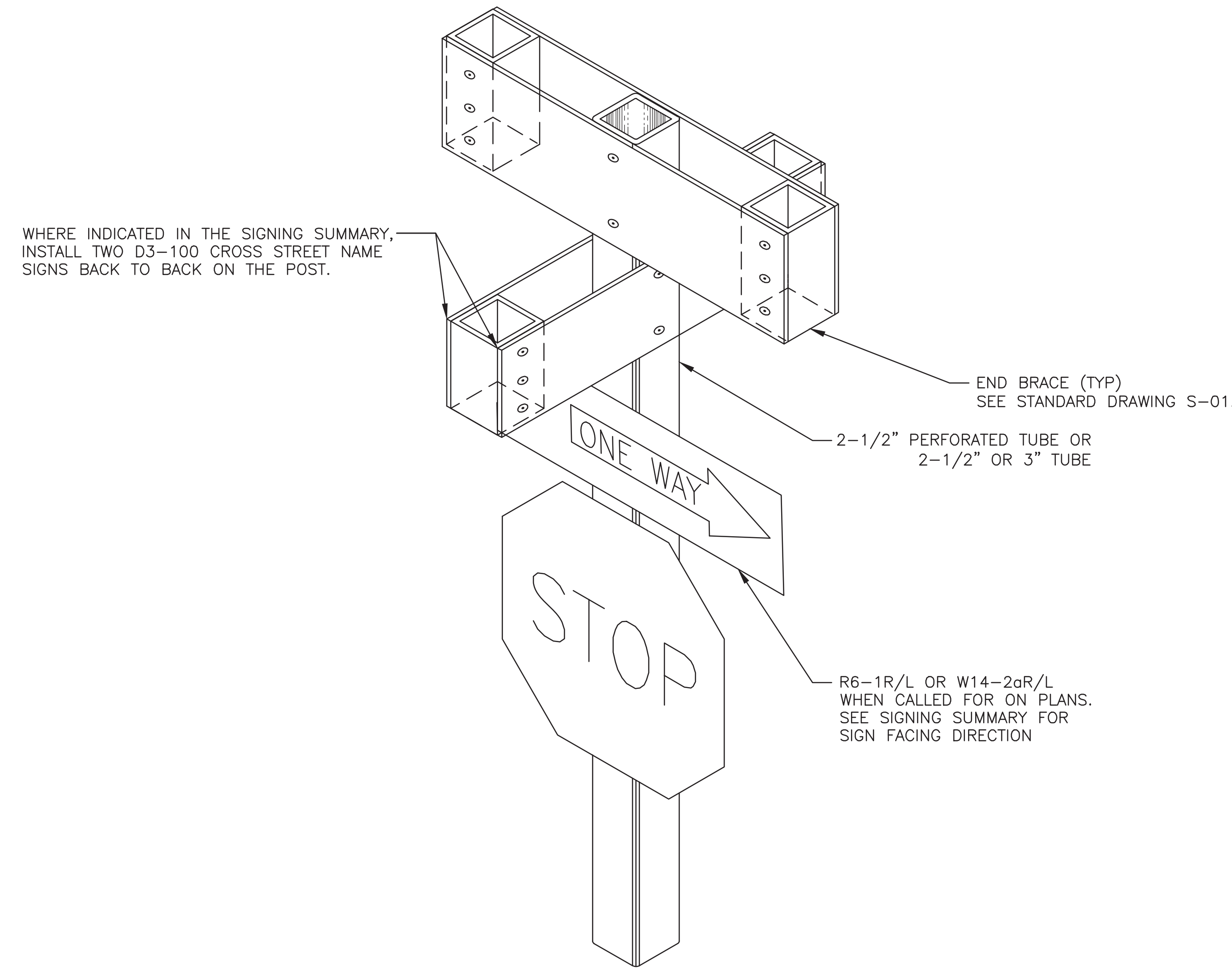
THESE SPECIFICATIONS APPLY TO ALL SIGN FASTENER HARDWARE ON THE PROJECT.



FRAMED SIGN ATTACHMENT BRACKETS



3/8" DIA. WINDBEAM BOLT AND LONG NUT

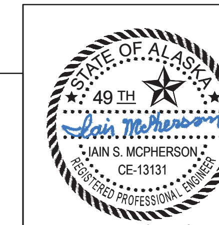


STREET NAME SIGN NOTES:

1. VERTICALLY SEPARATE MULTIPLE SIGNS MOUNTED ON THE SAME POST BY 2 1/2 INCHES.
2. 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.
3. 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

SIGN DETAILS
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-SIDES\Production\06173_S_H7-H8_Sign Detls-H7-SS Fri, Apr/26/19 04:14pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	H8-SS	H8-SS

BANDING: ¾" x 0.030 STAINLESS STEEL DOUBLE BANDING (TYPICAL)
BUCKLES: ¾" STAINLESS STEEL (TYPICAL)

IF H > 48" 3 WINDBEAMS ARE REQUIRED

IF 15" < H ≤ 48" USE 2 WINDBEAMS

IF H ≤ 15" USE 1 WINDBEAM

USE 4 BANDS H ≥ 48"
USE 2 BANDS H < 48"

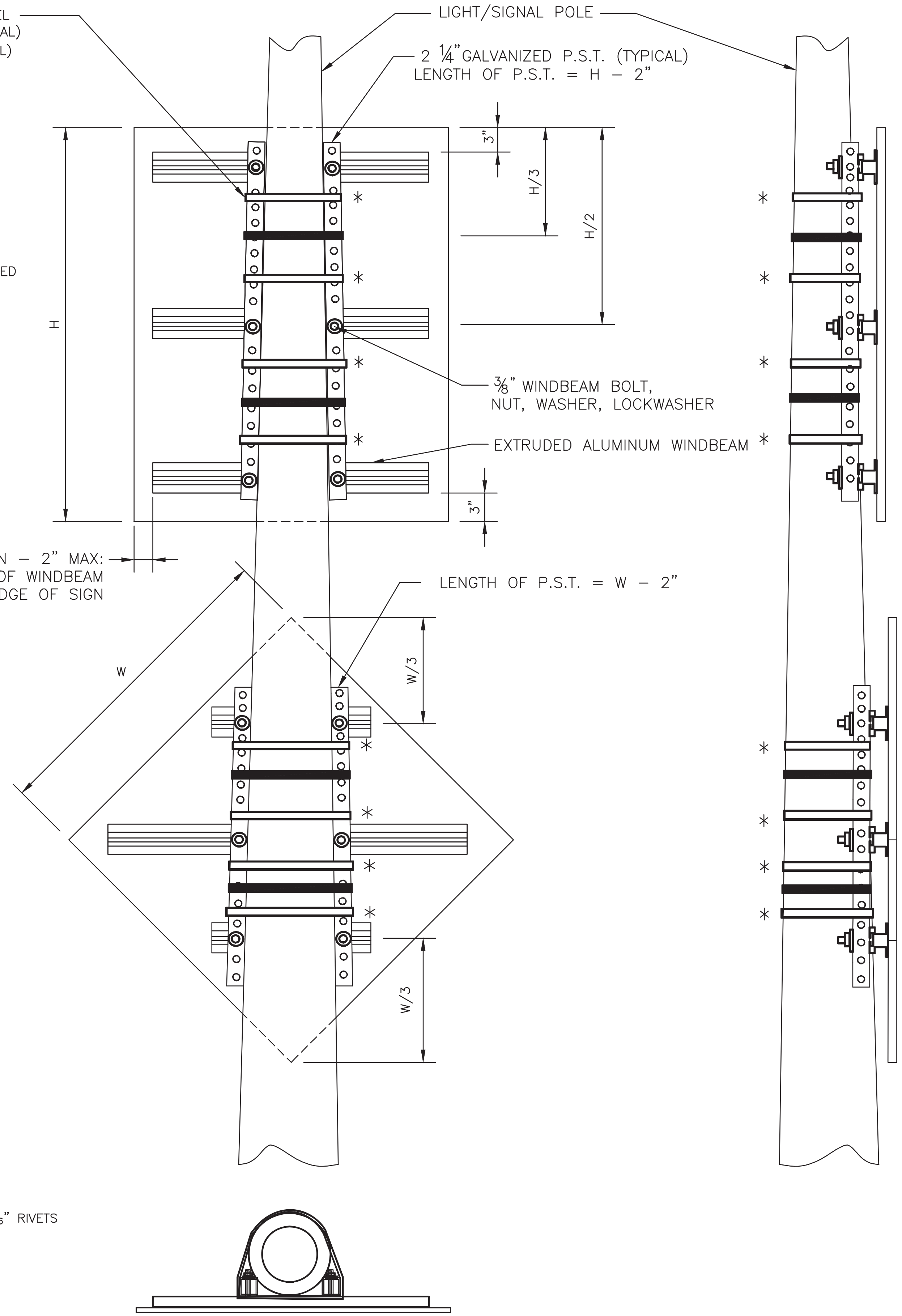
BAND LOCATIONS
SPACE BANDS H/5
WHEN 4 ARE REQUIRED

IF W ≥ 36"
3 WINDBEAMS ARE REQUIRED

IF W < 36"
USE 2 WINDBEAMS

USE 4 BANDS W ≥ 48"
USE 2 BANDS W < 48"

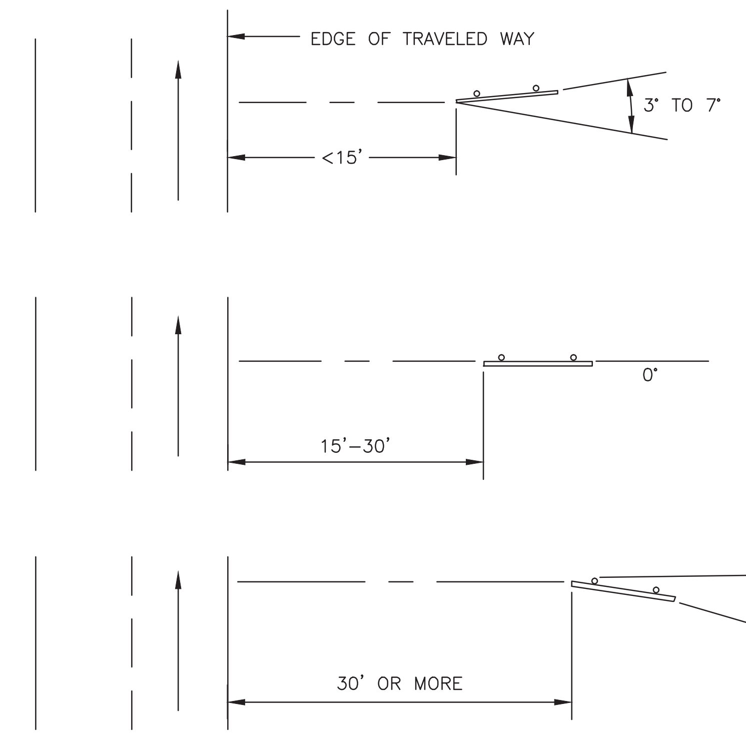
BAND LOCATIONS
SPACE BANDS W/5
WHEN 4 ARE REQUIRED



NOTE:

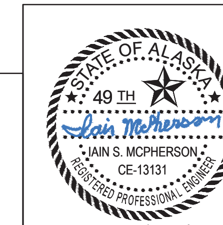
1. ATTACH SIGN TO WINDBEAMS WITH 3⁄16" RIVETS AT 4" STAGGERED SPACING.

LIGHT/SIGNAL POLE SIGN FRAMING & MOUNTING DETAILS



SIGN INSTALLATION ANGLES

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
Z:\PROJECTS\DOTPF\University Avenue Traffic Design_S1-SIDES\Production\06173_S_H7-H8_Sign Detls-H8-SS Fri, Apr/26/19 04:14pm

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)	10.0 AC
DISTURBED AREA (ACRE)	4.8 AC
PRE-CONSTRUCTION IMPERVIOUS AREA (%)	21%
POST-CONSTRUCTION IMPERVIOUS AREA (%)	22%
PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.39
POST-CONSTRUCTION RUNOFF COEFFICIENT	0.39

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 CHENA RIVER.
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. PROBABLITY OF ENCOUNTERING HAZARDOUS MATERIALS DURING CONSTRUCTION IS LOW.

ENVIRONMENTAL INFORMATION

1. RECEIVING WATERS: CHENA RIVER, NOYES 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.
5. THREATENED AND ENDANGERED SPECIES: NONE
6. HISTORICAL & CULTURAL RESOURCE PRESENCE: NONE AFFECTED
7. FISH & WILDLIFE HABITAT PRESENCE: CHENA RIVER
8. WETLANDS: NONE
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 26489 – 655 UNIVERSITY AVENUE (FORMER HOLIDAY HOUSE APARTMENTS), DEC HAZARD ID 4103 – 685 INDIANA AVENUE, RESIDENCE.
11. NO EXISTING PUBLIC WATER SYSTEM (PWS) DRINKING WATER PROTECTION AREAS (DWPA) INTERSECT THE BOUNDARY OF THE PROPOSED PROJECT. (SOURCE:ADEC DRINKING WATER PROTECTION MAP)
12. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE MIGRATORY BIRD TREATY ACT TO PREVENT THE KILLING OR TAKING OF MIGRATORY BIRDS OR ANY PART, NEST OR EGGS. SEE THE US FISH AND WILDLIFE SERVICES "LAND CLEARING TIMING GUIDANCE FOR ALASKA" FOR MORE INFORMATION.

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. AVOID UNNECESSARY GROUND DISTURBANCE AND MAINTAIN NATIVE VEGETATION WHERE PRACTICABLE THROUGH THE USE OF BMPs AND DOT&PF REVIEW OF PROPOSED SWPPP.
12. 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.
13. VEGETATIVE BUFFERS IS THE PREFERRED METHOD OF PERIMETER CONTROL FOR THIS PROJECT. WHERE VEGETATION IS NOT 25 FEET WIDE, THEN A BMP MUST BE INSTALLED FOR PERIMETER CONTROL.
14. SWEEP CLEAN STABILIZED CONSTRUCTION EXITS EACH SHIFT OR AS DIRECTED BY ENGINEER.

ESCP LEGEND:

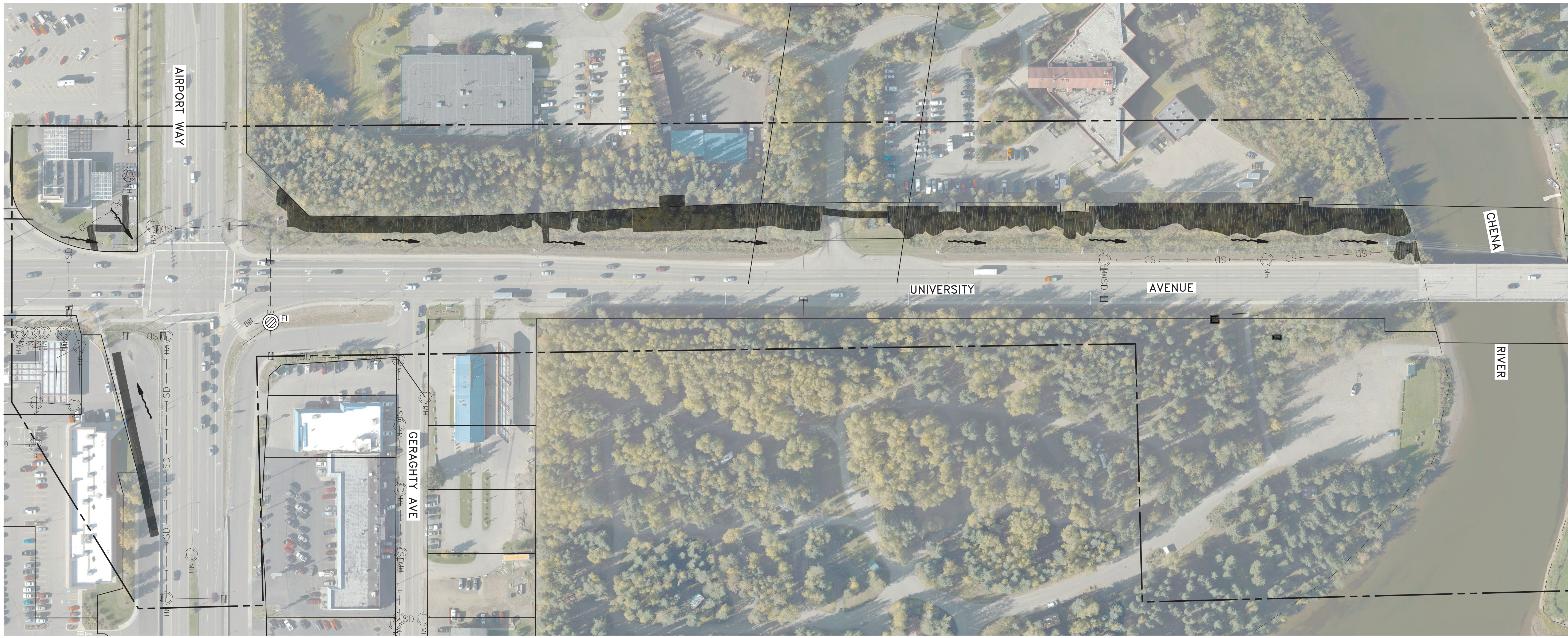
- PARCEL BOUNDARY
- SURFACE WATER FLOW DIRECTION
- CULVERT INLET PROTECTION (SEE BMP 08.00 DOT&PF SWPPP GUIDE)
- VELOCITY DISSIPATOR (RIPRAP CLASS II OR FUNCTIONAL EQUIVALENT)
- WETLANDS
- UPLANDS
- TEMPORARY CHECK DAM (SEE BMP 31.00-33.00 DOT&PF SWPPP GUIDE)
- DITCH LINE
- EXISTING EMBANKMENT CATCHLINE (CUT OR FILL)
- SD — EXISTING STORM DRAIN (FLOW DIRECTION)
- MH — STORM DRAIN MANHOLE
- FI — STORM DRAIN FIELD INLET
- STORM DRAIN CATCH BASIN
- CATCH BASIN PROTECTION AREA
- CULVERT PIPE
- TEMPORARY CULVERT INLET SEDIMENT TRAP
- APPROXIMATE LIMITS OF EARTH DISTURBANCE

FEET
800 0 400 800 1600

EROSION CONTROL NOTES AND DETAILS

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	Q2-SS	Q3-SS



80 40 0 80 160 240
SCALE IN FEET

EROSION AND SEDIMENT 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
P:\2011\11147.01FB\C\Segment 1C\1C-C\C0010cnst\11147.01fb_1c-Q2-SS Wed, Apr/24/19 10:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	Q3-SS	Q3-SS

80 40 0 80 160 240
SCALE IN FEET

EROSION AND SEDIMENT 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
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C0010cnst11147.01fb_1c-Q3-SS Wed, Apr/24/19 10:19am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U1-SS	U34-SS

WATER NOTES:

1. PROFILES SHOWN ARE BASED ON PIPE CENTERLINE.

2. ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF UTILITY SERVICES OF ALASKA STANDARDS OF DESIGN AND CONSTRUCTION AND SERVICE LINE STANDARDS.

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

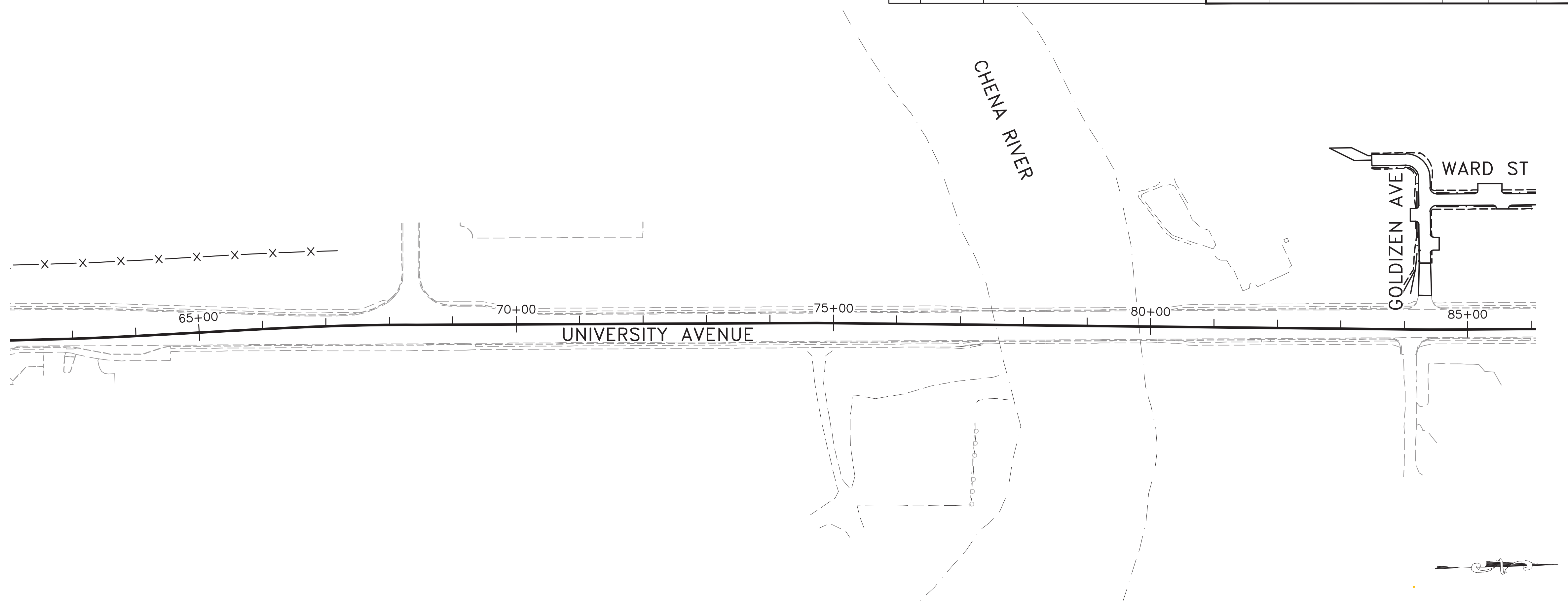
   REFER TO STANDARD DETAIL SHEETS:
   WD1– WATER SYSTEM DETAILS FIRE HYDRANT INSTALLATION
   WD2– WATER SYSTEM DETAILS PIPE, JOINTS, AND THRUST RESTRAINT
   WD3–WATER SYSTEM DETAILS VALVES AND SERVICES
   WD4– WATER AND SEWER TRENCH AND CROSSING DETAILS. REFER TO UNIVERSITY AVENUE REHABILITATION – INDIANA AVENUE TO THOMAS STREET PLANSET, SHEET U4, TYPICAL TRENCH SECTION DETAIL IN ADDITION TO STANDARD DETAIL WD4.

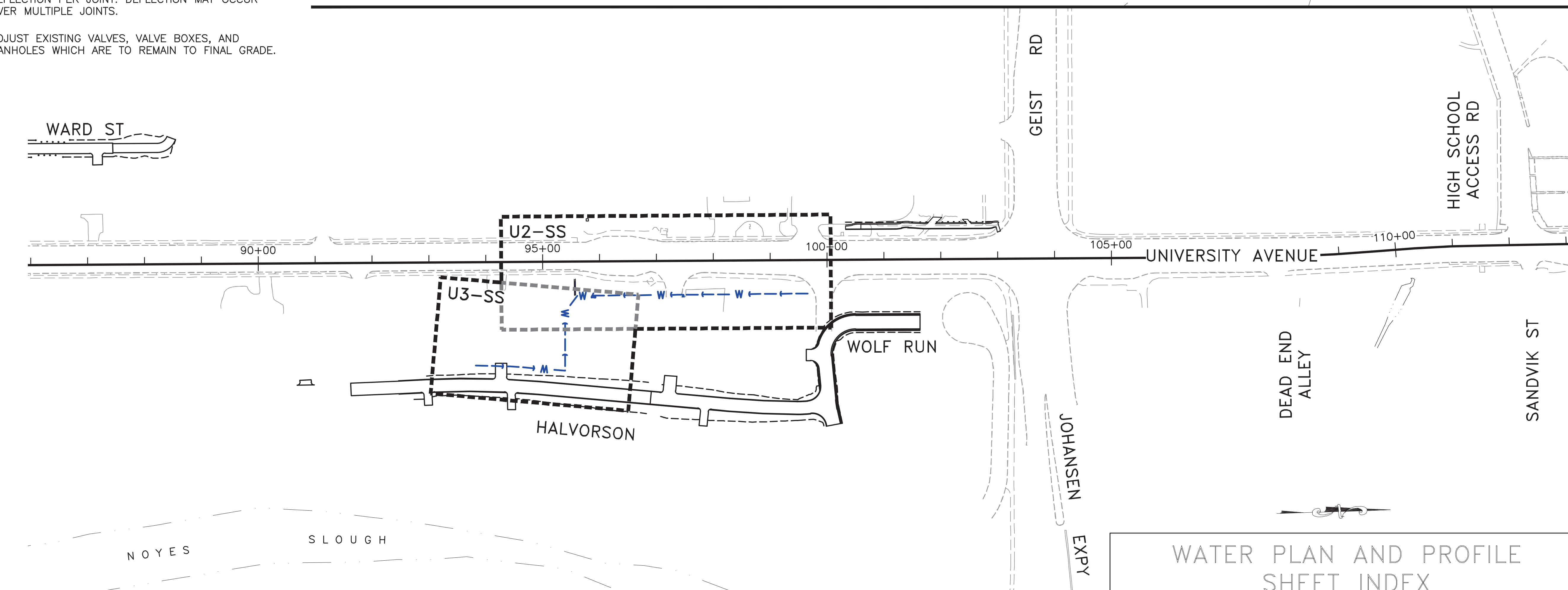
3. LOCATIONS OF EXISTING WATER AND SEWER UTILITIES ARE BASED ON SURVEYED LOCATES. LOCATE ALL NEAR UTILITIES AND REPORT TO ENGINEER IF LOCATIONS VARY FROM PLANS. VERTICAL ELEVATIONS ARE GENERALLY BASED ON ASSUMING MINIMUM COVER DEPTH.

4. 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.

5. DEFLECT WATER MAIN AS DIRECTED. DO NOT EXCEED HALF OF MANUFACTURER'S MAXIMUM RECOMMENDED DEFLECTION PER JOINT. DEFLECTION MAY OCCUR OVER MULTIPLE JOINTS.

6. ADJUST EXISTING VALVES, VALVE BOXES, AND MANHOLES WHICH ARE TO REMAIN TO FINAL GRADE.





WATER PLAN AND PROFILE SHEET INDEX

STATE OF ALASKA
49TH
Karen Ann Brady
KAREN ANN BRADY
CE 11523
5/6/2019
REGISTERED PROFESSIONAL ENGINEER

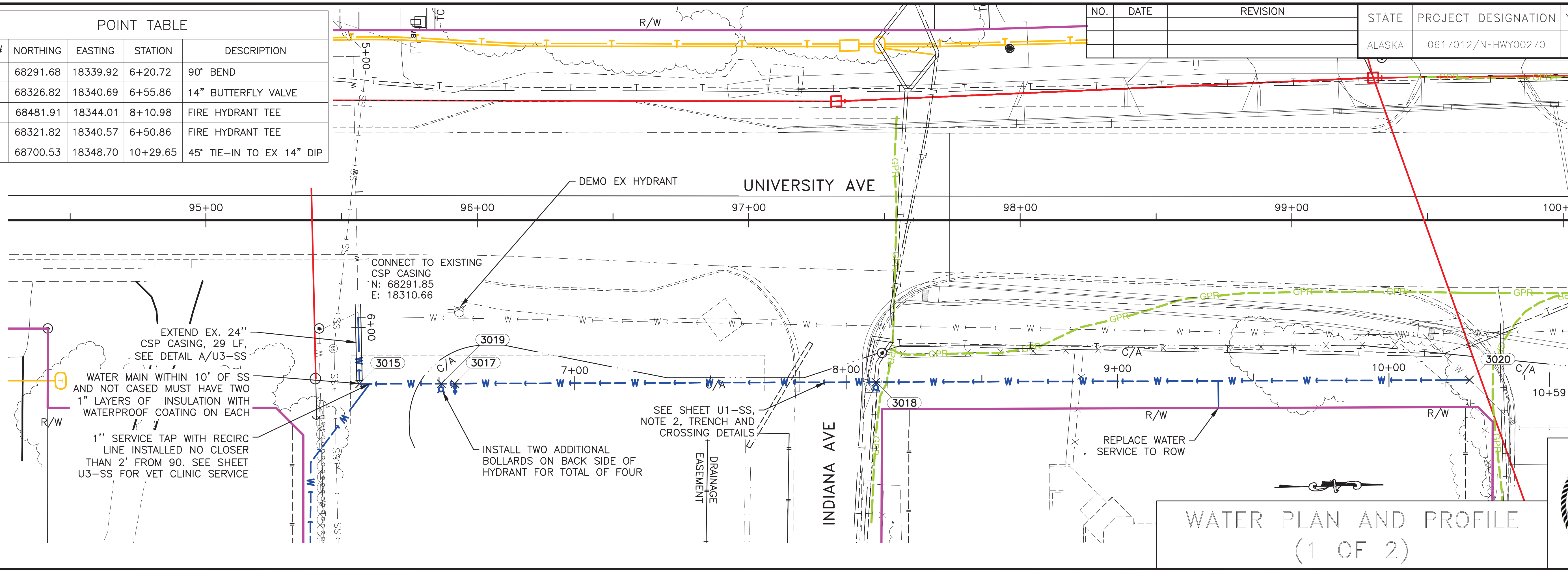
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01fb\C\Segment Improvement Packages\Segment 1C\1C-C\c005cnst11147.01fb_1c-U1-SS Water Plan and Profile Sheet Index Tue, May/07/19 02:49pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U2-SS	U34-SS

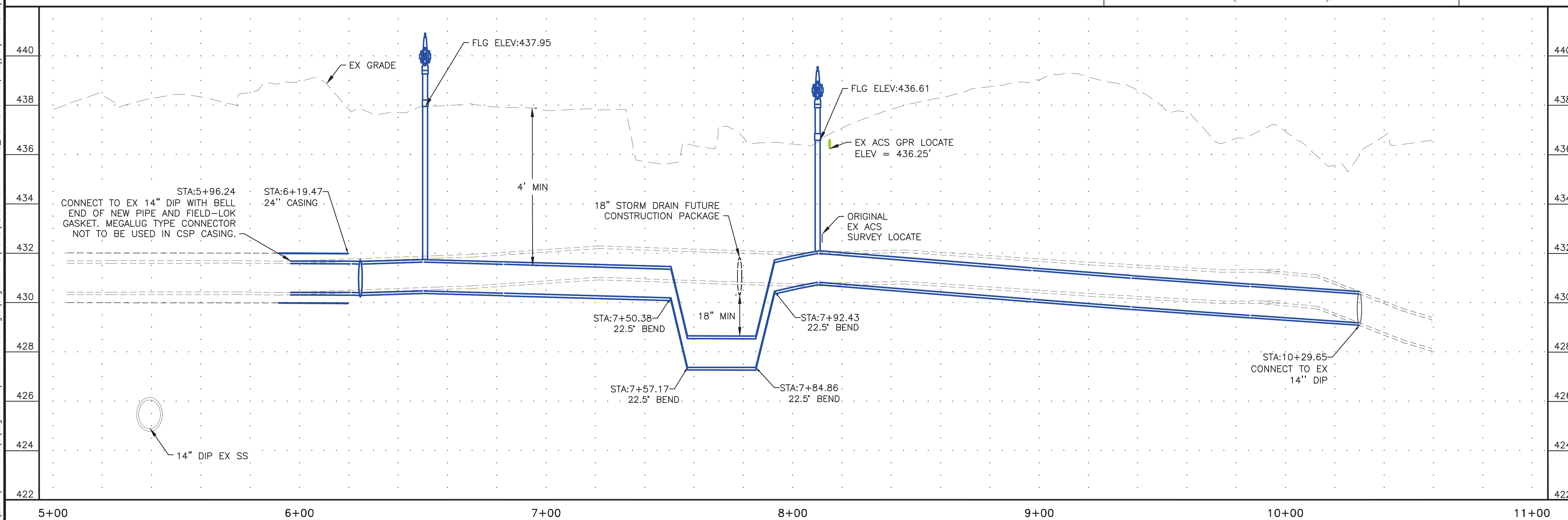
POINT TABLE

POINT #	NORTHING	EASTING	STATION	DESCRIPTION
3015	68291.68	18339.92	6+20.72	90° BEND
3017	68326.82	18340.69	6+55.86	14" BUTTERFLY VALVE
3018	68481.91	18344.01	8+10.98	FIRE HYDRANT TEE
3019	68321.82	18340.57	6+50.86	FIRE HYDRANT TEE
3020	68700.53	18348.70	10+29.65	45° TIE-IN TO EX 14" DIP



WATER PLAN AND PROFILE (1 OF 2)

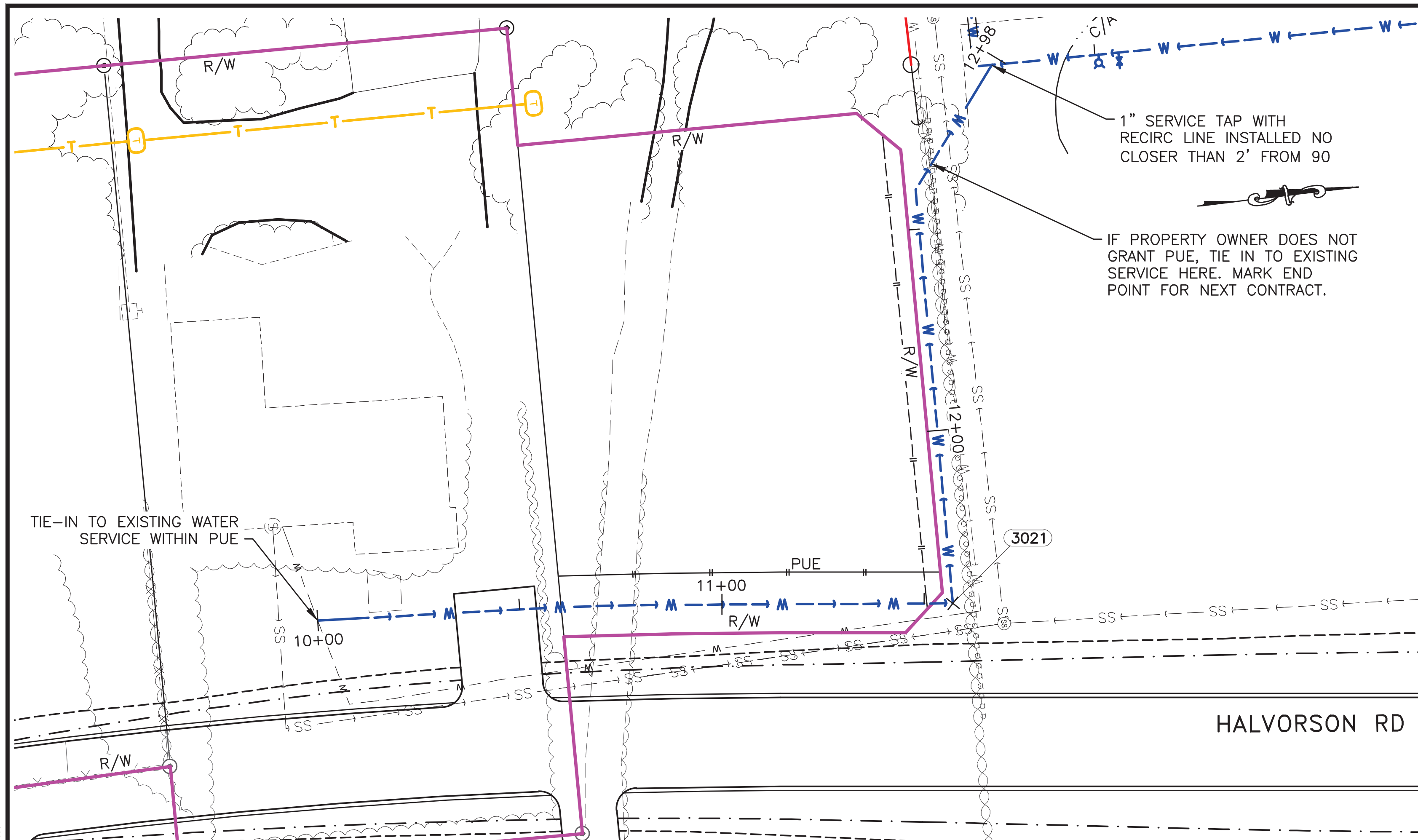
STATE OF ALASKA 49TH Karen Ann Brady 5/2/2019 KAREN ANN BRADY CE 11523 REGISTERED PROFESSIONAL ENGINEER

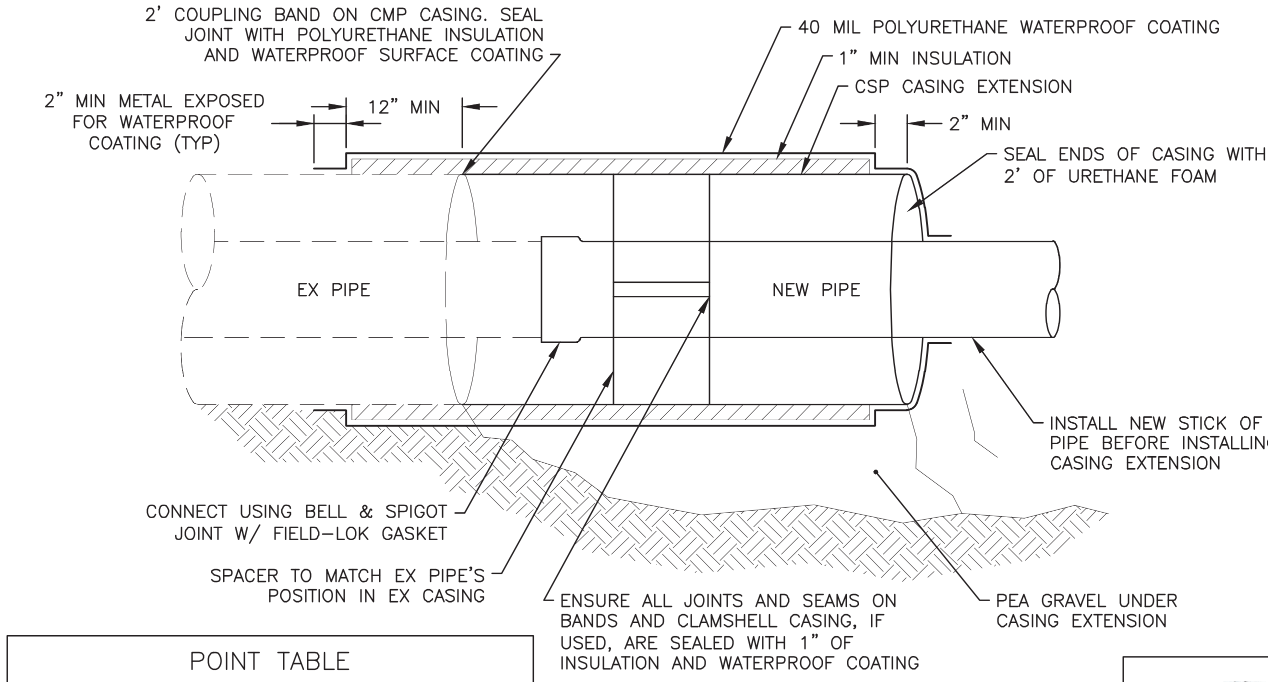


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01fb\C\Segment Improvement Packages\Segment 1C\1C-C\c2006cnst11147.01fb_1C-U2-SS Tue, May/07/19 02:59pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U3-SS	U34-SS





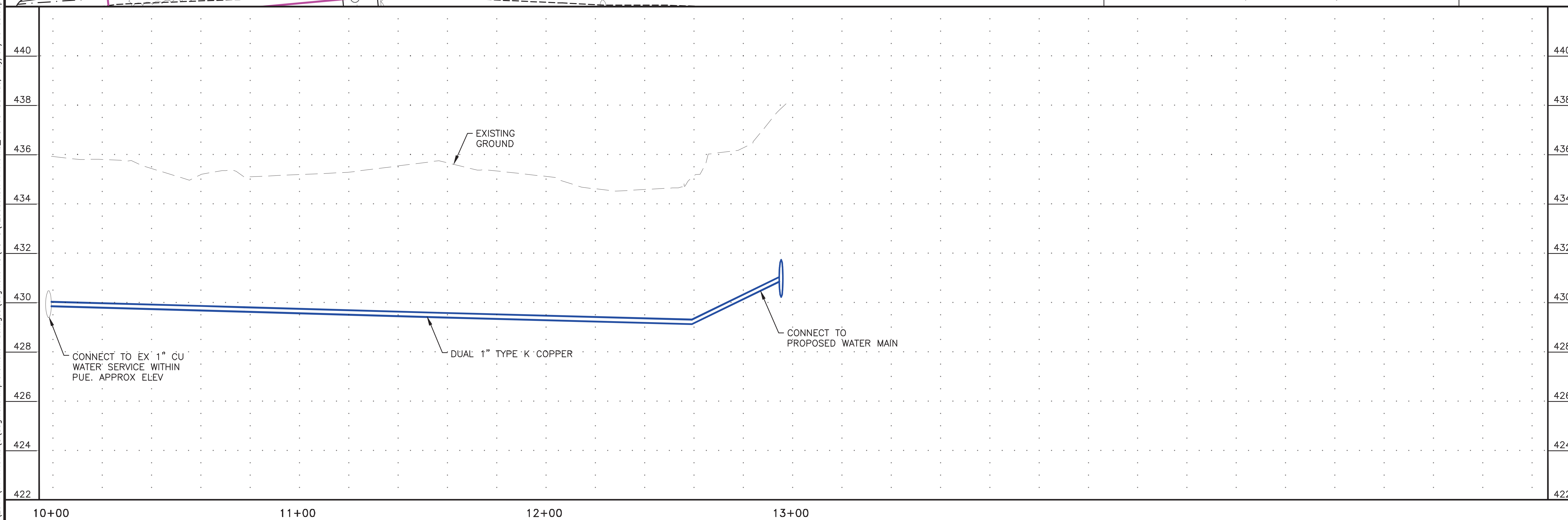
DETAIL A – CASING EXTENSION

POINT TABLE

POINT #	NORTHING	EASTING	STATION	DESCRIPTION
3021	68270.00	18470.99	11+57.13	90° BEND

WATER PLAN AND PROFILE (2 OF 2)

STATE OF ALASKA 49 TH Karen Ann Brady KAREN ANN BRADY 5/7/2019 CE 11523 REGISTERED PROFESSIONAL ENGINEER



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 1C\1C-C\c2006cnst11147.01fb_1C-U3-SS Tue, May/07/19 03:09pm

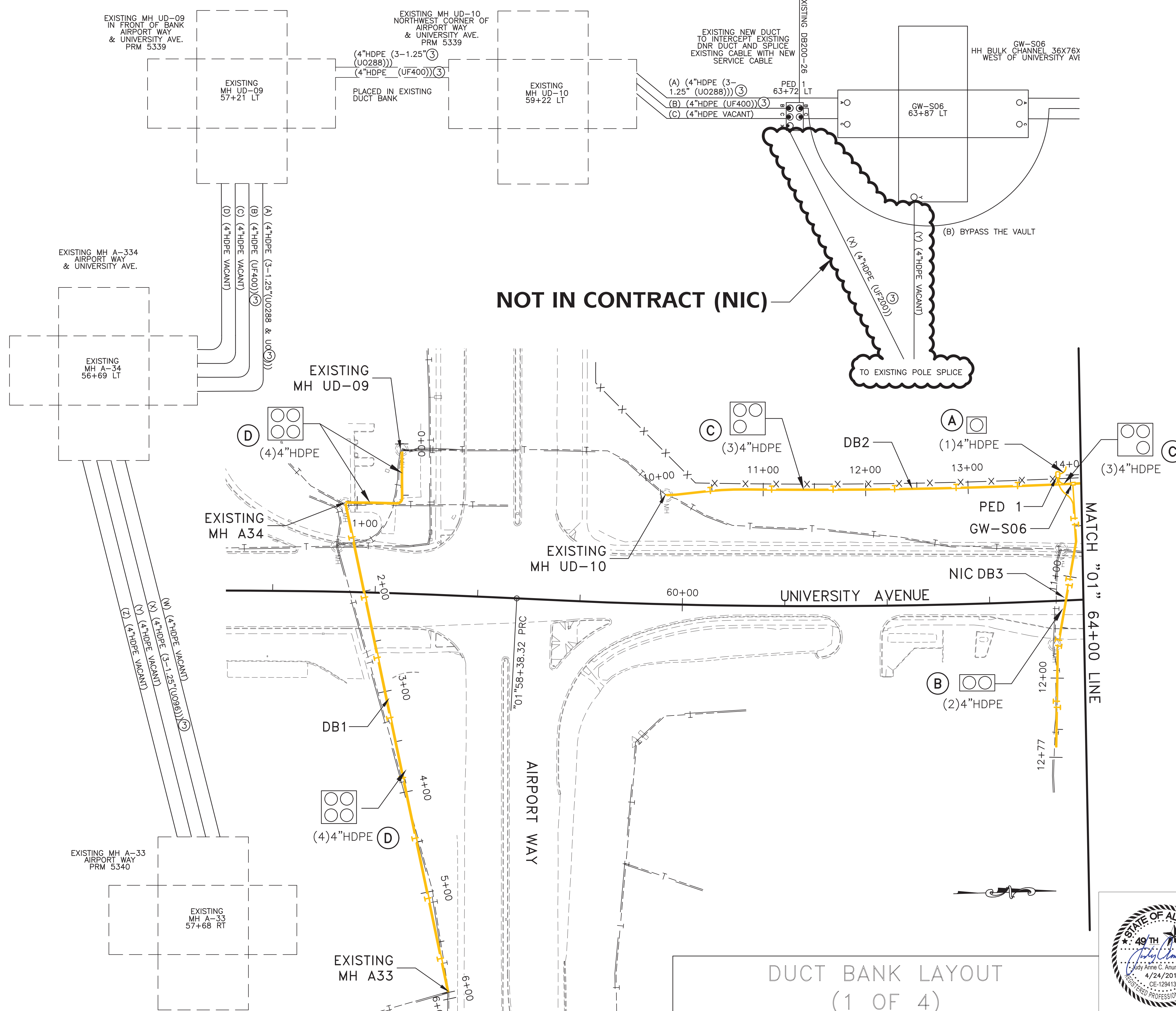
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U4-SS	U34-SS

NOTES:

1. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.
2. SEE SHEETS U21–U23 FROM UNIVERSITY AVENUE INDIANA TO THOMAS STREET PROJECT FOR DUCT BANK DETAILS.

③ CABLE INSTALLATION NOT IN CONTRACT (NIC)



DUCT BANK LAYOUT (1 OF 4)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion CE-129413 4/24/2019 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1004cnst11147.01FB_1C-U4-SS Duct Bank Layout (1 of 4) Wed, Apr/24/19 03:25pm

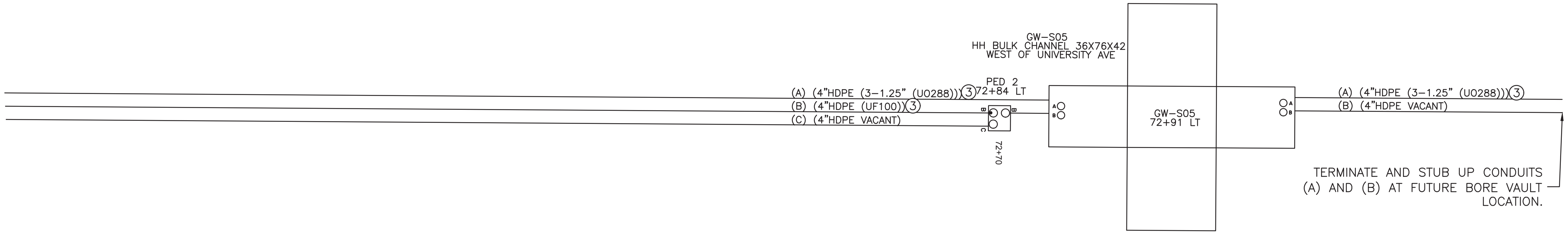
NO.	DATE	REVISION

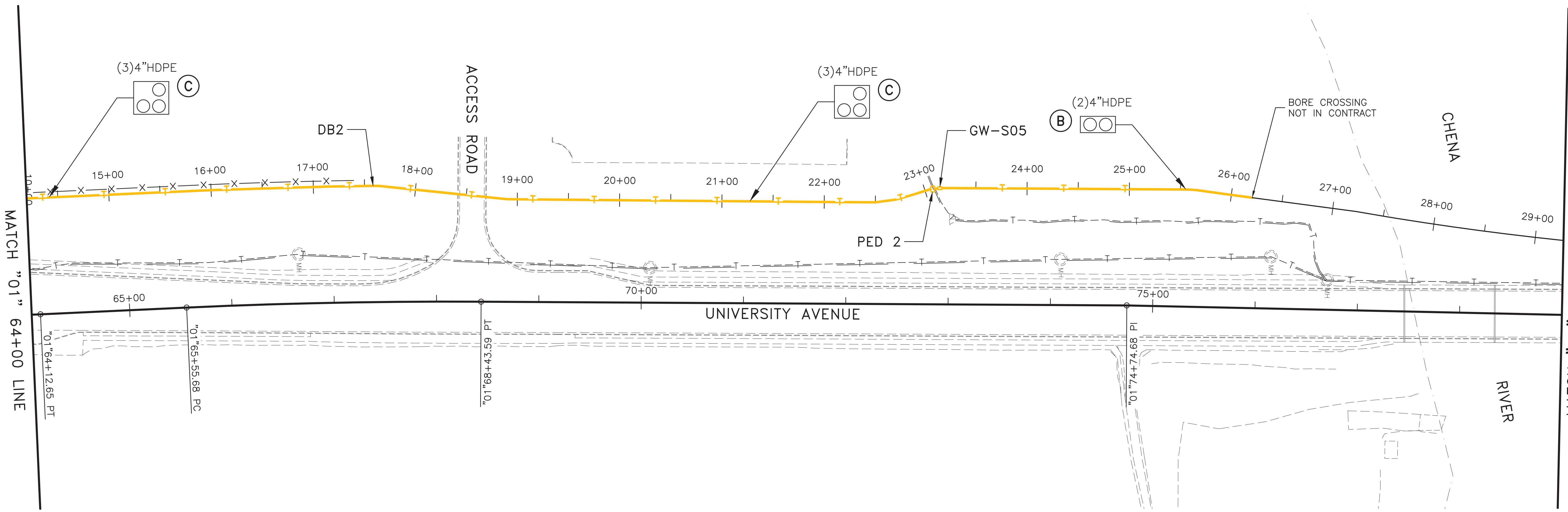
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U5-SS	U34-SS

NOTES:

1. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.
2. SEE SHEETS U21–U23 FROM UNIVERSITY AVENUE INDIANA TO THOMAS STREET PROJECT FOR DUCT BANK DETAILS.

③ CABLE INSTALLATION NOT IN CONTRACT (NIC)





DUCT BANK LAYOUT
(2 OF 4)

STATE OF ALASKA 49TH
Judy Anne C. Anunciacion
CE-129413
4/24/2019
REGISTERED PROFESSIONAL ENGINEER

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\1147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C1004cnst\1147.01FB_1C-U5-SS Duct Bank Layout (2 of 4) Wed, Apr/24/19 03:25pm

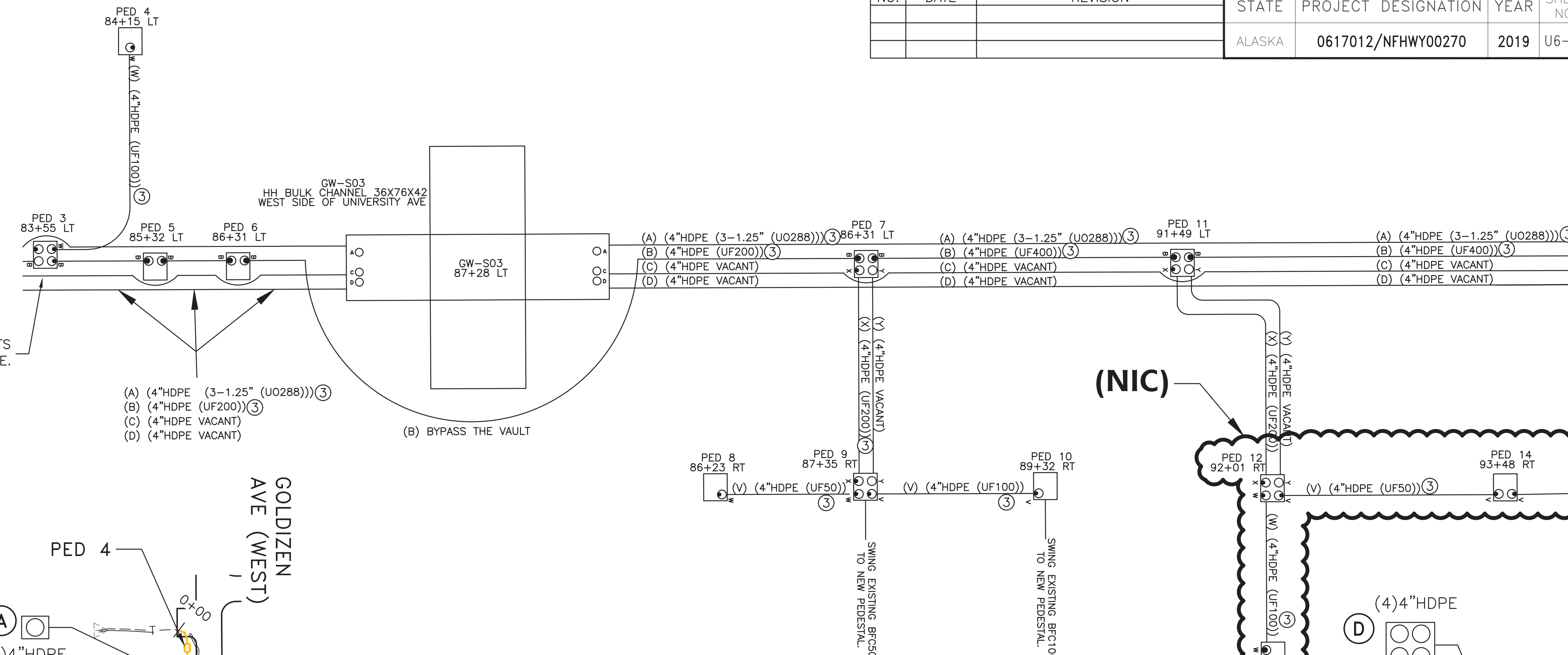
NOTES:

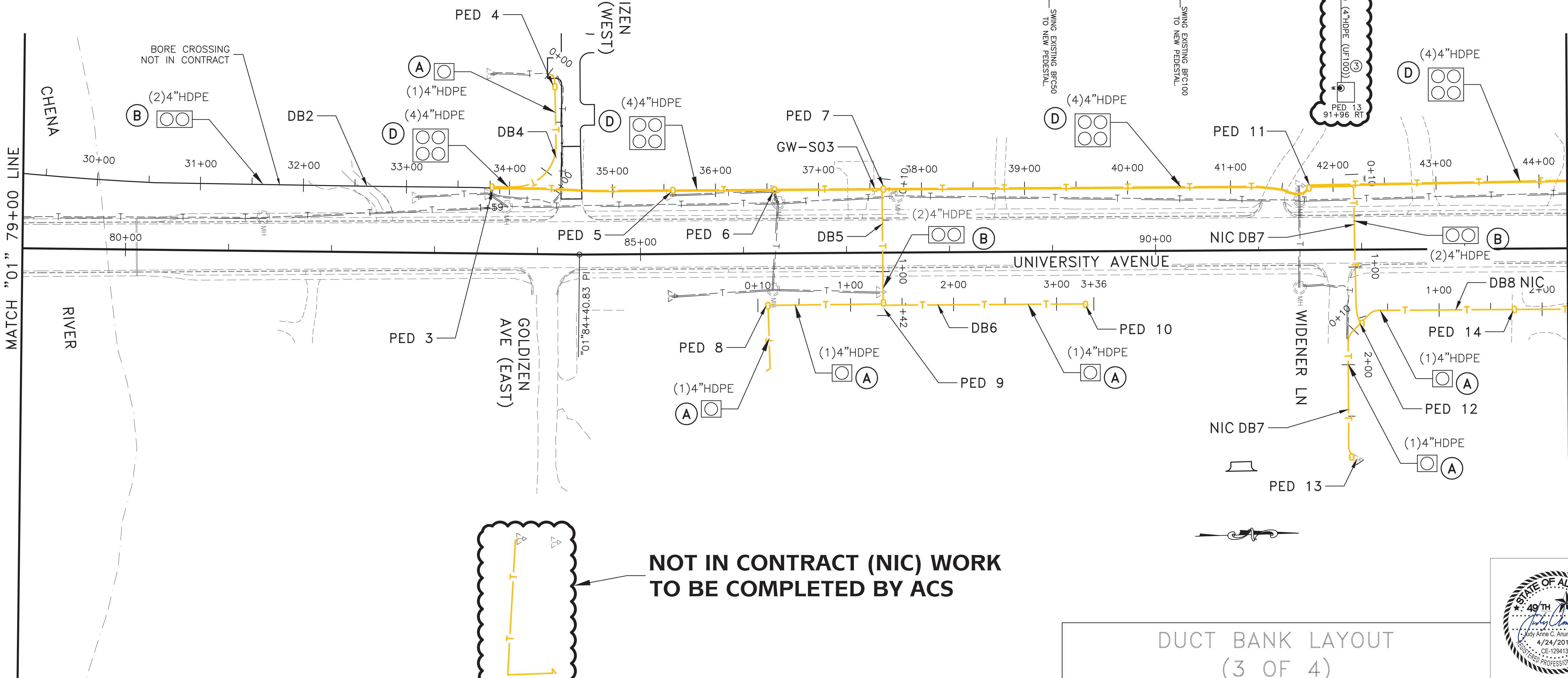
1. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.
2. SEE SHEETS U21–U23 FROM UNIVERSITY AVENUE INDIANA TO THOMAS STREET PROJECT FOR DUCT BANK DETAILS.

(3) CABLE INSTALLATION NOT IN CONTRACT (NIC)

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U6-SS	U34-SS





DUCT BANK LAYOUT
(3 OF 4)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C1004cnst11147.01FB-1C-U6-SS Duct Bank Layout (3 of 4) Wed, Apr/24/19 03:25pm

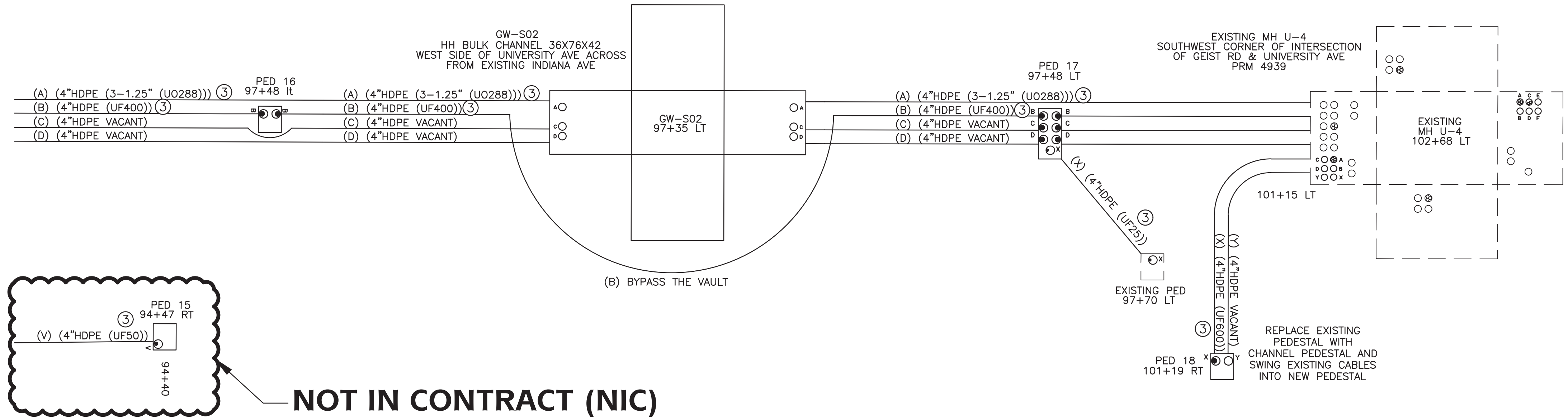
NO.	DATE	REVISION

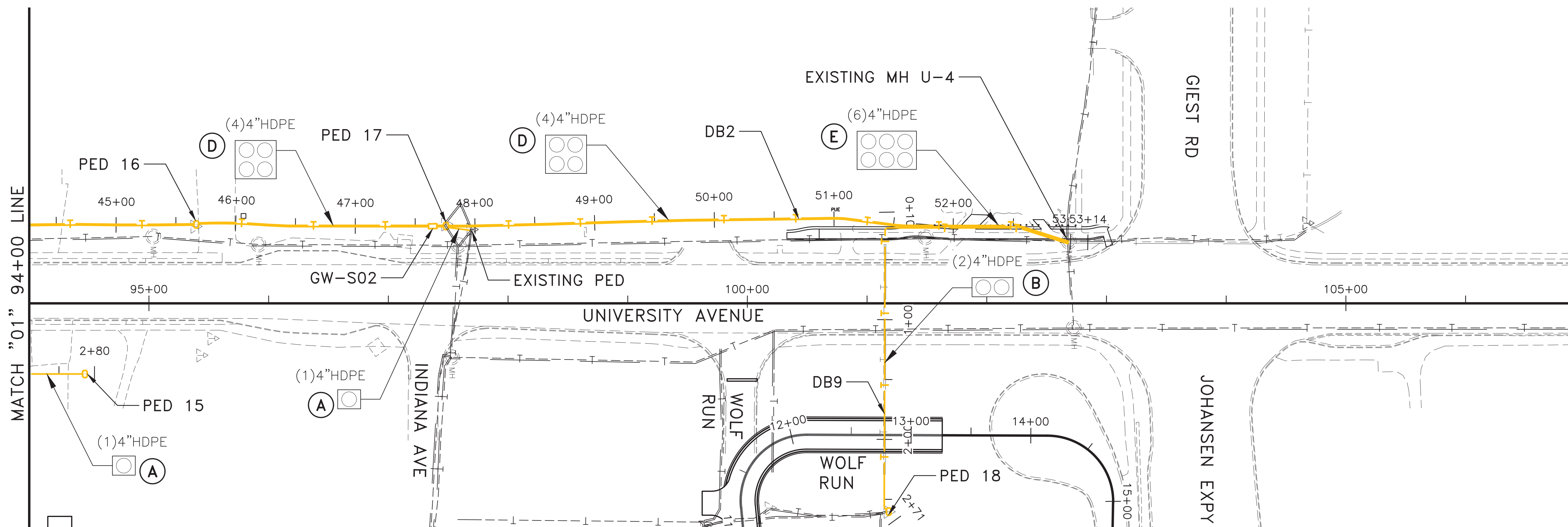
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U7-SS	U34-SS

NOTES:

1. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.
2. SEE SHEETS U21-U23 FROM UNIVERSITY AVENUE INDIANA TO THOMAS STREET PROJECT FOR DUCT BANK DETAILS.

(3) CABLE INSTALLATION NOT IN CONTRACT (NIC)





DUCT BANK LAYOUT
(4 OF 4)

Judy Anne C. Anunciacion
4/24/2019
CE-129413

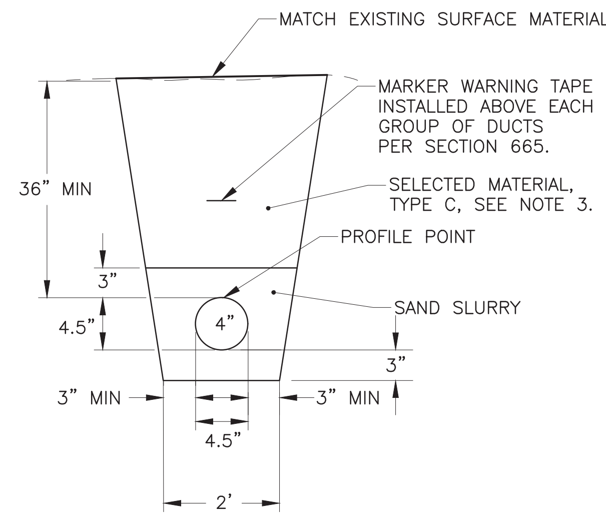
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C1004cnst11147.01FB_1C-U7-SS Duct Bank Layout (4 of 4) Wed, Apr/24/19 03:25pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U8-SS	U34-SS

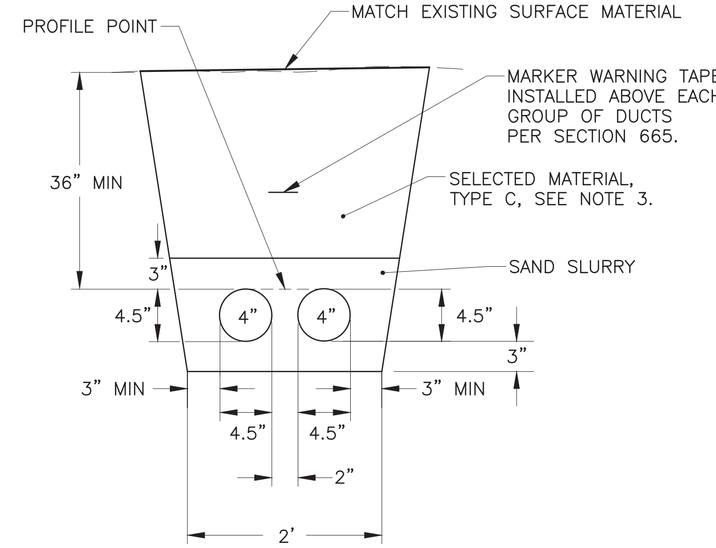
NOTES:

1. DUCT BANK SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY.
2. DUCT PLACEMENT CAN SHIFT WITHIN THE TRENCH SECTION, MAINTAIN MINIMUM SEPARATION BETWEEN DUCT EDGE AND TRENCH EDGE.
3. BACK FILL DB2 DUCT BANK ALIGNMENT AS SPECIFIED USING SUBBASE, GRADING F IN PREPARATION OF UNIVERSITY AVENUE ROADWAY WIDENING.



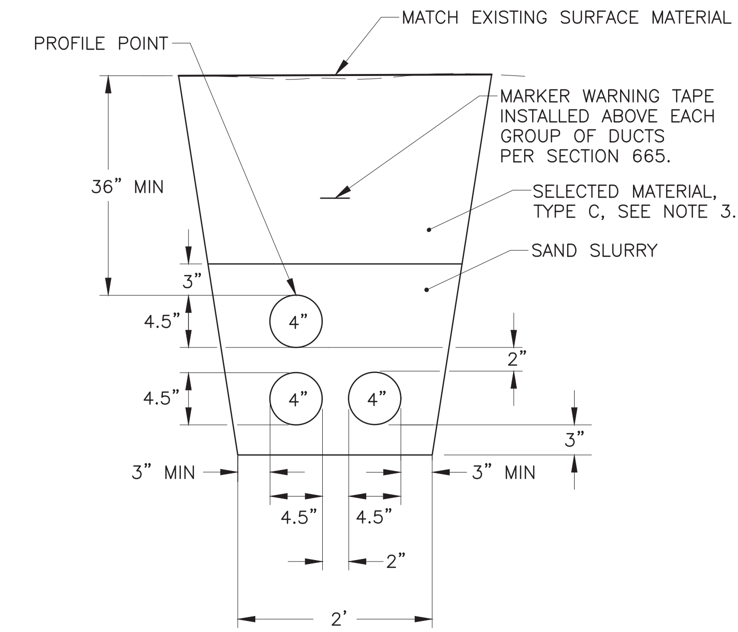
A (1) 4" HDPE CONDUITS

"DB2" 13+88.36 TO "DB2" 13+99.74
3 "DB2" 47+75.98 TO "DB2" 47+95.30
"DB6" 0+20.75 TO "DB6" 3+27.52
NIC ~~"DB7" 1+54.80 TO "DB7" 2+93.68~~
NIC ~~"DB8" 0+19.97 TO "DB8" 2+70.61~~
"DB4" 0+00.96 TO "DB4" 1+56.79



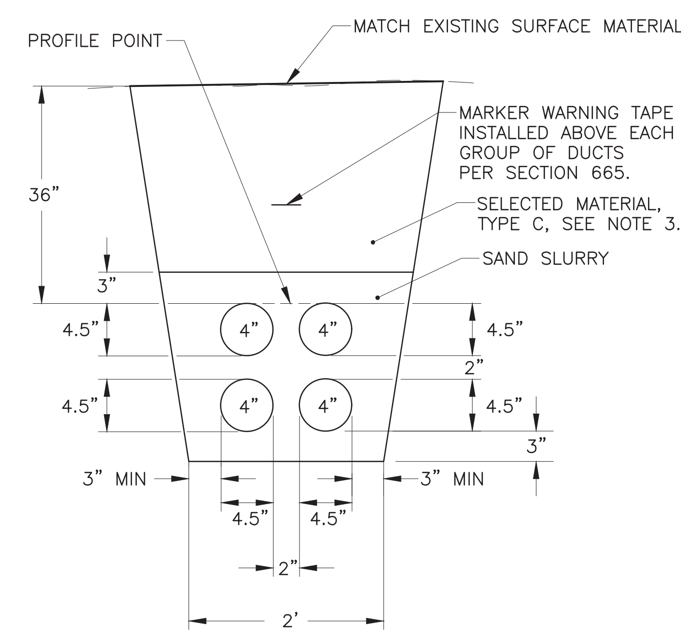
B (2) 4" HDPE CONDUITS

"DB2" 23+07.87 TO "DB2" 26+20.67
NIC ~~"DB3" 10+10.52 to "DB3" 12+66.18~~
"DB5" 0+20.90 TO "DB5" 1+31.09
"DB7" 0+20.06 TO "DB7" 1+23.51
NIC ~~"DB7" 1+23.51 TO "DB7" 1+54.80~~
"DB9" 0+20.00 TO "DB9" 2+59.01



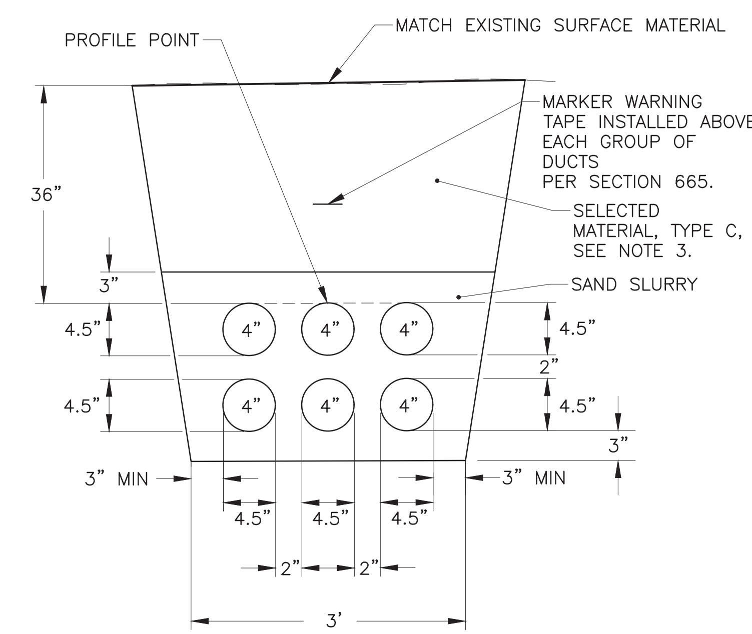
C (3) 4" HDPE CONDUITS

"DB2" 10+10.00 TO "DB2" 23+05.96



D (4) 4" HDPE CONDUITS

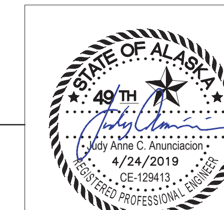
3 "DB2" 33+84.91 TO "DB2" 51+44.63
"DB1" 0+05.45 TO "DB1" 6+00.00



E (6) 4" HDPE CONDUITS

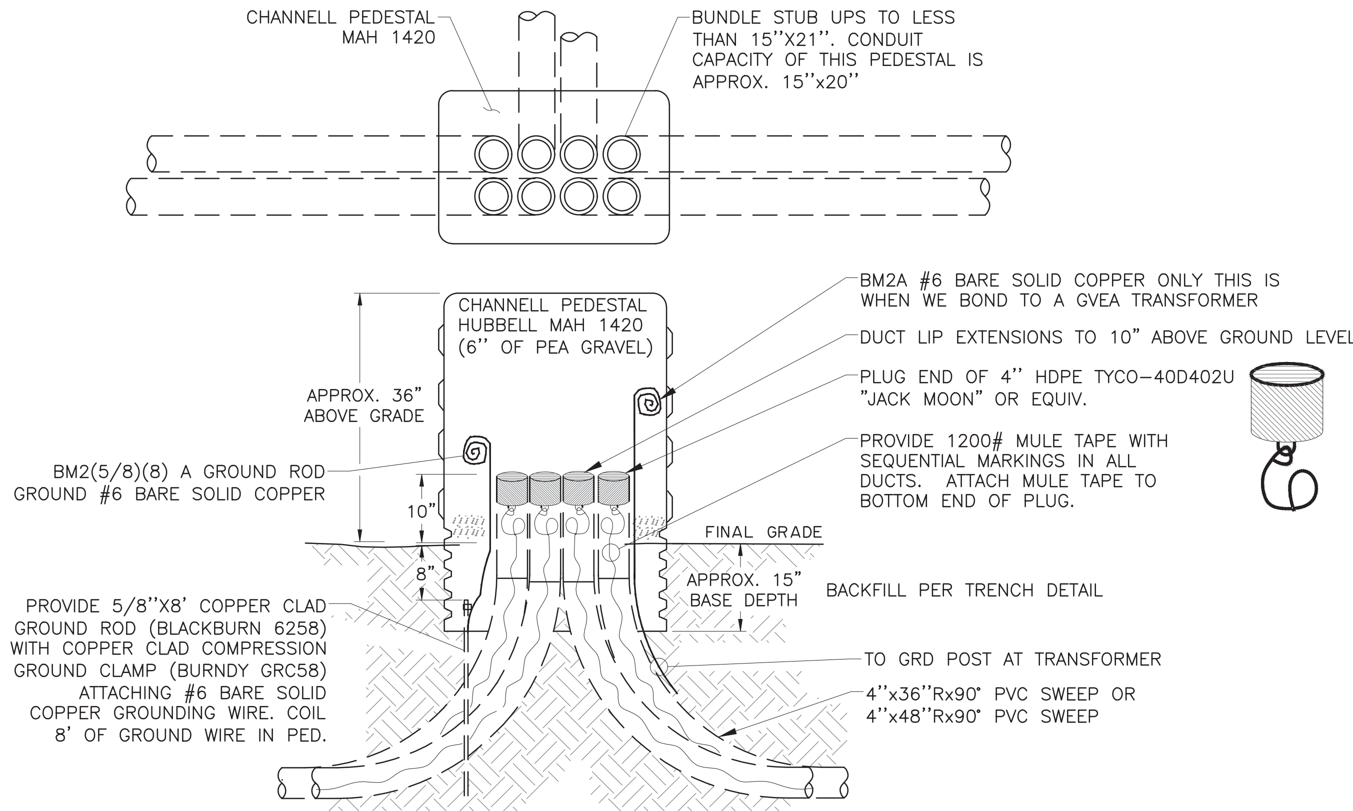
3 "DB2" 51+44.63 TO "DB2" 52+98.30

DUCT BANK TRENCH SECTIONS



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 1C\1C-C\c7003cnst11147.01fb_1c-U8-SS Duct Bank Trench Sections Wed, Apr/24/19 03:25pm

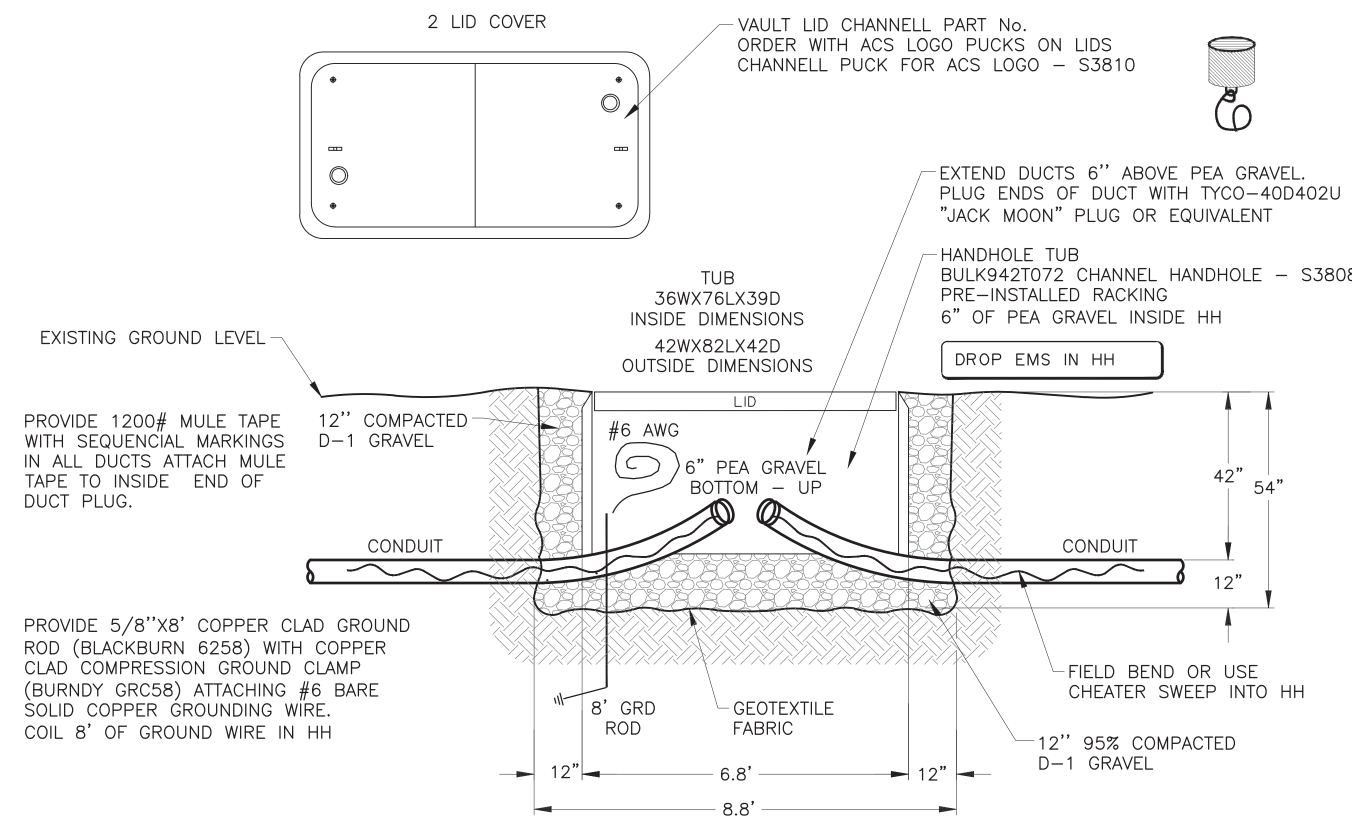
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2019	U9-SS	U34-SS



PVC SPEC CHANNEL PEDESTAL

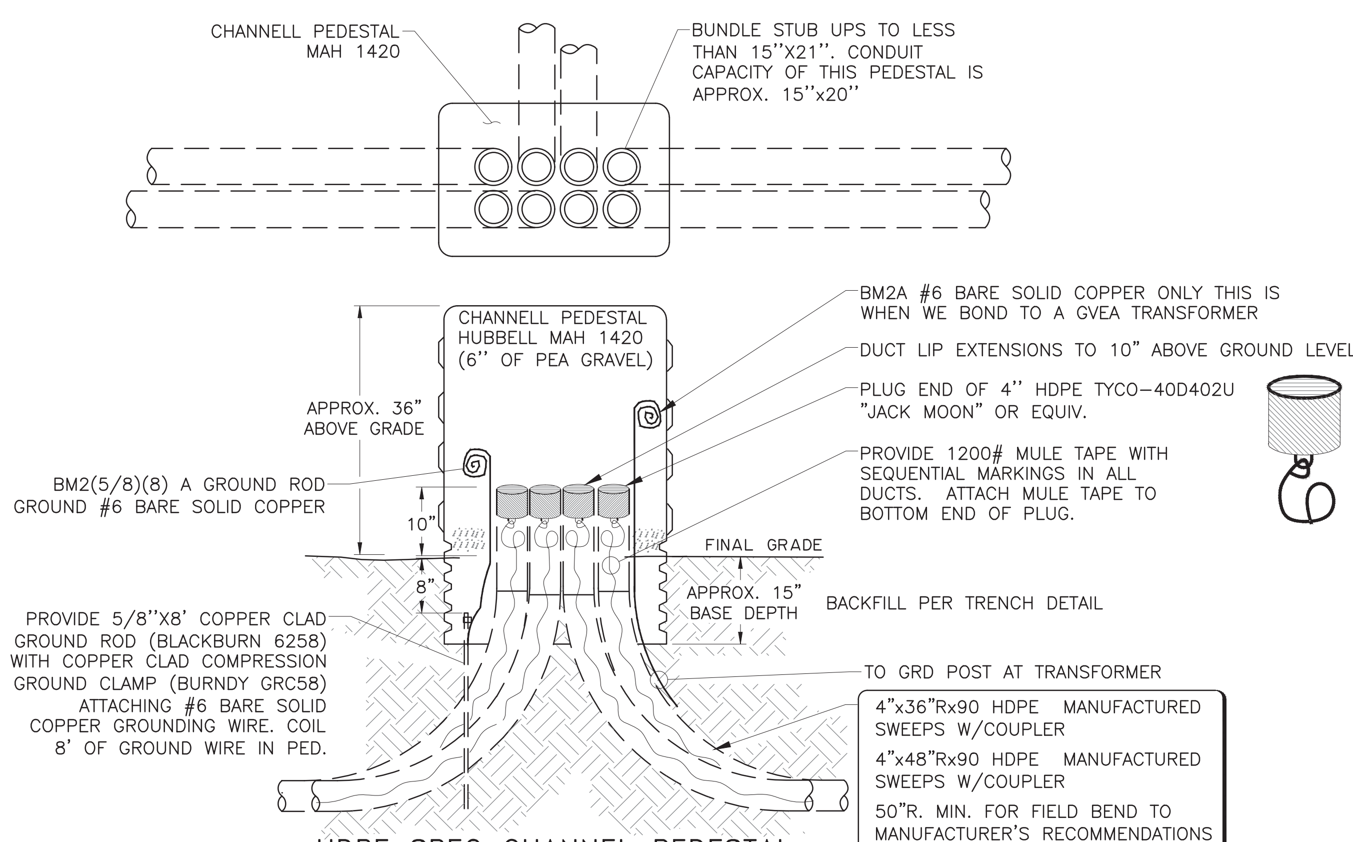
CALL LOCATE: 1-800-478-3121
2 WORKING DAYS PRIOR TO CONSTRUCTION
FOR UNDERGROUND SERVICES LOCATING

ACS CODE S3808



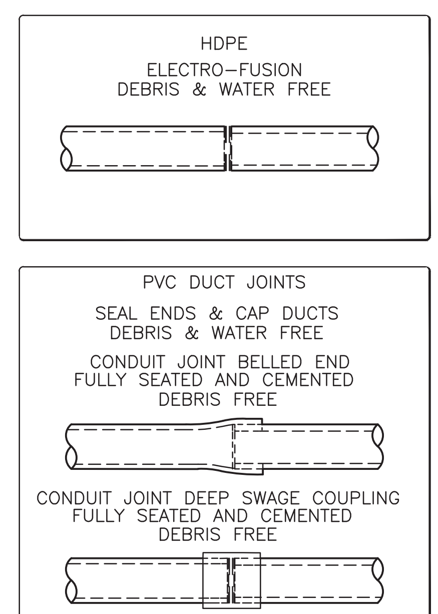
TYPICAL 36X76X42 BULK942T072 CHANNELL HANDHOLE DETAIL INSTALLATION DETAIL

NTS



HDPE SPEC CHANNEL PEDESTAL

CALL LOCATE: 1-800-478-3121
2 WORKING DAYS PRIOR TO CONSTRUCTION
FOR UNDERGROUND SERVICES LOCATING



DUCT JOINT DETAILS

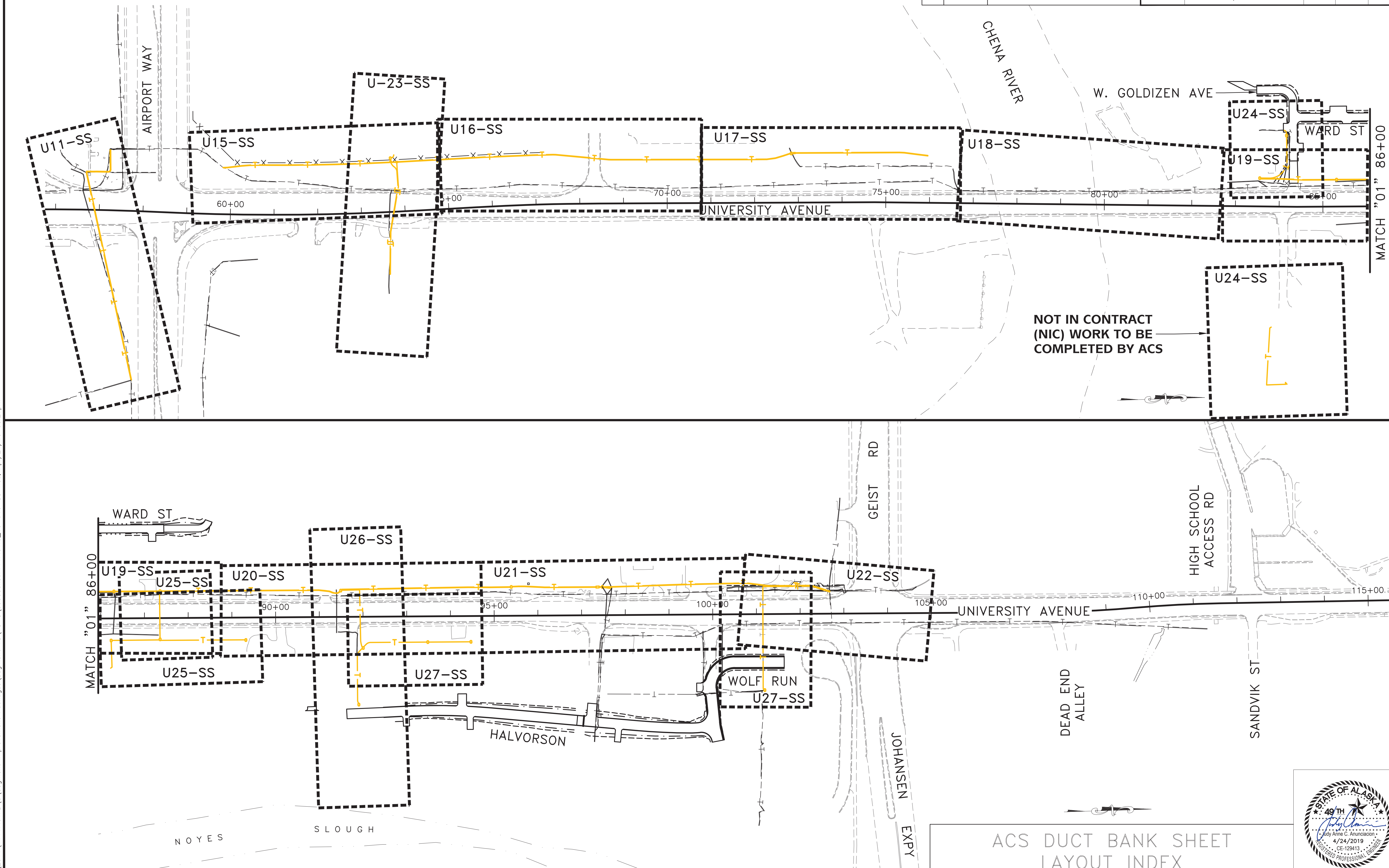
DUCT BANK DETAILS

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\c7003cnst11147.01fb_1c-U9-SS Wed, Apr/24/19 03:25pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U10-SS	U34-SS

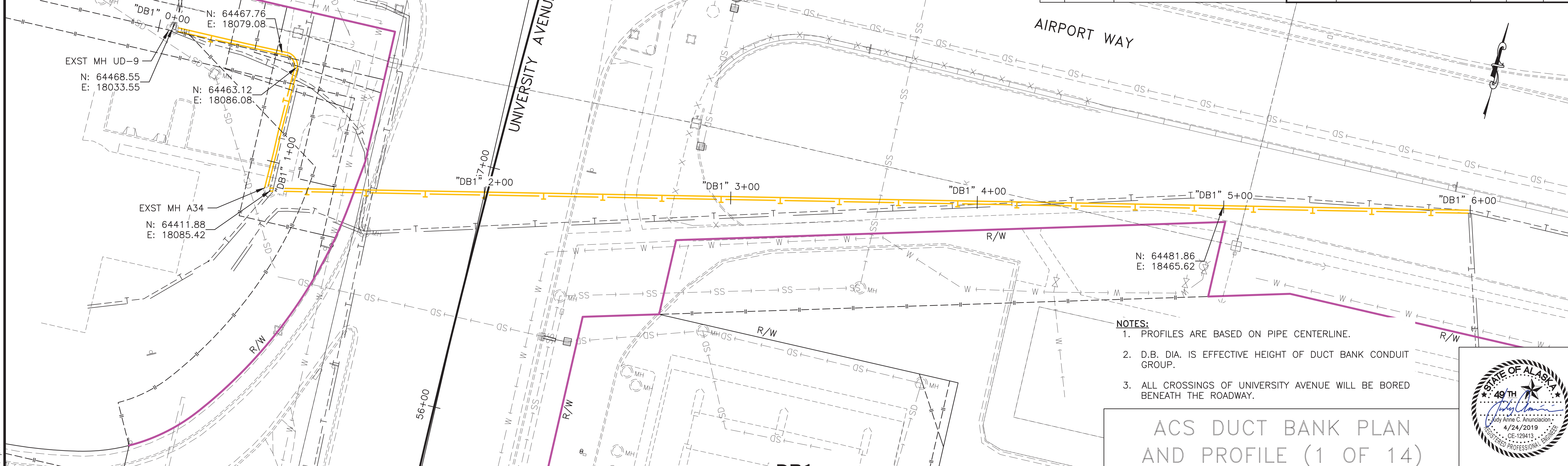


ACS DUCT BANK SHEET LAYOUT INDEX

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U11-SS	U34-SS



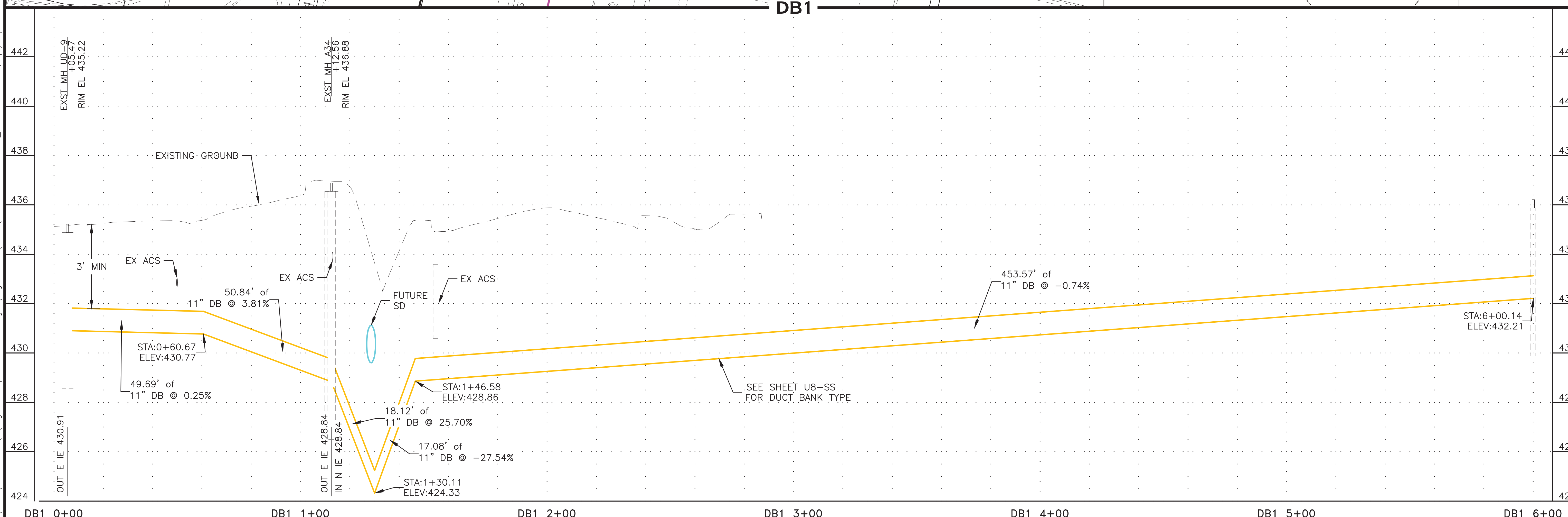
NOTES:

1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.

ACS DUCT BANK PLAN AND PROFILE (1 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

DB1



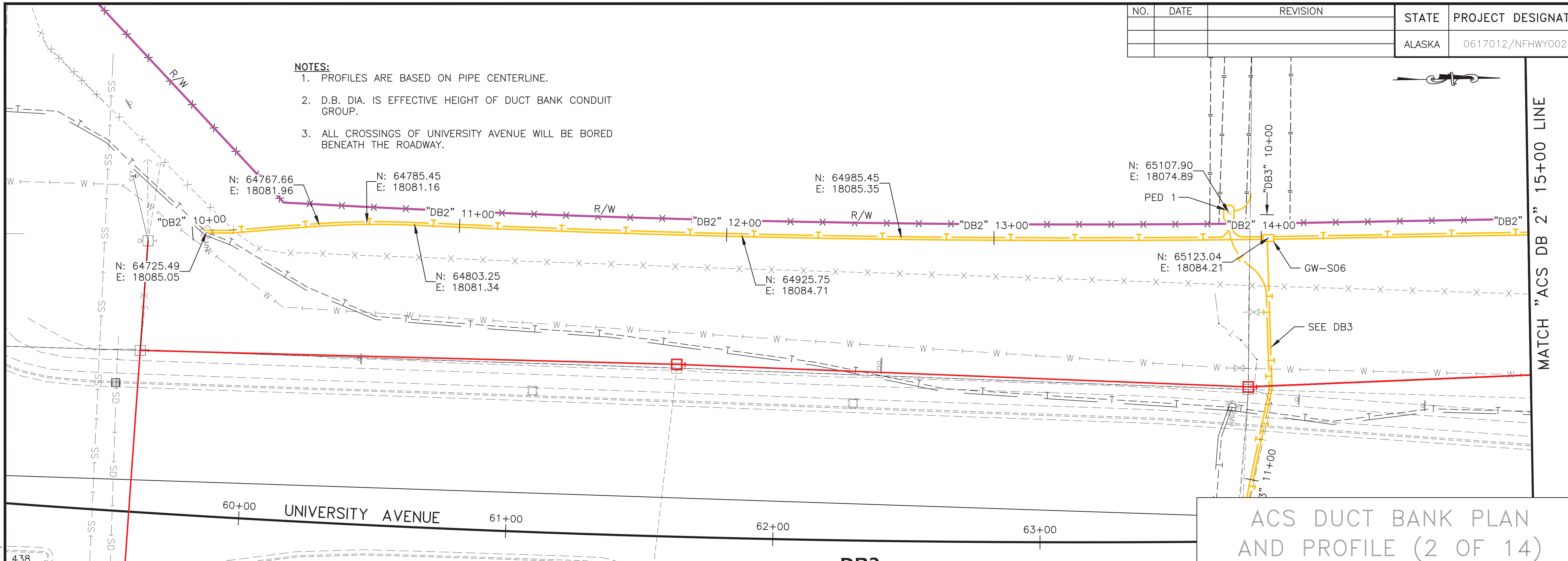
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C7002cnst11147.01FB_1C-U11-SS Wed, Apr/24/19 03:34pm

NO.	DATE	REVISION

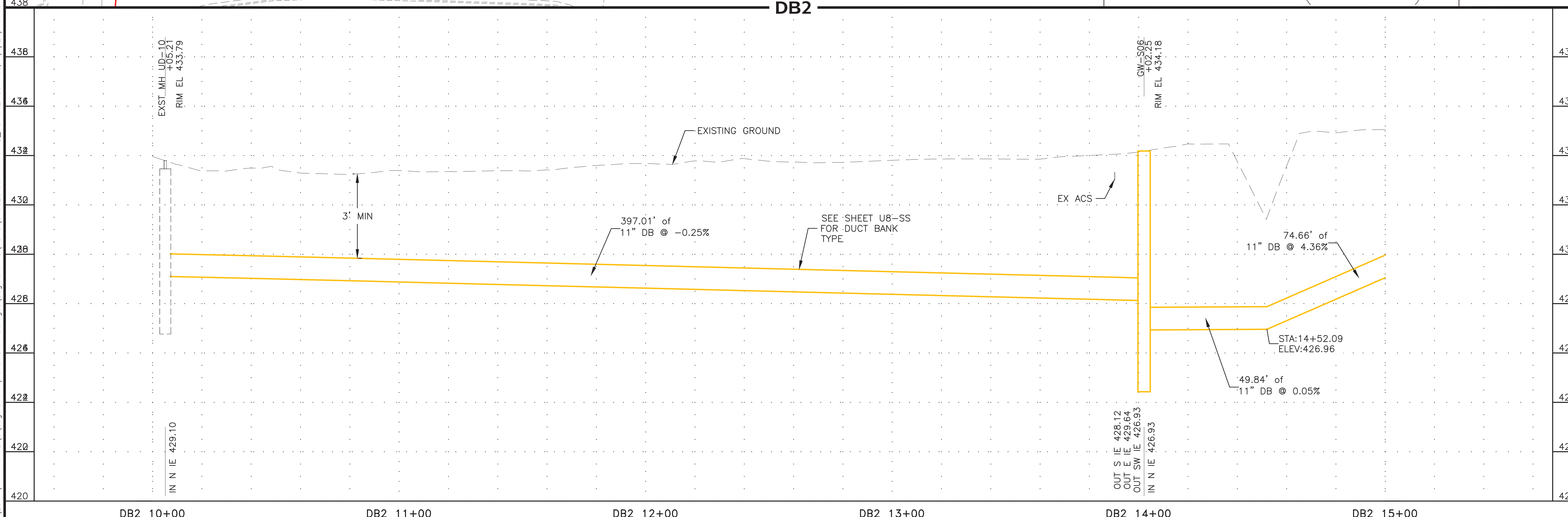
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U12-SS	U34-SS

NOTES:

1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.



ACS DUCT BANK PLAN AND PROFILE (2 OF 14)



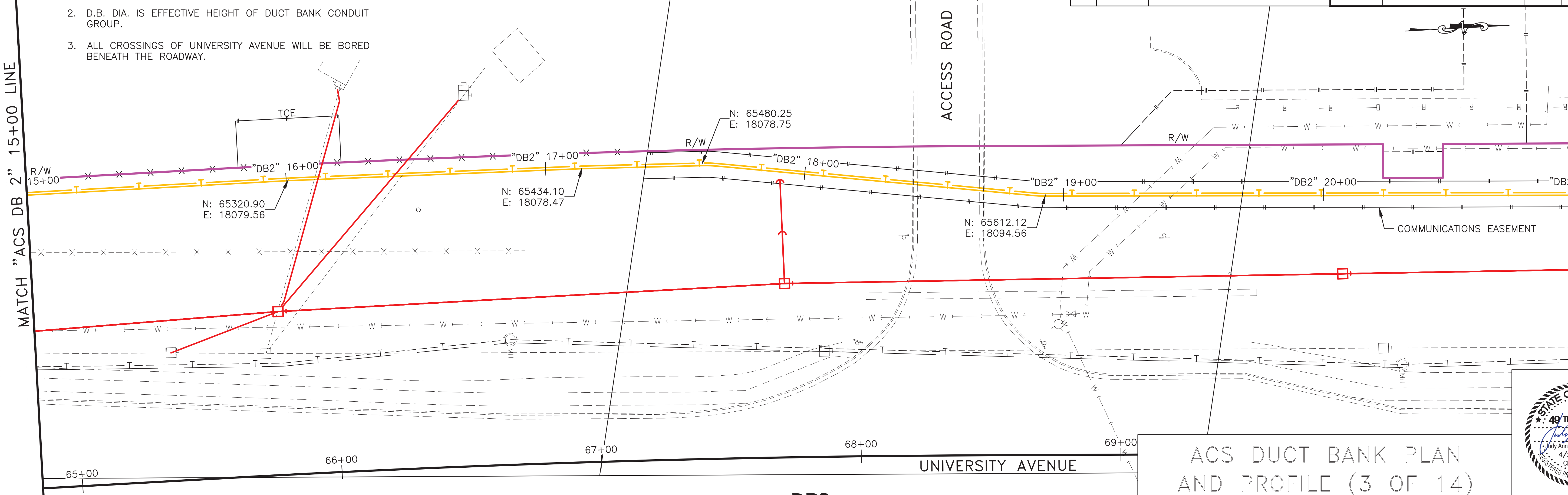
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C7002cnst11147.01FB_1C-U12-SS Wed, Apr/24/19 03:35pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U13-SS	U34-SS

NOTES:

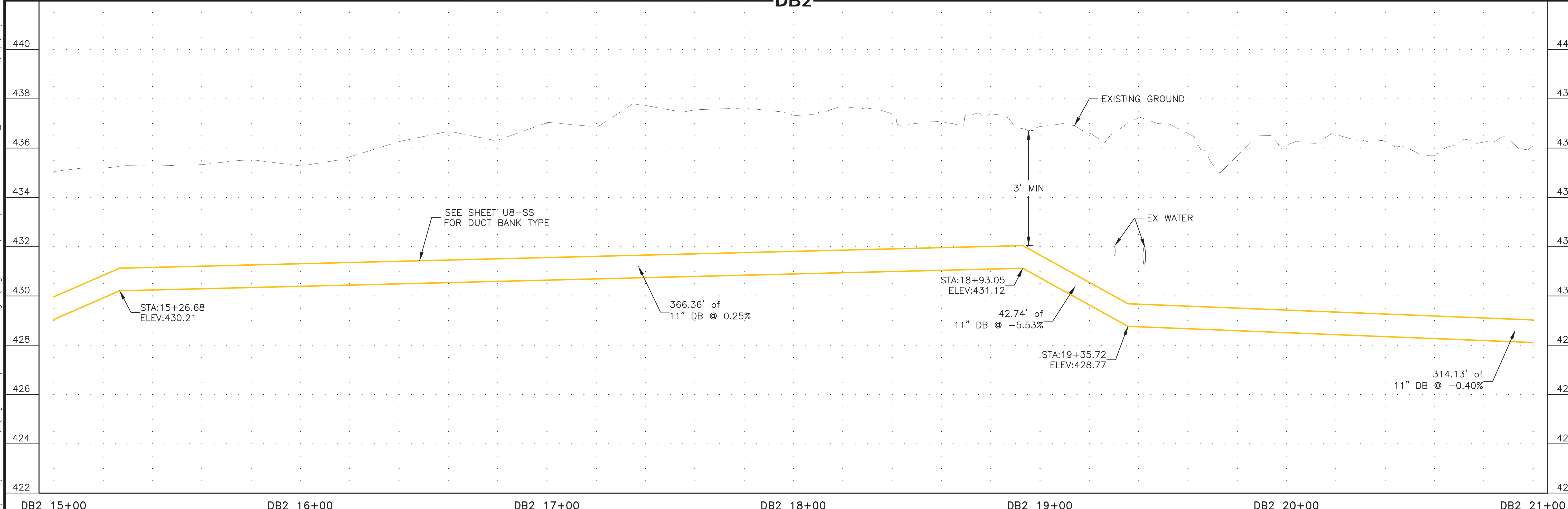
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.



ACS DUCT BANK PLAN AND PROFILE (3 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

DB2



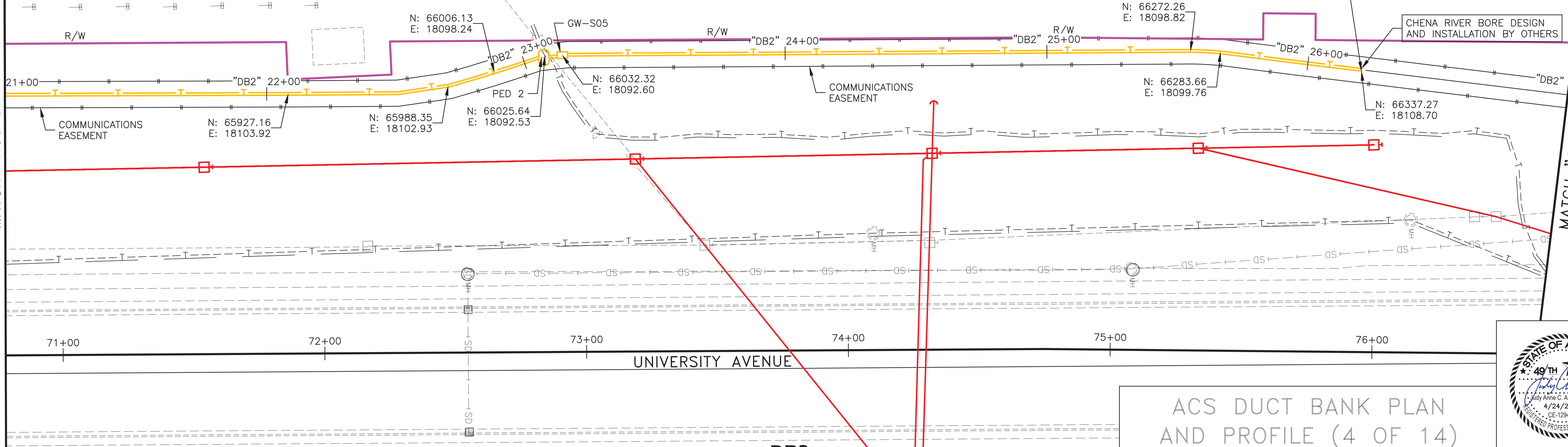
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C7002cnst11147.01FB_1C-U13-SS Wed, Apr/24/19 03:35pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U14-SS	U34-SS

NOTES:

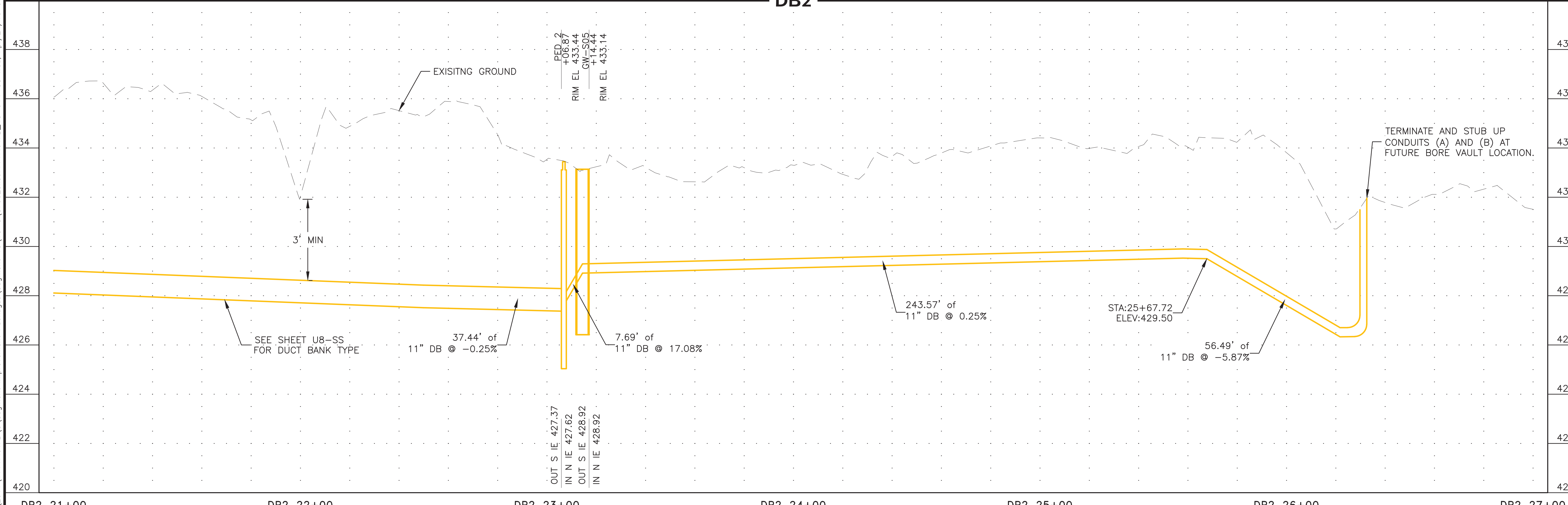
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.



ACS DUCT BANK PLAN AND PROFILE (4 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

DB2

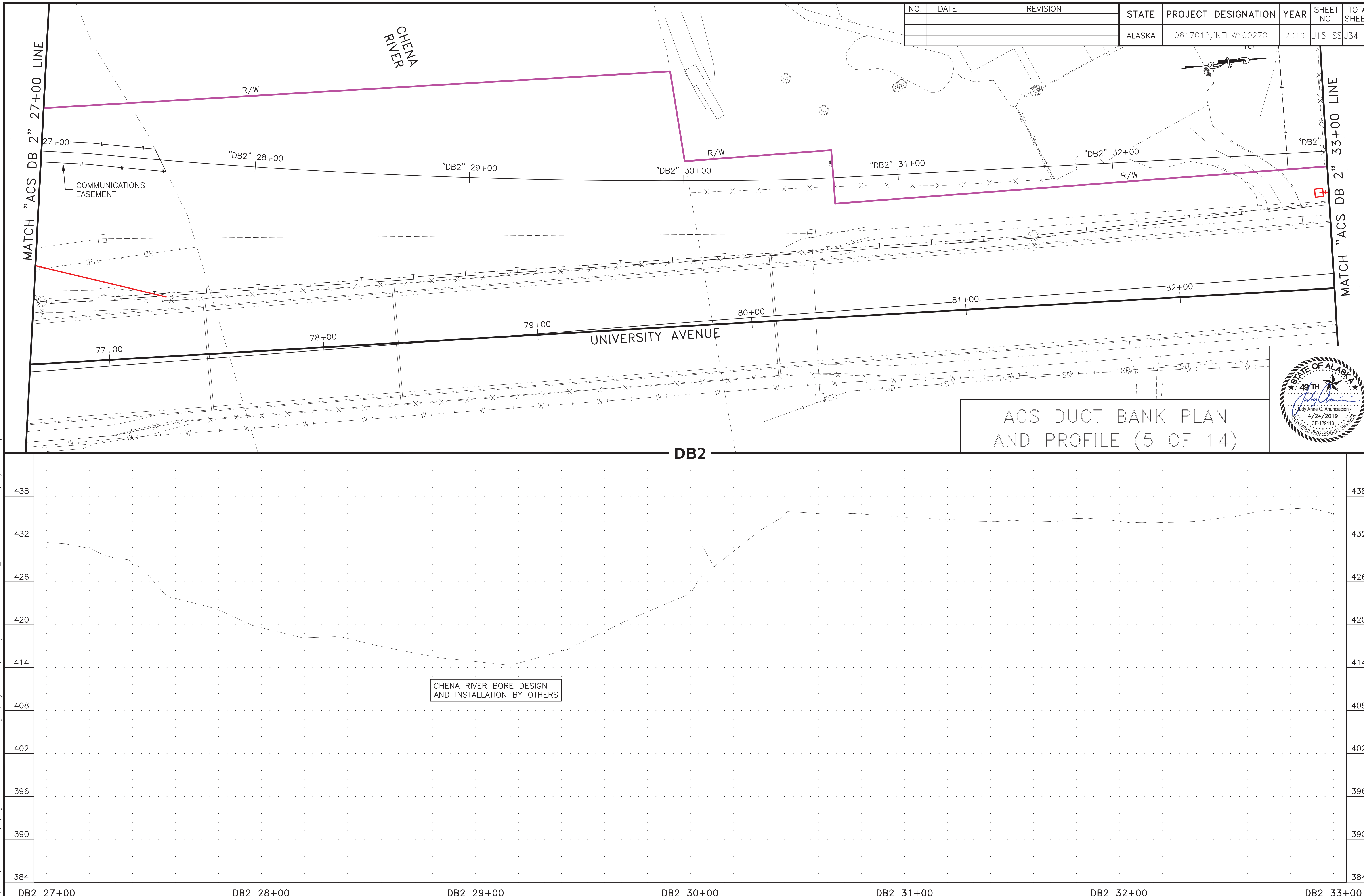


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C7002cnst11147.01FB_1C-U14-SS Wed, Apr/24/19 03:36pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U15-SS	U34-SS

ACS DUCT BANK PLAN AND PROFILE (5 OF 14)



STATE OF ALASKA
49TH
Judy Anne C. Anunciacion
4/24/2019
CE-129413
REGISTERED PROFESSIONAL ENGINEER

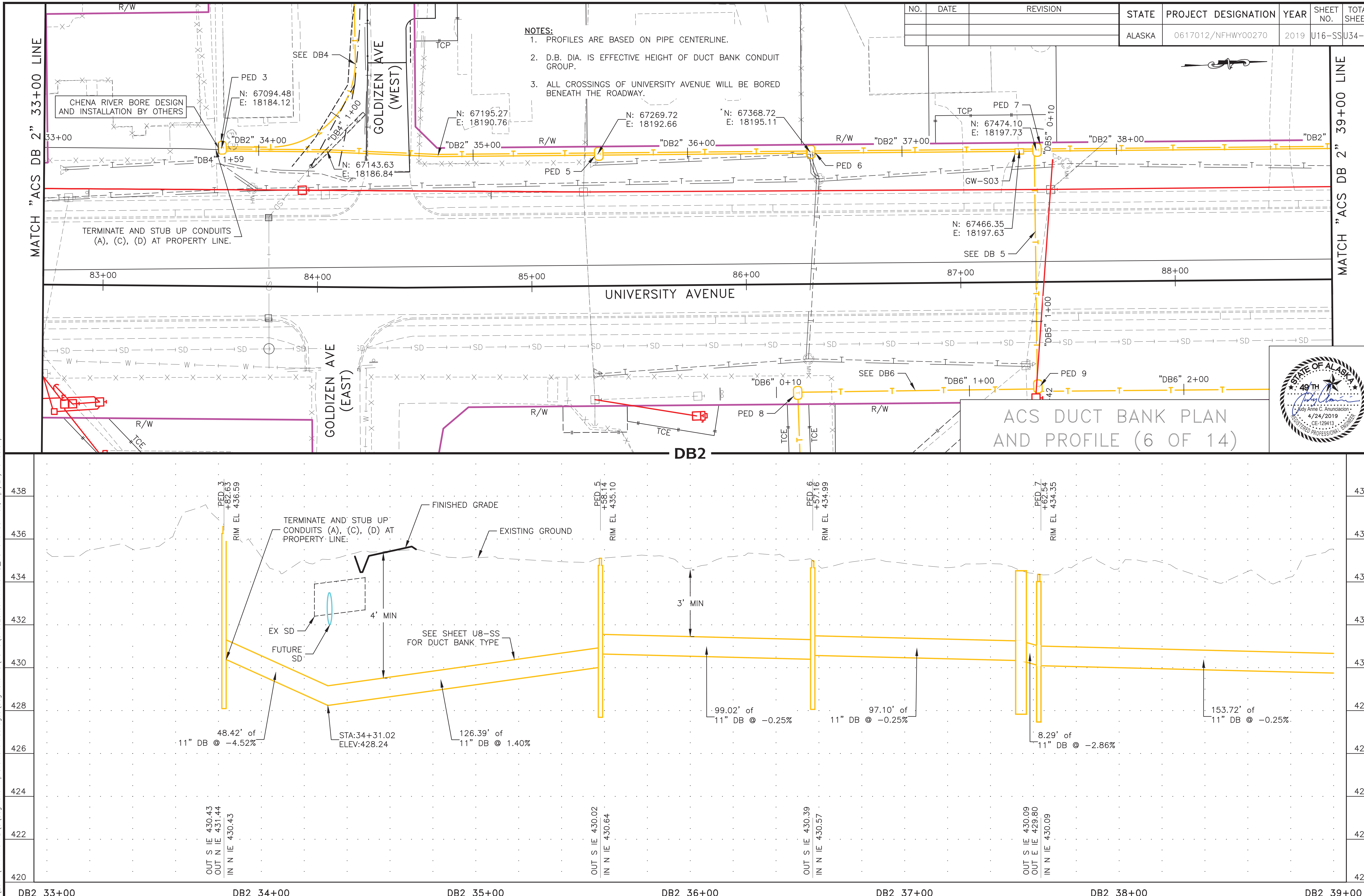
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1147.01FB\C\Segment 1C\1C-C\C7002cnst11147.01FB_1C-U15-SS Wed, Apr/24/19 03:36pm

NO.	DATE	REVISION

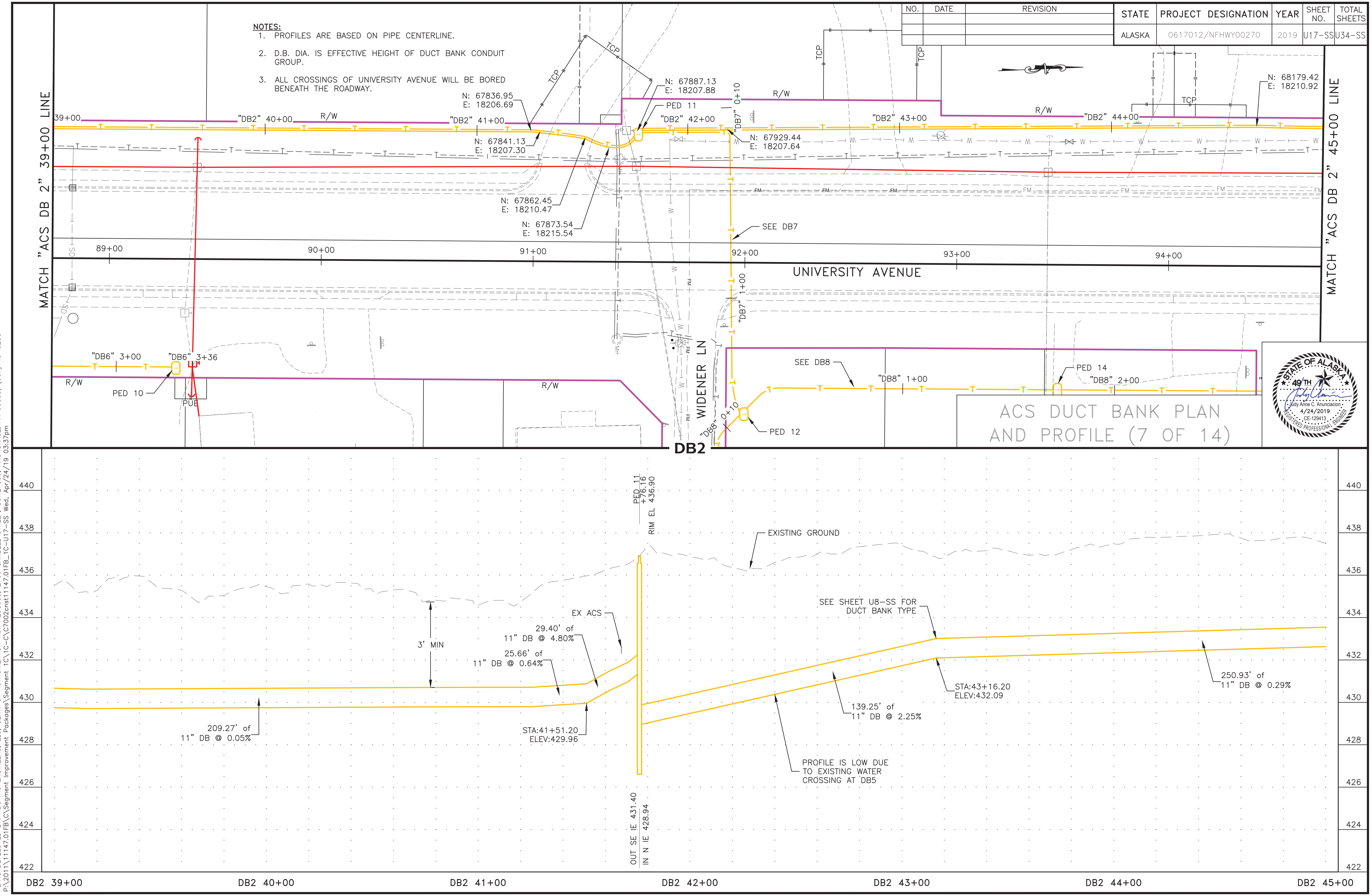
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U16-SS	U34-SS

ACS DUCT BANK PLAN AND PROFILE (6 OF 14)

NOTES:
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.



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 1C\1C-C\C7002cnst11147.01FB_1C-U16-SS Wed, Apr/24/19 03:37pm

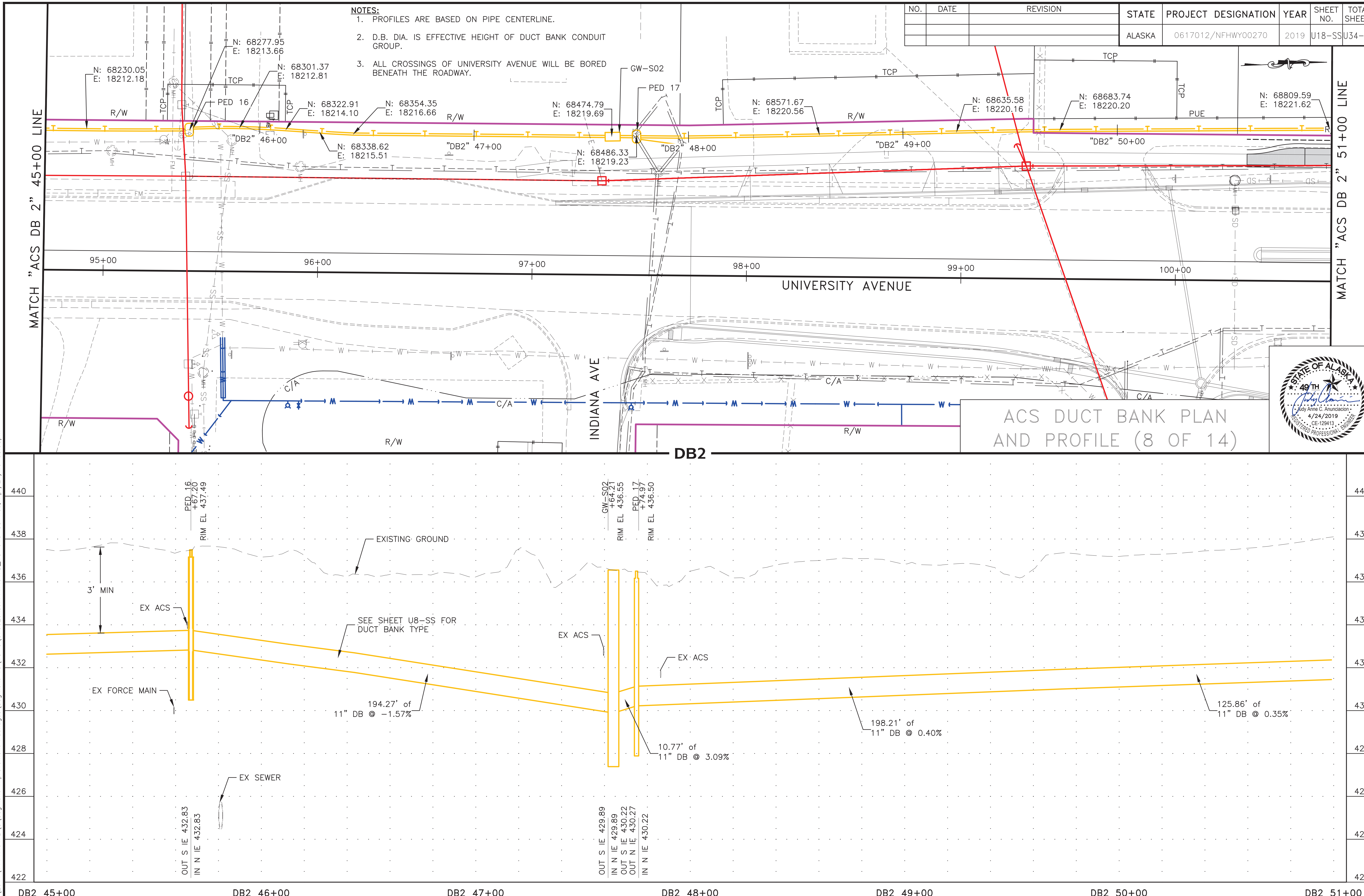


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C7002cnst11147.01FB_1C-U17-SS Wed, Apr/24/19 03:37pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U18-SS	U34-SS

NO.	DATE	REVISION

NOTES:
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.



ACS DUCT BANK PLAN AND PROFILE (8 OF 14)

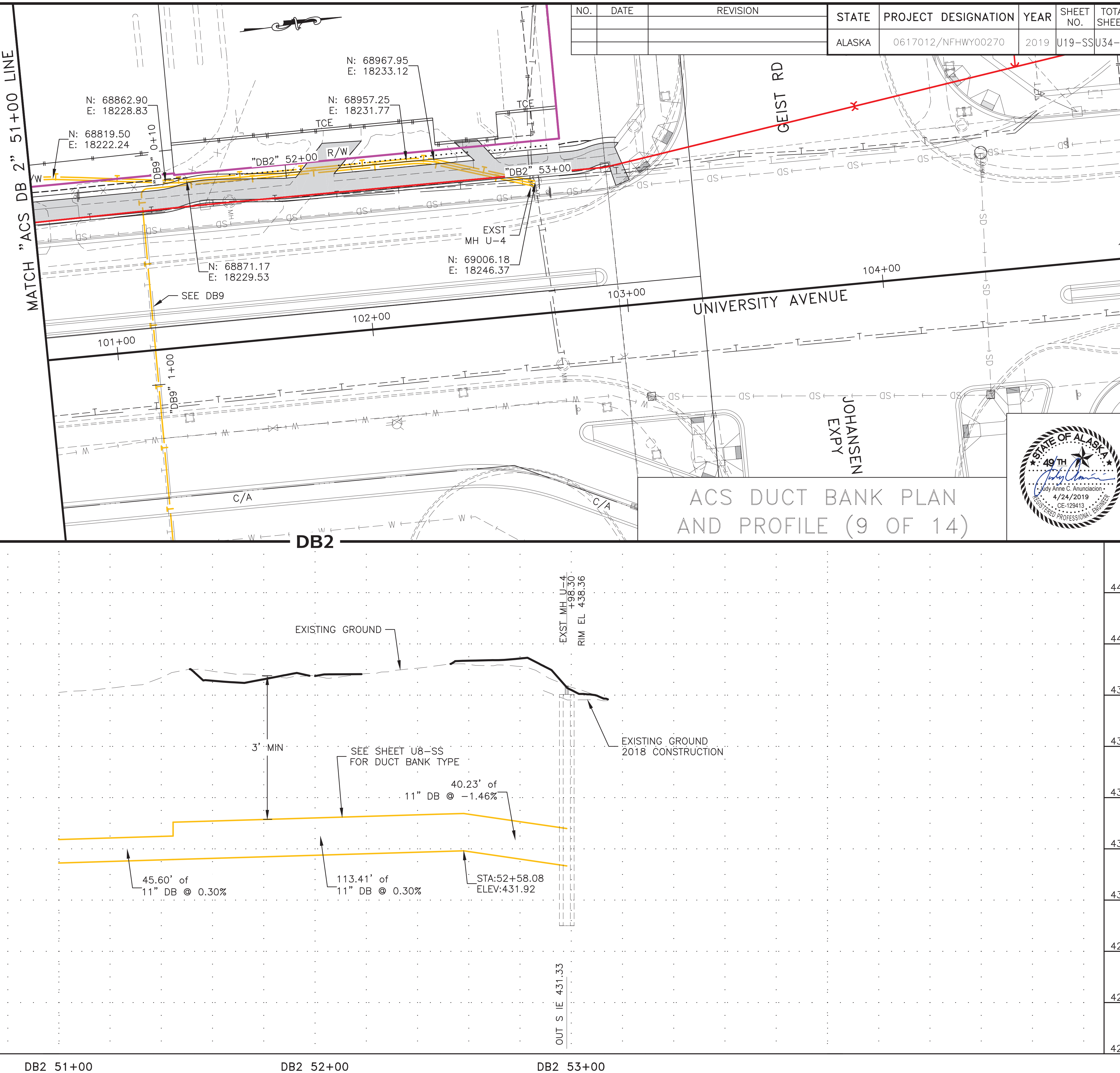
STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C7002cnst11147.01FB_1C-U18-SS Wed, Apr/24/19 03:38pm

NOTES:
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U19-SS	U34-SS



ACS DUCT BANK PLAN AND PROFILE (9 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

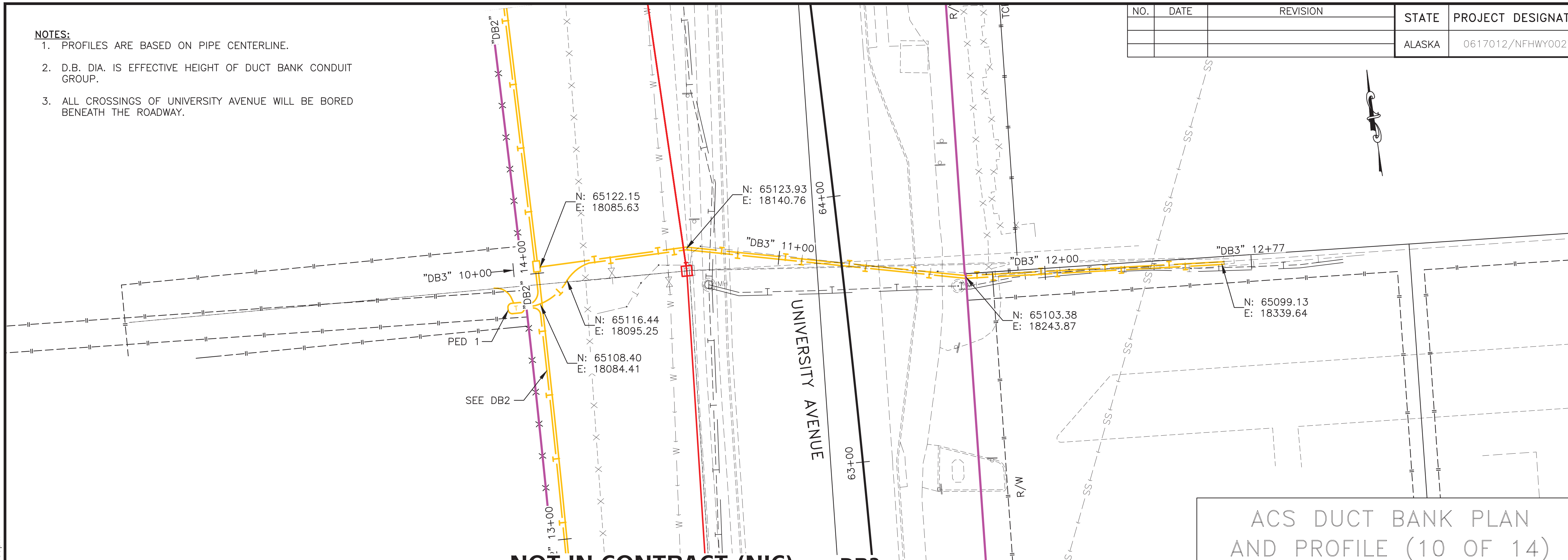
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C7002cnst11147.01FB_1C-U19-SS Wed, Apr/24/19 03:38pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U20-SS	U34-SS

NOTES:

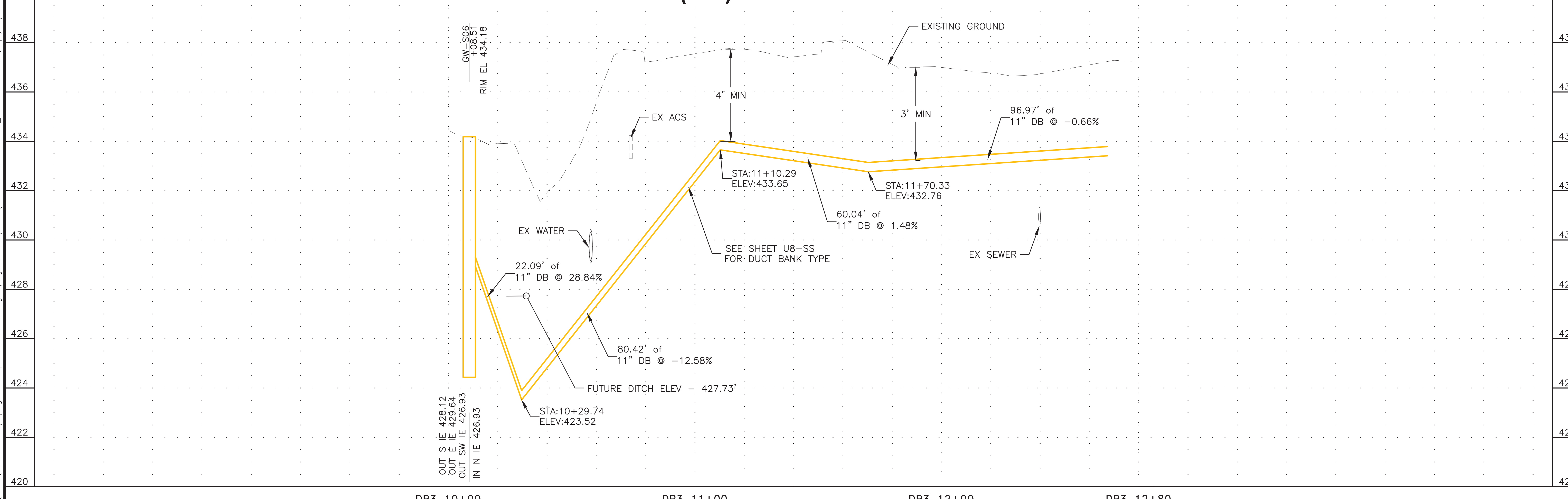
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.



ACS DUCT BANK PLAN AND PROFILE (10 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

NOT IN CONTRACT (NIC) — DB3



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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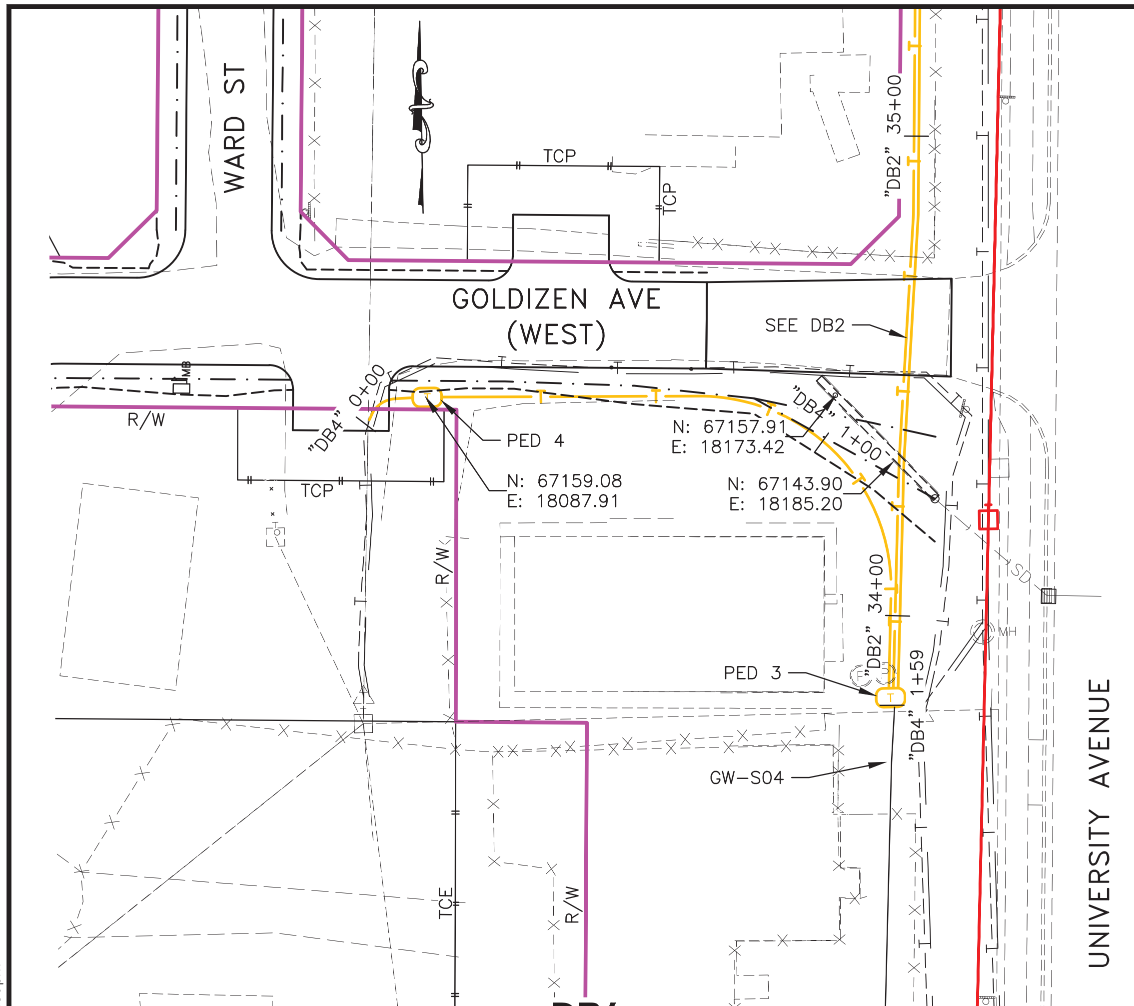
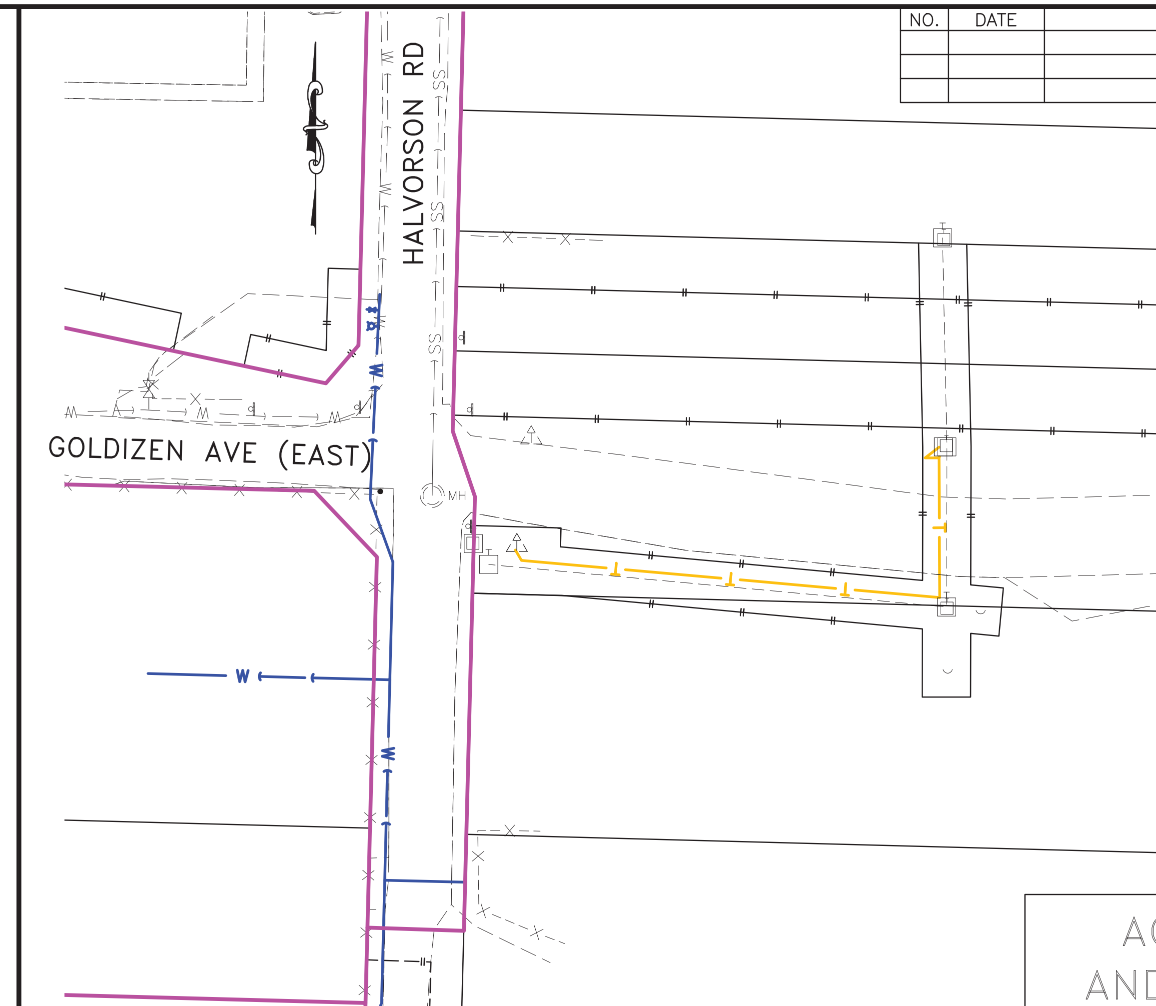
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U21-SS	U34-SS





NOTES:

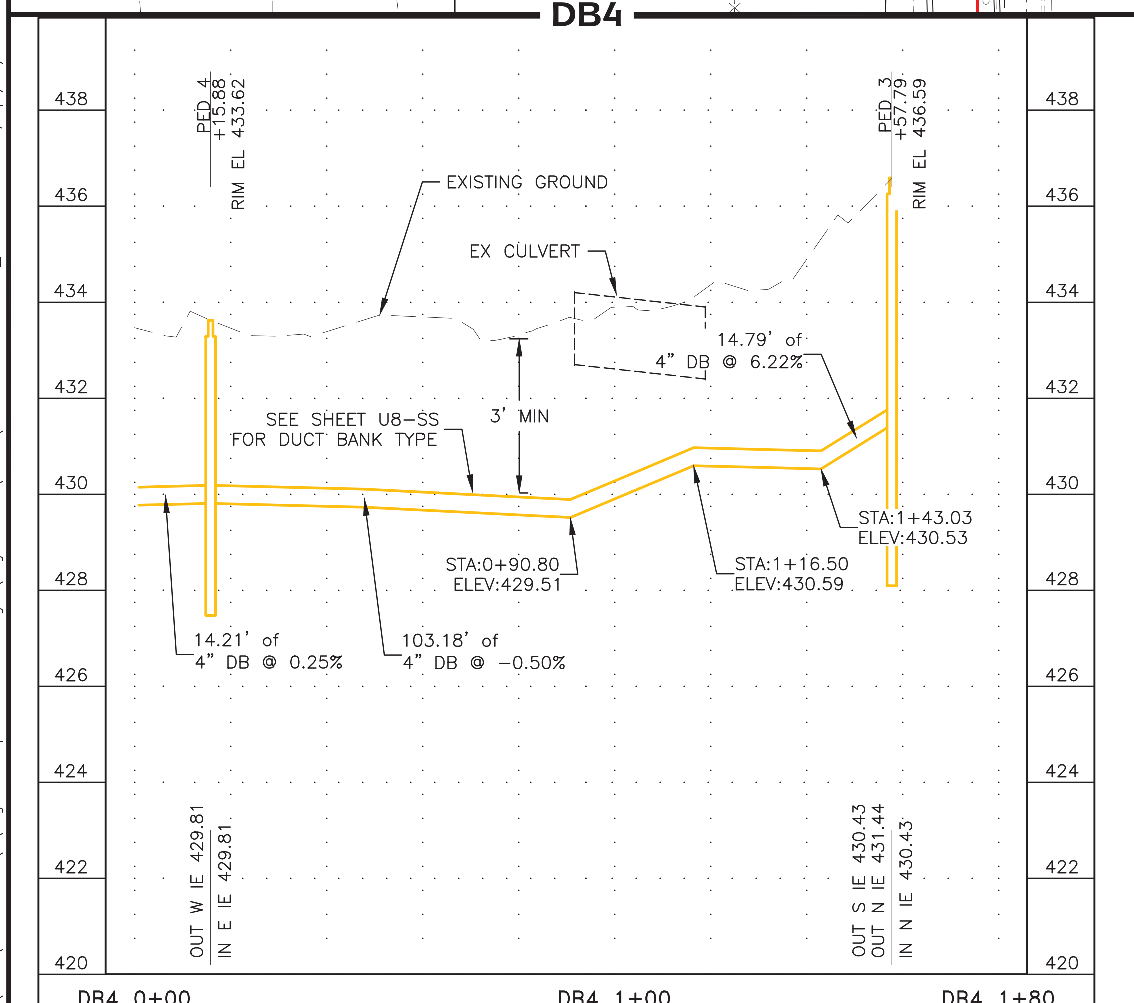
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.

NOT IN CONTRACT (NIC)
WORK TO BE COMPLETED BY ACS

ACS DUCT BANK PLAN AND PROFILE (11 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

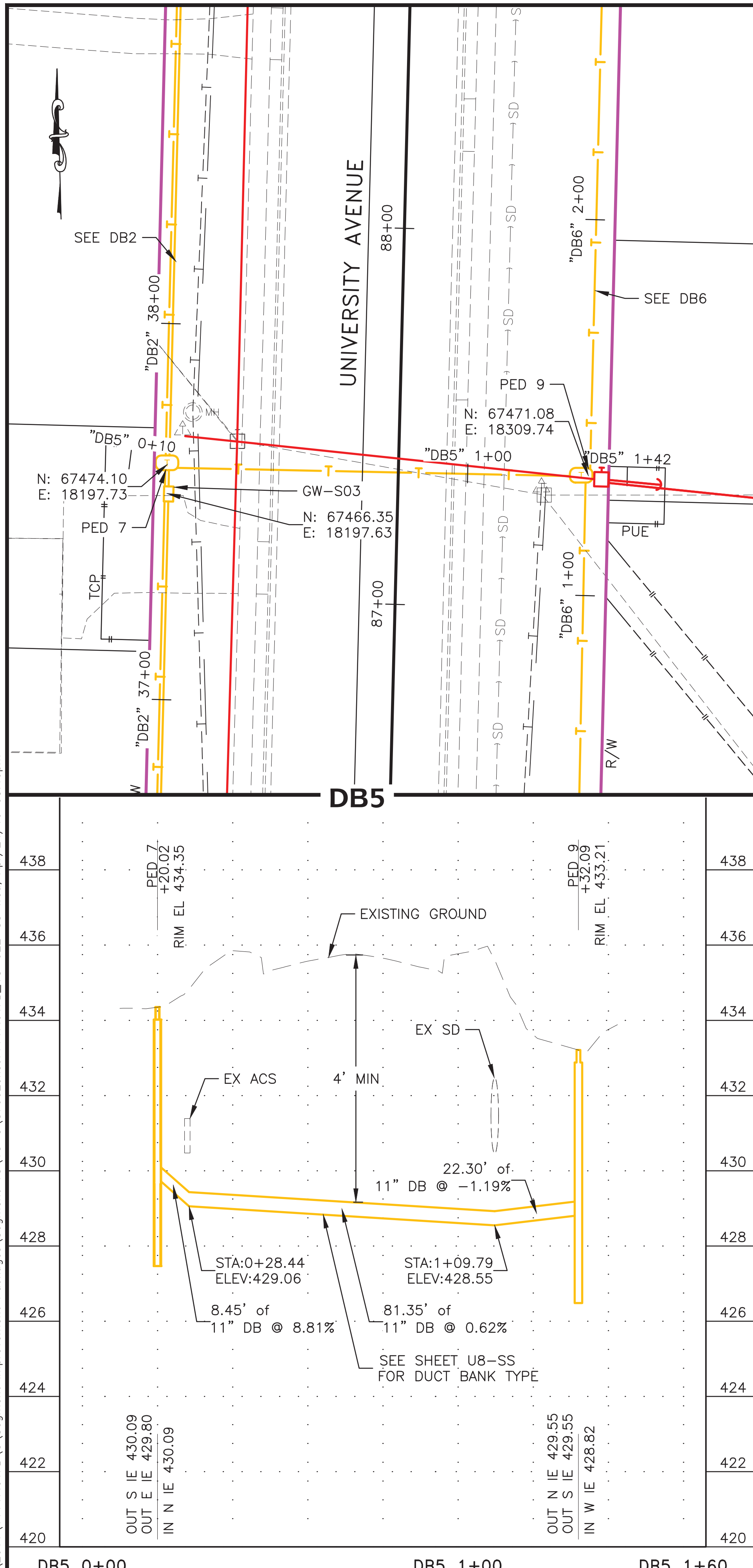
DB4

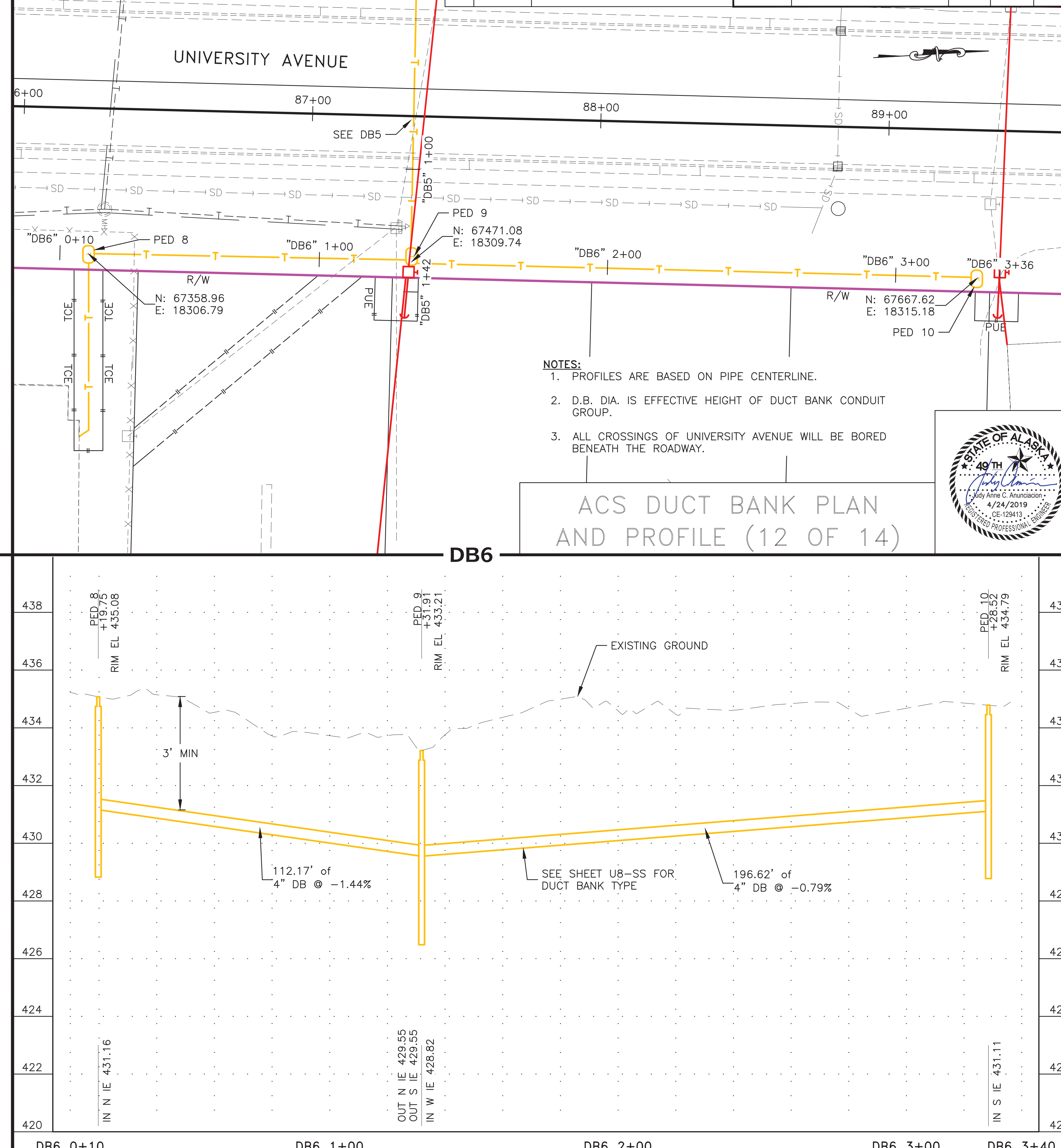


PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\1147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\C7002cnst1147.01FB_1C-U21-SS Wed, Apr/24/19 03:39pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U22-SS	U34-SS





NOTES:

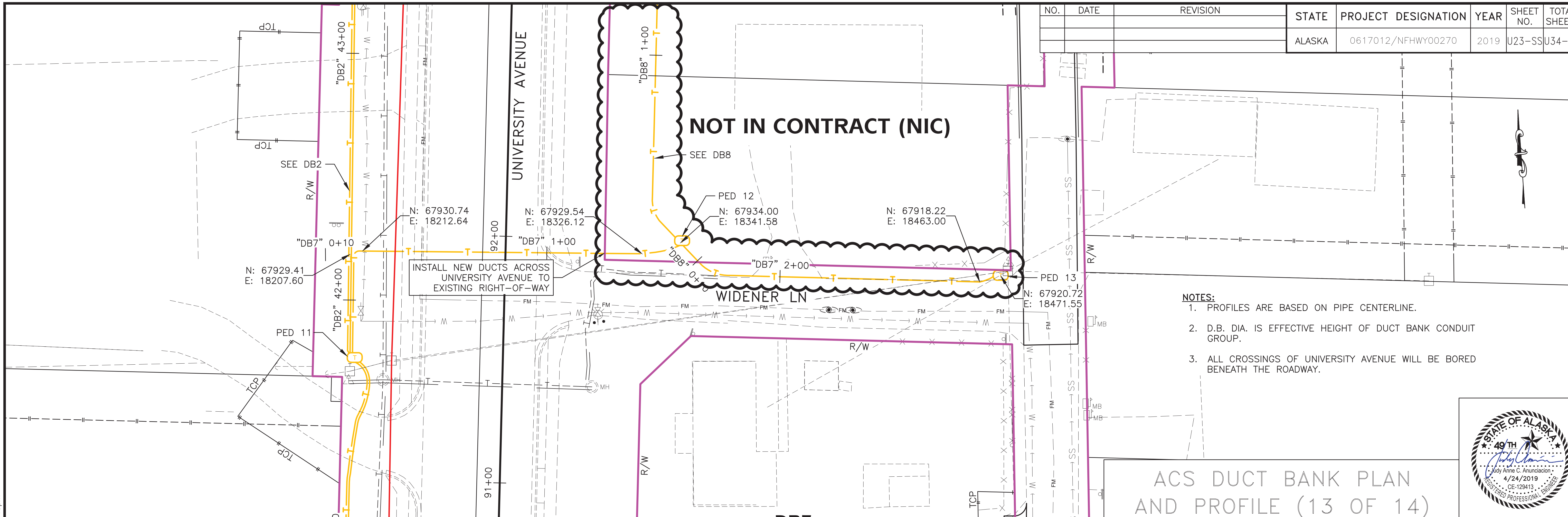
1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.

ACS DUCT BANK PLAN AND PROFILE (12 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\C7002cnst1147.01FB_1C-U22-SS Wed, Apr/24/19 03:40pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0617012/NFHWY00270	2019	U23-SS	U34-SS



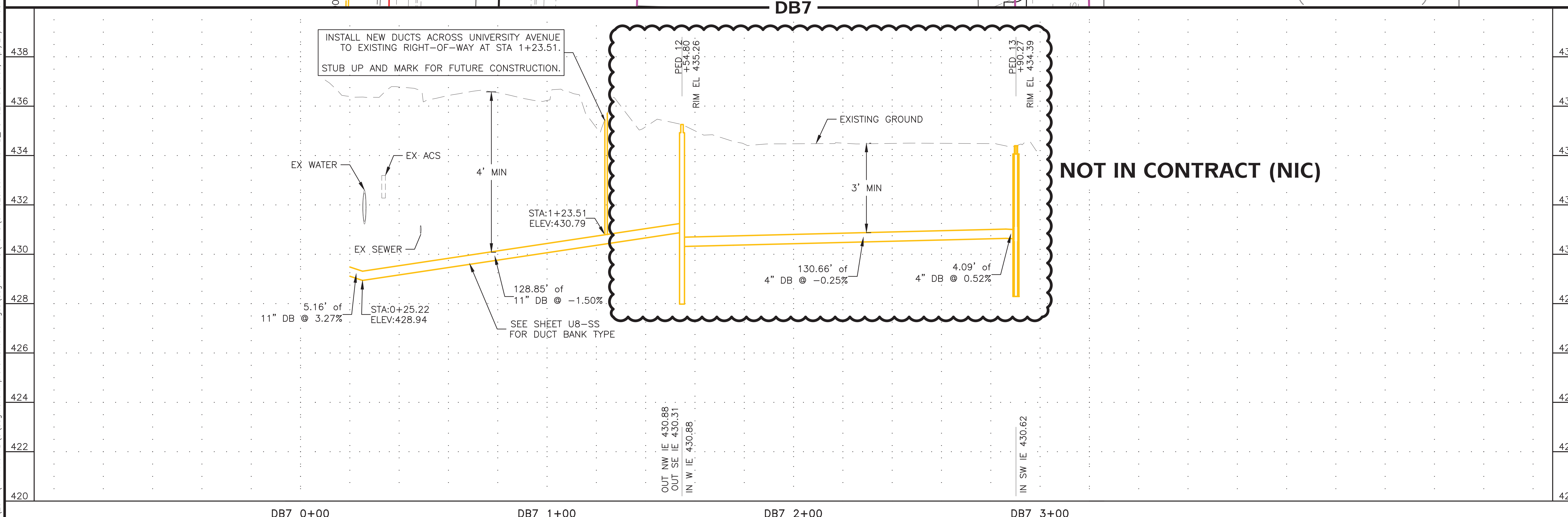
NOTES:

1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.

ACS DUCT BANK PLAN AND PROFILE (13 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

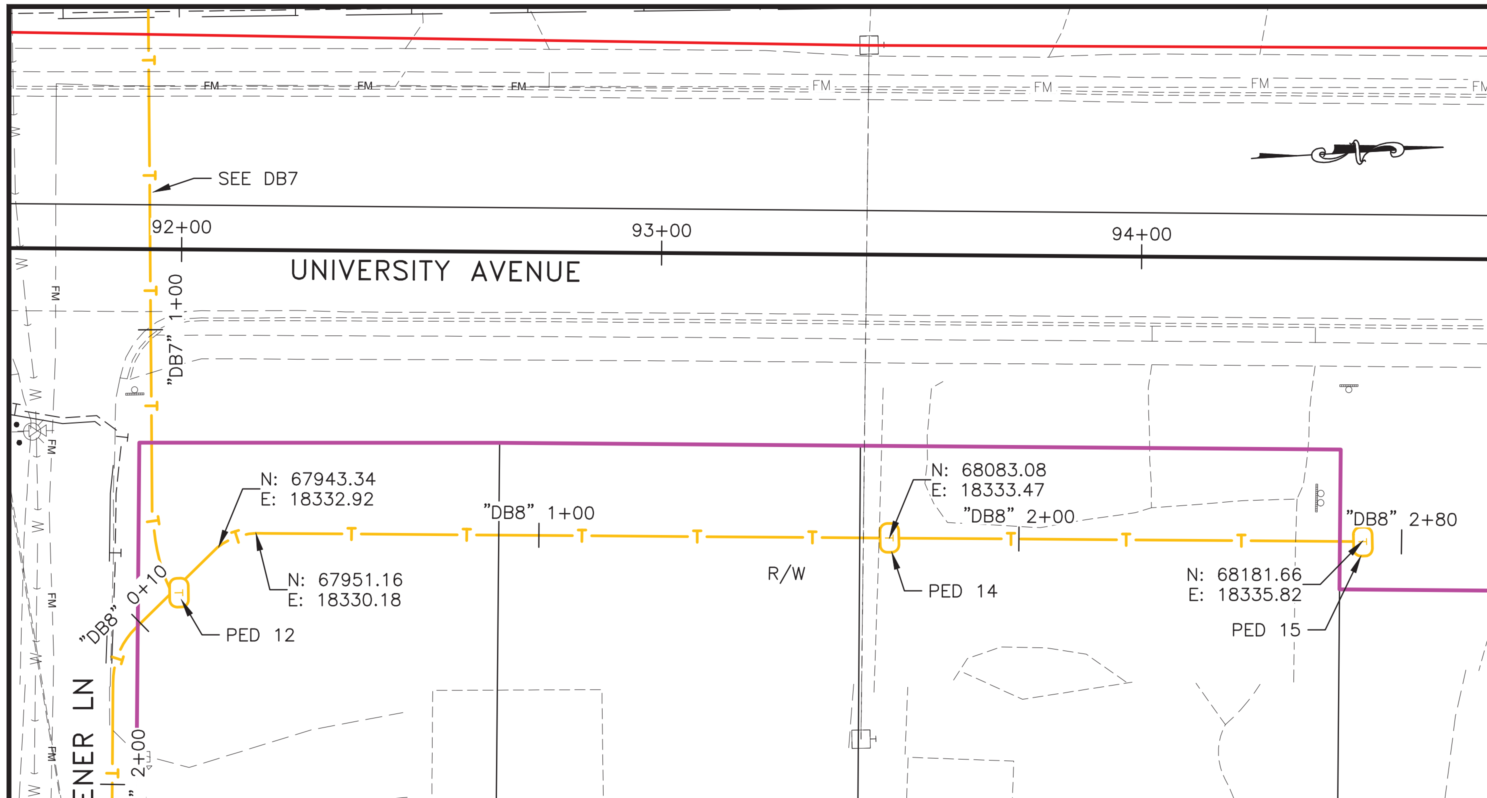
DB7



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 1C\1C-C\C7002cnst11147.01FB_1C-U23-SS Wed, Apr/24/19 03:40pm

NO.	DATE	REVISION

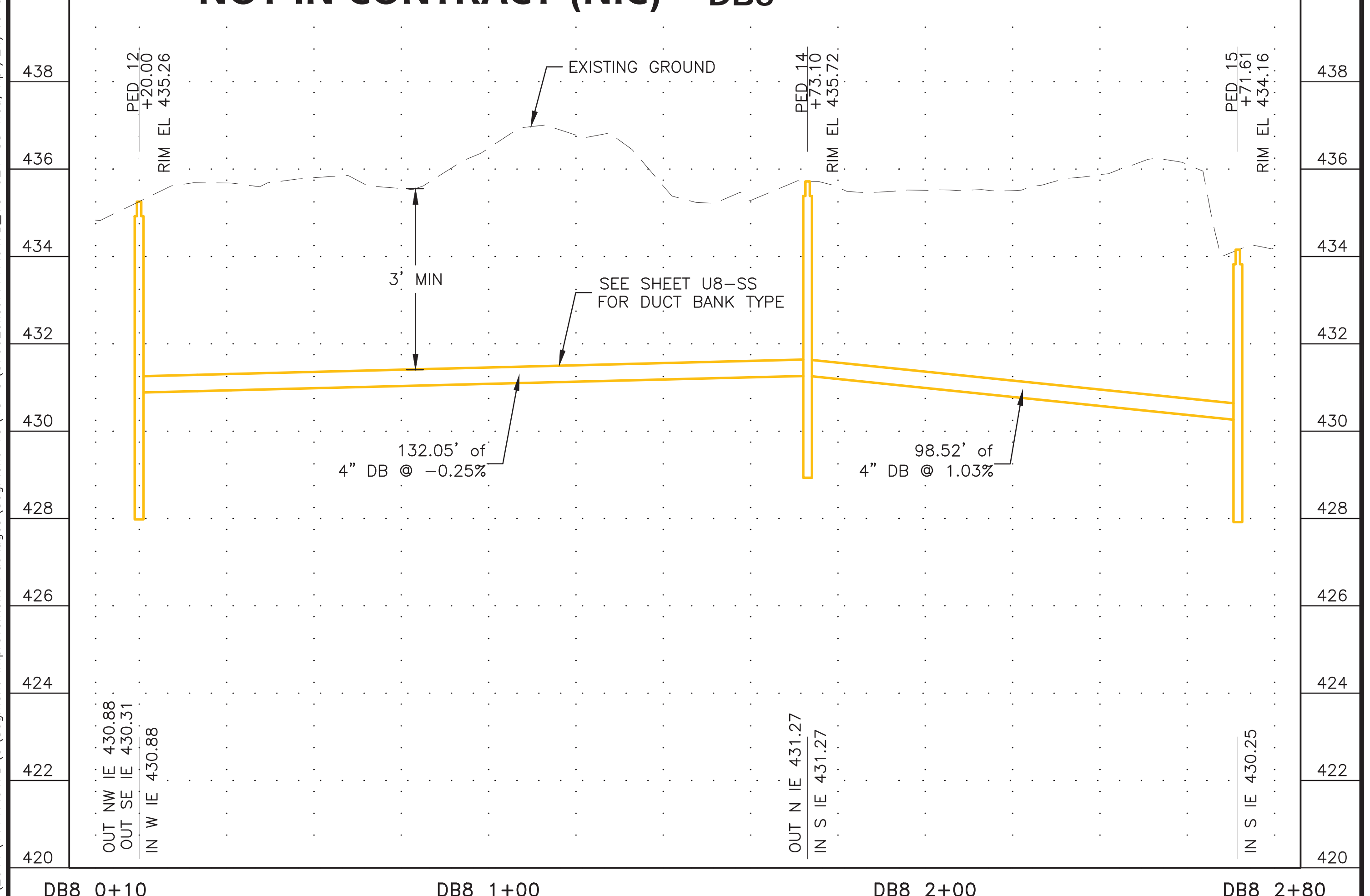
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U24-SS	U34-SS

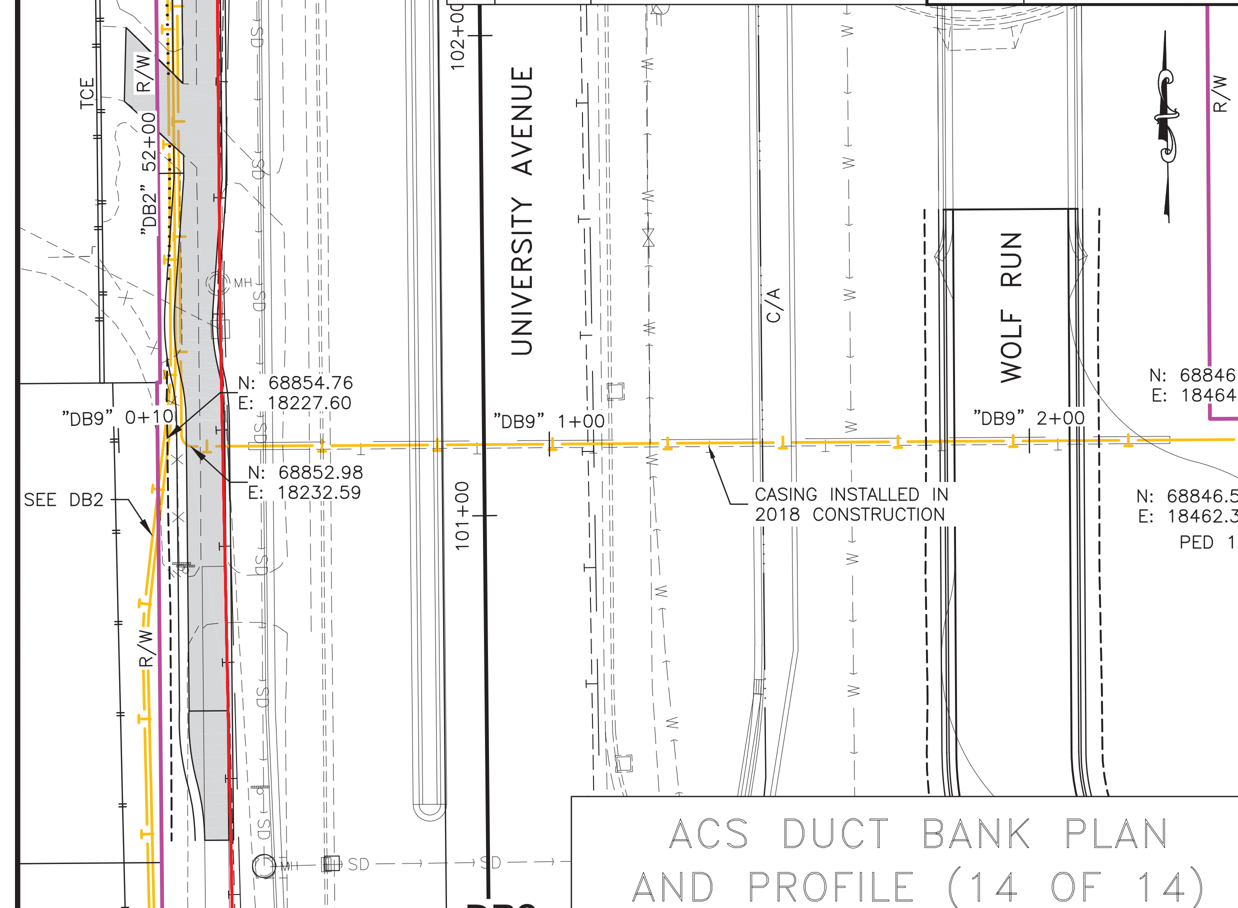


NOTES:

1. PROFILES ARE BASED ON PIPE CENTERLINE.
2. D.B. DIA. IS EFFECTIVE HEIGHT OF DUCT BANK CONDUIT GROUP.
3. ALL CROSSINGS OF UNIVERSITY AVENUE WILL BE BORED BENEATH THE ROADWAY.

NOT IN CONTRACT (NIC) — DB8

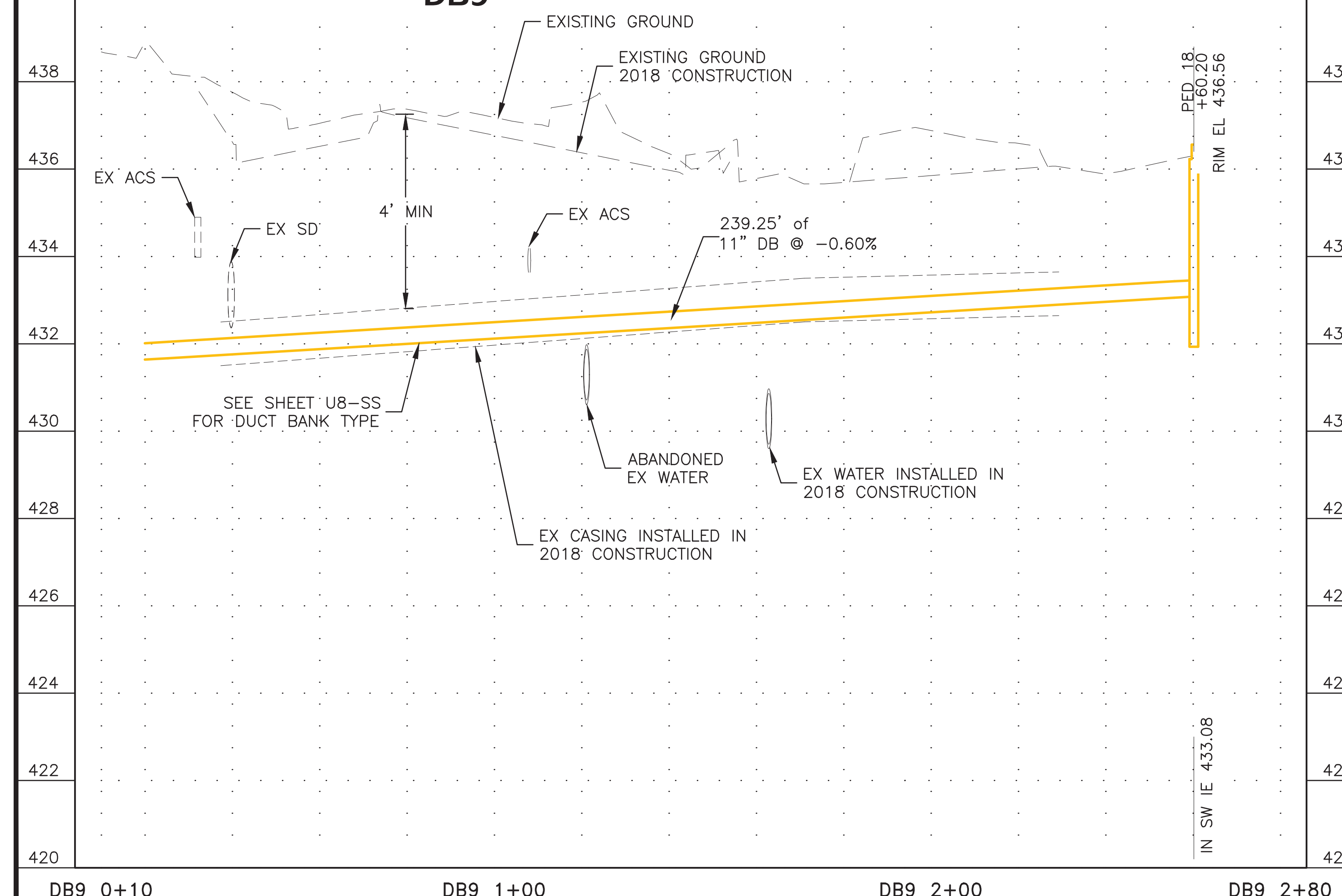




ACS DUCT BANK PLAN AND PROFILE (14 OF 14)

STATE OF ALASKA 49TH Judy Anne C. Anunciacion 4/24/2019 CE-129413 REGISTERED PROFESSIONAL ENGINEER

DB9



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 1C\1C-C\C7002cnst1147.01FB_1C-U24-SS Wed, Apr/24/19 03:41pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U25-SS	U34-SS

ABBREVIATIONS	
A	AMPERES
AC	ALTERNATING CURRENT
ACS	ALASKA COMMUNICATION SYSTEM
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
AK	ALASKA
AMP	AMPERES
ANC	ANCHOR
ARRC	ALASKA RAILROAD CORPORATION
ASMBLY	ASSEMBLY
AT	AMP TRIP
AWG	AMERICAN WIRE GUAGE
BCU	BARE COPPER WIRE
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
CUC	COLLEGE UTILITIES CORPORATION
DEG	DEGREE
DIA	DIAMETER
DISC	DISCONNECT
DNR	DEPARTMENT OF NATURAL RESOURCES
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
NESC	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
RSD	RESIDENTIAL
RT	RIGHT
SEC	SECONDARY
SPEC	SPECIFICATION
SVC	SERVICE
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 - DASHED INDICATES DEMO OR SALVAGE	
	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 ELECTRICAL CONTRACTOR
	EXISTING EQUIPMENT

LINETYPES		
DEMO OR SALVAGE	PROPOSED	
OHE	OHE	ELECTRICAL LINE (OVERHEAD)
UGE	UGE	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 DEATILS. 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. WORK INDICATED IN DRAWINGS IS LIMITED TO SECONDARY DISTRIBUTION. SEE UNIVERSITY AVE ELECTRIC UTILITY RELOCATION PLANS FOR ADDITIONAL INFORMATION RELATING TO GVEA'S ELECTRICAL DISTRIBUTION SYSTEM AND THEIR WORK ASSOCIATED WITH THE SECONDARY.
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.

ELECTRICAL LEGEND AND NOTES

STATE OF ALASKA
49 TH
Michael S. Goulding
Apr 26, 2019
EE-9705
REGISTERED PROFESSIONAL ENGINEER

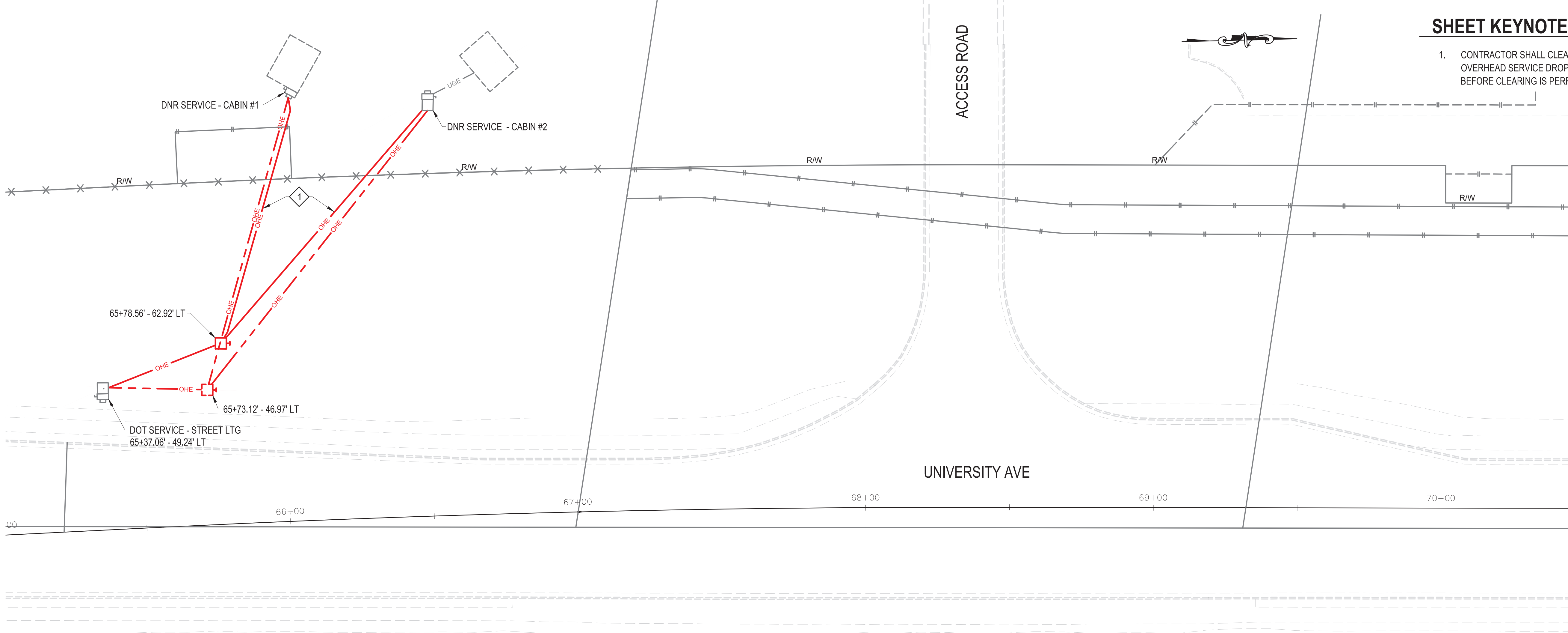
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\E\Electrical Secondary Relocation\Segment 1 South\E0025epti11147.01FB-U25-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U26–SS	U34–SS

SHEET KEYNOTES: ⟨X⟩

1. CONTRACTOR SHALL CLEAR A MINIMUM 4 FOOT WIDE PATH FOR OVERHEAD SERVICE DROP. TCP TO BE ACQUIRED FOR PROPERTY BEFORE CLEARING IS PERFORMED.



STAKING SHEET

ID #	EXIST / RETIRE / ADD / SALVAGE / NEW	POLE: Back Span (Ft)	POLE: From Pole	POLE: To Pole	POLE: Line Angle Deg.	POLE: Line Angle Dir.	POLE: Poles Height (Ft)	POLE: Poles Class	POLE: Poles Burial Depth (Ft)	Underground Qty.	Underground Asmbly	Underground FT	SECONDARY Qty.	SECONDARY Asmbly	SECONDARY Conductor #	SECONDARY Conductor AWG	SECONDARY Conductor Type	GUY & ANCHOR # of guy anc.	GUY & ANCHOR No.	GUY & ANCHOR Guy Unit 'E'	GUY & ANCHOR Min. Lead or Span (Ft)	GUY & ANCHOR Lead N-pos (Ft)	GUY & ANCHOR Guy Strand Dia. (in)	GUY & ANCHOR Guy Strand Grade	GUY & ANCHOR Anchor Unit 'F'	Misc. Parts Qty	Misc. Parts Description	Misc. Parts Qty	Misc. Parts Description	Remarks
65+73.12'-46.97' RT	RETIRE												1	J3.1B																
65+78.56'-62.92' LT	NEW												2	J3.1B																
DOT SERVICE- STR LTG	EXIST						25	-	-				1	Q2.1XX																EXISTING METER NO.: 89492
" "	RETIRE	37	65+73.12'-46.97' RT										1	J3.1B	1	2/0	TRIPLEX													
DOT SERVICE- STR LTG	NEW	44	65+78.56'-62.92' LT										1	J3.1B	1	2/0	TRIPLEX													
DNR SERVICE- CABIN #1	EXIST												1	J3.1B												1	SVC ASSEMBLY			EXISTING METER NO.: 86295
" "	SALVAGE	100	65+73.12'-46.97' RT												1	#2	TRIPLEX													
DNR SERVICE- CABIN #1	ADD	83	65+78.56'-62.92' LT												1	#2	TRIPLEX													
DNR SERVICE- CABIN #2	EXIST												1	J3.1B																EXISTING METER NO.: 307988
" "	EXIST												1	Q2.1xx																
" "	SALVAGE	118	65+73.12'-46.97' RT												1	2/0	TRIPLEX													
DNR SERVICE- CABIN #2	ADD	103	65+78.56'-62.92' LT												1	2/0	TRIPLEX													

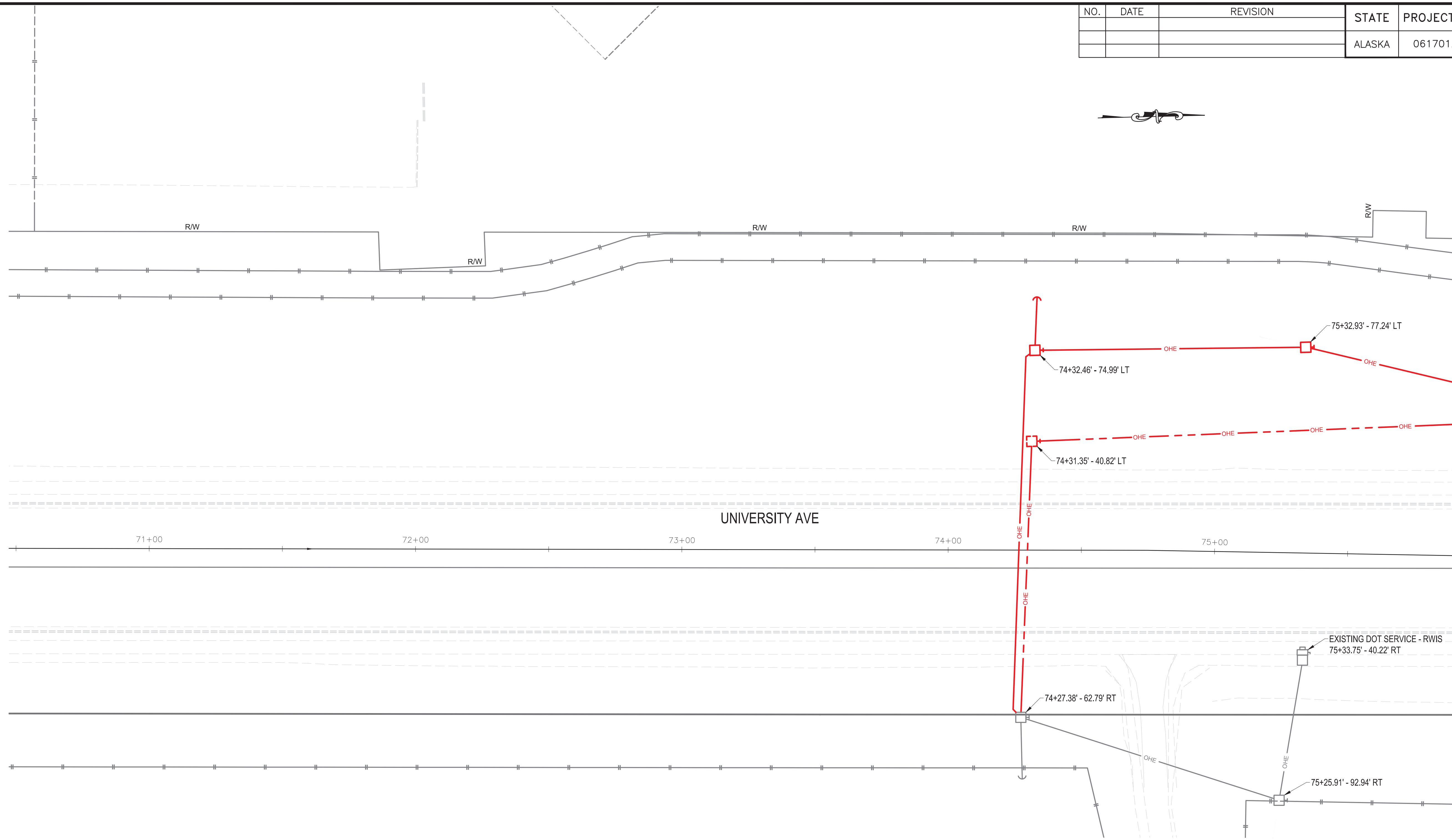
ELECTRICAL SECONDARY RELOCATION PLANS

STATE OF ALASKA
49TH
Michael S. Goulding
Apr 26, 2019
EE-9705
REGISTERED PROFESSIONAL ENGINEER

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\E\Electrical Secondary Relocation\Segment 1 South\E0026spep1147.01FB-U26-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

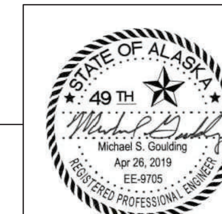
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U27-SS	U34-SS



STAKING SHEET

ID #	EXIST RETIRE ADD SALVAGE NEW	POLE: Back Span (Ft)	POLE: From Pole	POLE: To Pole	POLE: Line Angle Deg.	POLE: Line Angle Dir.	POLE: Poles Height (Ft)	POLE: Poles Class	POLE: Poles Burial Depth (Ft)	Underground Qty.	Underground Asmbly	Underground FT	SECONDARY Qty.	SECONDARY Asmbly	SECONDARY Conductor #	SECONDARY Conductor AWG	SECONDARY Conductor Type
74+31.35'-40.82' LT	RETIRE												1	J3.1B			
74+32.46'-74.99' LT	NEW												1	J3.1B			
74+27.38'-62.79' RT	RETIRE	104	74+31.35'-40.82' LT	75+25.91'-92.94' RT									1	J3.1B	1	2/0	QUADRUPLEX
74+27.38'-62.79' RT	NEW	138	74+32.46'-74.99' LT	75+25.91'-92.94' RT									1	J3.1B	1	2/0	QUADRUPLEX

ID #	GUY & ANCHOR: # of guy anc.	GUY & ANCHOR: No.	GUY & ANCHOR: Guy Unit 'E'	GUY & ANCHOR: Min. Lead or Span (Ft)	GUY & ANCHOR: Lead N-pos (Ft)	GUY & ANCHOR: Guy Strand Dia. (in)	GUY & ANCHOR: Guy Strand Grade	GUY & ANCHOR: Anchor Unit 'F'	Misc. Parts: Qty	Misc. Parts: Description	Misc. Parts: Qty	Misc. Parts: Description	Remarks
74+31.35'-40.82' LT													
74+32.46'-74.99' LT													
74+27.38'-62.79' RT													
74+27.38'-62.79' RT													

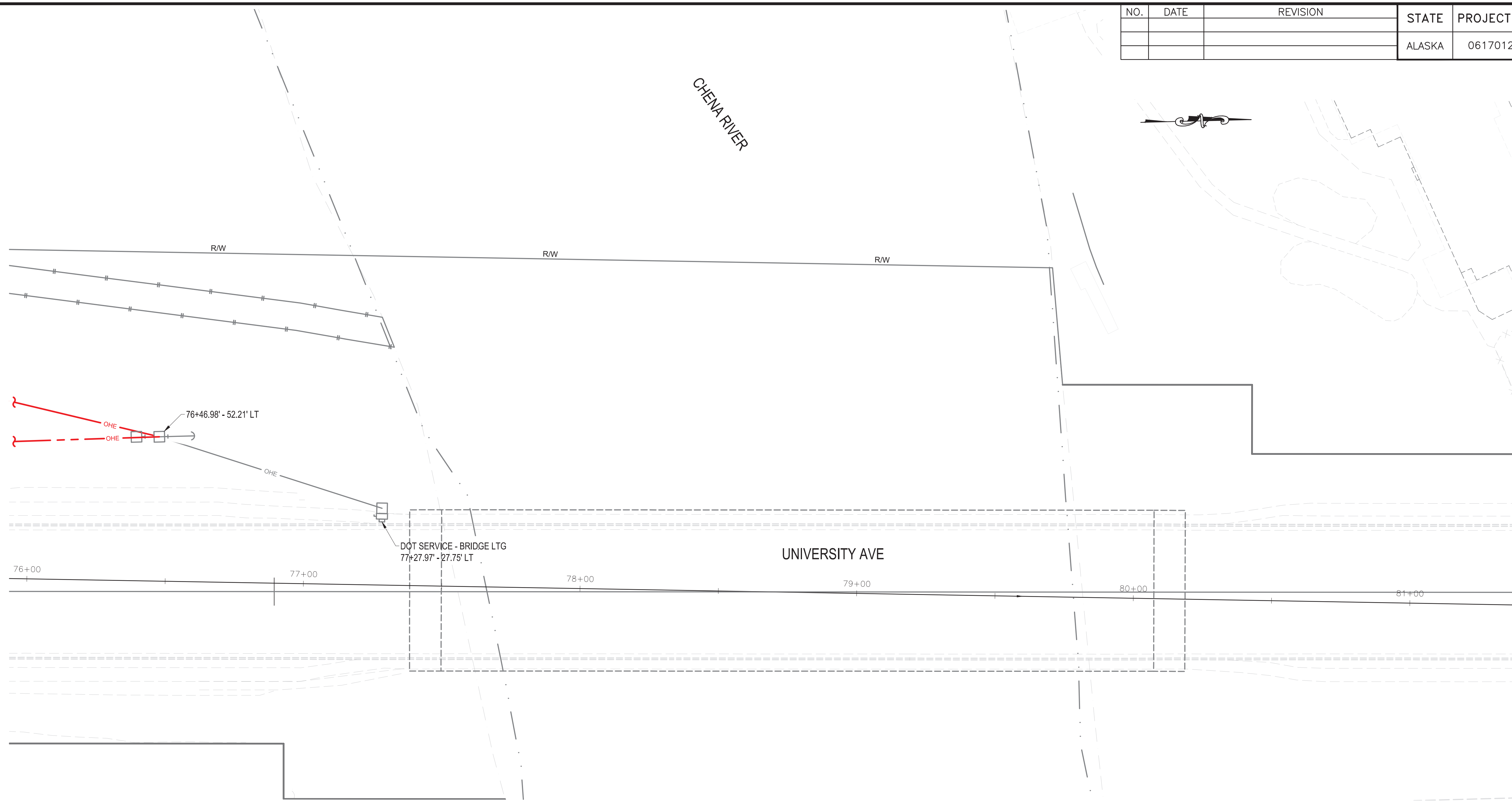


ELECTRICAL SECONDARY RELOCATION PLANS

PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\E\Electrical Secondary Relocation\Segment 1 South\E0026spep1147.01FB-U27-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U28–SS	U34–SS



STAKING SHEET

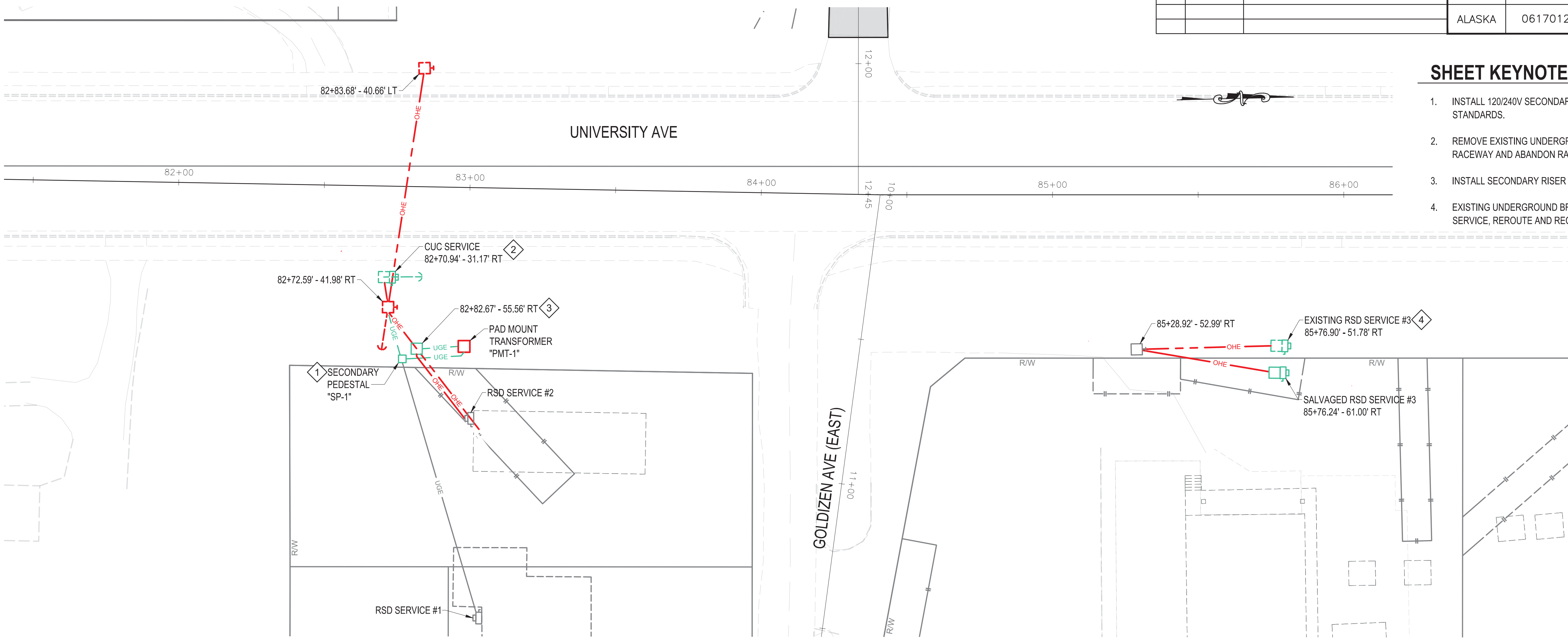
ID #	EXIST RETIRE ADD SALVAGE NEW	POLE								Underground			SECONDARY					GUY & ANCHOR								Misc. Parts				Remarks
		Back Span (Ft)	From Pole	To Pole	Line Angle		Poles								Conductor			# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Guy Strand		Anchor Unit 'F'					
					Deg.	Dir.	Height (Ft)	Class	Burial Depth (Ft)	Qty.	Asmbly	FT	Qty.	Asmbly	#	AWG	Type						Dia. (in)	Grade		Qty	Description	Qty	Description	
74+31.35'-40.82' LT	RETIRE												1	J3.1B																
74+32.46'-74.99' LT	NEW												1	J3.1B																
76+46.98'-52.21' LT	EXIST		74+31.35'-40.82' LT	DOT SERVICE- BRIDGE LTG									1	J3.1B																
" "	SALVAGE	169	74+31.35'-40.82' LT	DOT SERVICE- BRIDGE LTG											1	2/0	TRIPLEX													
" "	RETIRE												1	J3.1B																
75+32.93'-77.24' LT	NEW	102	74+32.46'-74.99' LT	76+46.98'-52.21' LT									2	J3.1B	1	2/0	TRIPLEX													
76+46.98'-52.21' LT	NEW		75+32.93'-77.24' LT	DOT SERVICE- BRIDGE LTG									1	J3.1B																
" "	ADD	117	75+32.93'-77.24' LT	DOT SERVICE- BRIDGE LTG											1	2/0	TRIPLEX													

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
P:\2011\11147.01FB\E\Electrical Secondary Relocation\Segment 1 South\E0026spep1147.01FB-U28-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U29–SS	U34–SS



SHEET KEYNOTES: X

1. INSTALL 120/240V SECONDARY PEDESTAL ACCORDING TO GVEA STANDARDS.
2. REMOVE EXISTING UNDERGROUND BRANCH CIRCUIT CONDUCTORS FROM RACEWAY AND ABANDON RACEWAY.
3. INSTALL SECONDARY RISER ACCORDING TO GVEA STANDARDS.
4. EXISTING UNDERGROUND BRANCH CIRCUIT IS ROUTED TO EXISTING SERVICE, REROUTE AND RECONNECT TO NEW SERVICE LOCATION.

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.	Asmbly	FT	Qty.	Asmbly	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						Dia. (in)	Grade						
82+83.68'-40.66' LT	RETIRE												1	J3.1B																
82+72.59' - 41.98' RT	RETIRE	83	82+83.68'-40.66' LT	CUC SERVICE, RSD SERVICE #1, RSD SERVICE #2			45	4	-				2	J3.1B	1	2/0	TRIPLEX	1	1	E1.1XX			-	-	F3.10	1	2" RMC CONDUIT RISER			
CUC SERVICE	RETIRE	11	82+72.59' - 41.98' RT				35	-	-				1	Q2.1XX	1	#2	TRIPLEX	1	1	E1.1XX			-	-	F3.10					EXISTING METER NO. 326383
" "	RETIRE												1	J3.1B																
SECONDARY PEDESTAL "SP-1"	RETIRE	18	82+72.59' - 41.98' RT										1	UR2XX	3	#2										1	2" RMC CONDUIT			SECONDARY PEDESTAL "SP-1" IS NEW
RSD SERVICE #1	EXIST	93	SECONDARY PEDESTAL "SP-1"										1	UR2XX	3	#2										1	2" RMC CONDUIT	1	SVC ASSEMBLY	EXISTING METER NO. 305526
RSD SERVICE #2	EXIST												1	K3.2														1	SVC ASSEMBLY	EXISTING METER NO. 305525
" "	SALVAGE	45	82+72.59' - 41.98' RT												1	#2	TRIPLEX													
SECONDARY PEDESTAL "SP-1"	NEW	22	"PMT-1"	RSD SERVICE #1									1	UR2XX	3	#2										1	2" HDPE CONDUIT	1	2" RMC ELBOW	
82+82.67'- 55.56' RT	NEW	17	"PMT-1"	RSD SERVICE #2			35	4	5.5				1	J3.1B												1	2" RMC CONDUIT RISER			
" "	NEW	17	"PMT-1"	RSD SERVICE #2									1	UR2XX	3	#2										1	2" HDPE CONDUIT	1	2" RMC ELBOW	
RSD SERVICE #2	ADD	30	82+82.67'- 55.56' RT												1	#2	TRIPLEX													
EXISTING RSD SERVICE #3	SALVAGE	48	85+28.92'-52.99' RT				25	-	-				1	Q2.1XX	1	2/0	TRIPLEX													EXISTING METER NO. 307642
" "													1	J3.1B																
SALVAGED RSD SERVICE #3	ADD	48	85+28.92'-52.99' RT				25	-	4.5				1	Q2.1XX	1	2/0	TRIPLEX													
" "													1	J3.1B																

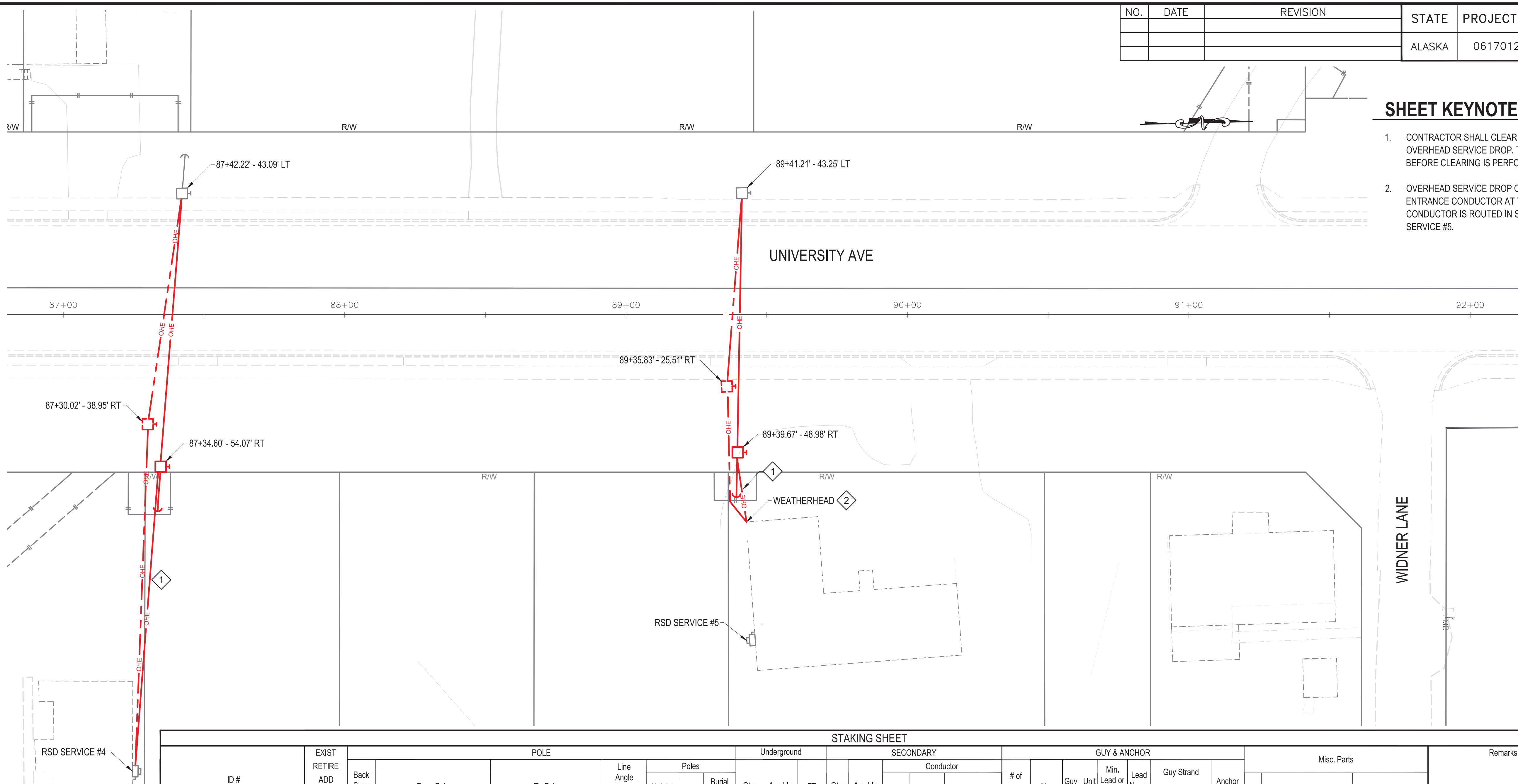
ELECTRICAL SECONDARY RELOCATION PLANS

STATE OF ALASKA
49TH
Michael S. Goulding
Apr 26, 2019
EE-9705
REGISTERED PROFESSIONAL ENGINEER

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\E\Electrical Secondary Relocation\Segment 1 South\E0026sepp1147.01FB-U29-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U30-SS	U34-SS



SHEET KEYNOTES:

1. CONTRACTOR SHALL CLEAR A MINIMUM 4 FOOT WIDE PATH FOR OVERHEAD SERVICE DROP. TCP TO BE ACQUIRED FOR PROPERTY BEFORE CLEARING IS PERFORMED.
2. OVERHEAD SERVICE DROP CONNECTS TO WEATHERHEAD AND SERVICE ENTRANCE CONDUCTOR AT THIS LOCATION. SERVICE ENTRANCE CONDUCTOR IS ROUTED IN SURFACE MOUNTED RACEWAY TO RSD SERVICE #5.

STAKING SHEET

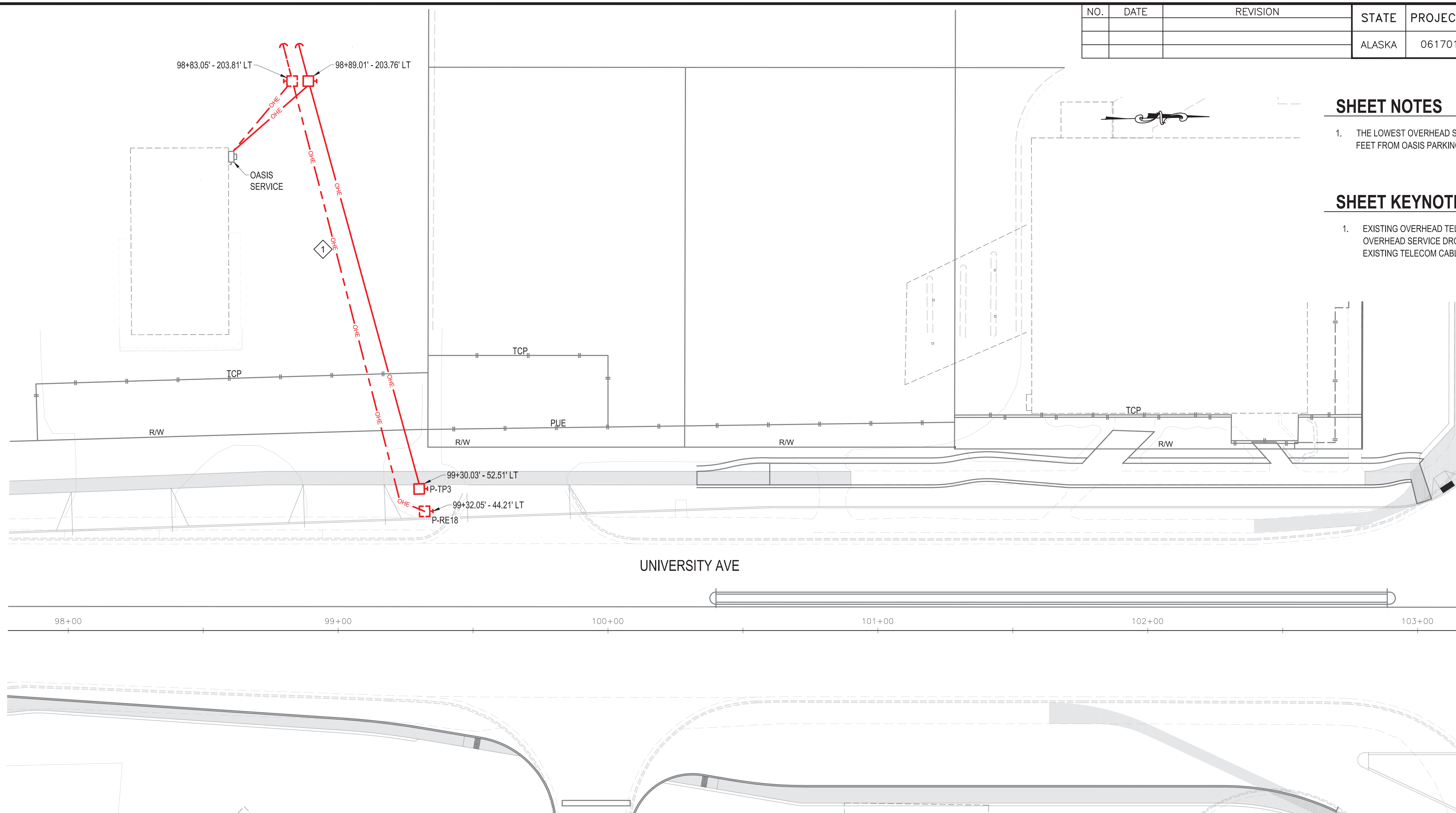
ID #	EXIST RETIRE ADD SALVAGE NEW	POLE: Back Span (Ft)	POLE: From Pole	POLE: To Pole	POLE: Line Angle Deg.	POLE: Line Angle Dir.	POLE: Poles Height (Ft)	POLE: Poles Class	POLE: Poles Burial Depth (Ft)	Underground Qty.	Underground Asmbly	Underground FT	SECONDARY Qty.	SECONDARY Asmbly	SECONDARY Conductor #	SECONDARY Conductor AWG	SECONDARY Conductor Type	GUY & ANCHOR # of guy anc.	GUY & ANCHOR No.	GUY & ANCHOR Guy Unit 'E'	GUY & ANCHOR Min. Lead or Span (Ft)	GUY & ANCHOR Lead N-pos (Ft)	GUY & ANCHOR Guy Strand Dia. (in)	GUY & ANCHOR Guy Strand Grade	GUY & ANCHOR Anchor Unit 'F'	Misc. Parts Qty	Misc. Parts Description	Misc. Parts Qty	Misc. Parts Description	Remarks
87+42.22'-43.09 LT	EXIST												1	J3.1B																
87+30.02'-38.95' RT	RETIRE	83	87+42.22'-43.09 LT	RSD SERVICE #4			40	3	-				2	J3.1B	1	4/0	TRIPLEX													
87+34.60'-54.07' RT	NEW	98	87+42.22'-43.09 LT	RSD SERVICE #4			40	3	6				2	J3.1B	1	4/0	TRIPLEX	1	1	E1.1XX			3/8	EHS	F3.10					
RSD SERVICE #4	EXIST												1	J3.1B												1	SVC ASSEMBY			EXISTING METER NO. 306503, 306504, 306505, 306506
" "	SALVAGE	123	87+30.02'-38.95' RT												1	4/0	TRIPLEX													
RSD SERVICE #4	ADD	108	87+34.60'-54.07' RT												1	4/0	TRIPLEX													
89+41.21'-43.25' LT	EXIST												1	J3.1B																
89+35.83'-25.51' RT	RETIRE	69					35	5	-				2	J3.1B	1	2/0	TRIPLEX													
89+39.67'-48.98' RT	NEW	92	89+41.21'-43.25' LT	RSD SERVICE #5- WEATHERHEAD			40	3	6				2	J3.1B	1	2/0	TRIPLEX	1	1	E1.1XX			3/8	EHS	F3.10					
RSD SERVICE #5- WEATHERHEAD	EXIST												1	J3.1B												1	SVC ASSEMBY			EXISTING METER NO. 304594
" "	SALVAGE	49	89+35.83'-25.51' RT												1	2/0	TRIPLEX													
RSD SERVICE #5- WEATHERHEAD	ADD	25	89+39.67'-48.98' RT												1	2/0	TRIPLEX													

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
P:\2011\11147.01FB\E\Electrical Secondary Relocation\Segment 1 South\E0026spep1147.01FB-U30-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U31-SS	U34-SS



SHEET NOTES

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

SHEET KEYNOTES: X

1. EXISTING OVERHEAD TELECOM(ASC/GCI) IS LOCATED BELOW THE OVERHEAD SERVICE DROP. TELECOM UTILITY PROVIDER TO REATTACH EXISTING TELECOM CABLES TO NEW POLES.

STAKING SHEET

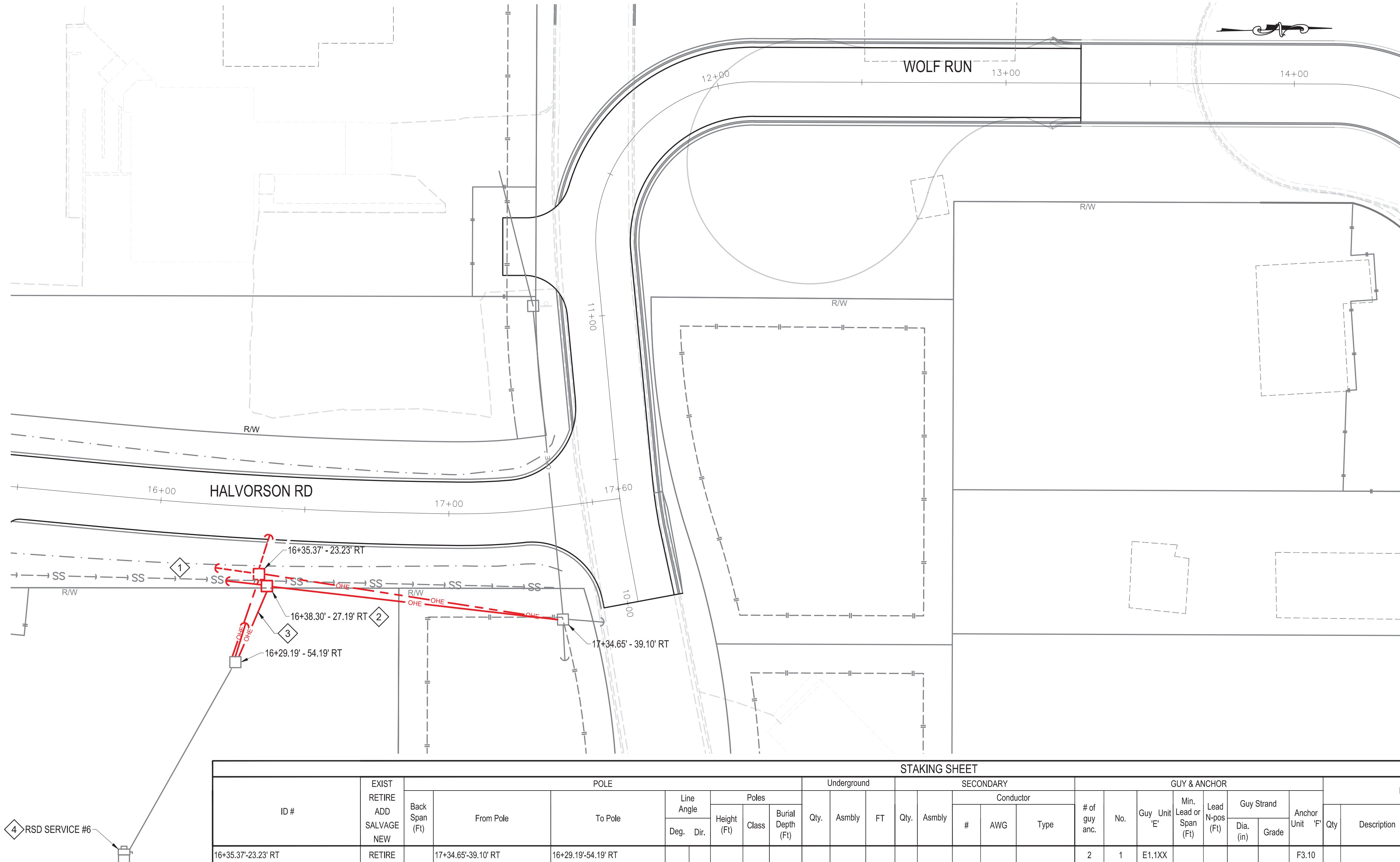
ID #	EXIST RETIRE ADD SALVAGE NEW	POLE								Underground			SECONDARY					GUY & ANCHOR								Misc. Parts				Remarks
		Back Span (Ft)	From Pole	To Pole	Line Angle		Poles								Conductor								Guy Strand							
					Deg.	Dir.	Height (Ft)	Class	Burial Depth (Ft)	Qty.	Asmbly	FT	Qty.	Asmbly	#	AWG	Type	# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Dia. (in)	Grade	Anchor Unit 'F'	Qty	Description	Qty	Description	
"P-RE18" 99+32.05'- 44.21	RETIRE												1	J3.1B																
"P-TP3" 99+30.03'- 52.51' LT	NEW												1	J3.1B																
98+83.05'- 203.81' LT	RETIRE	167	"P-RE18" 99+32.05'- 44.21 LT	OASIS SERVICE			30	5	-				1	J3.1B	1	4/0	QUADRAPLEX	1	1	E1.1XX					F3.10					
98+89.01'- 203.76' LT	NEW	157	"P-TP3" 99+30.03'- 52.51' LT	OASIS SERVICE			35	4	5.5				2	J3.1B	1	4/0	QUADRAPLEX	1	1	E1.1XX			3/8	EHS	F3.10					
OASIS SERVICE	RETIRE	34	98+83.05'- 203.81' LT										1	K3.2	1	4/0	QUADRAPLEX						3/8	EHS						EXISTING METER NO.: 200698
OASIS SERVICE	NEW	38	98+89.01'- 203.76' LT										1	K3.2	1	4/0	QUADRAPLEX						3/8	EHS						

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
P:\2011\11147.01FB\E\Electrical Secondary Relocation\Segment 1 South\E0026sep1147.01FB-U31-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U32-SS	U34-SS



SHEET KEYNOTES:

1. FIELD LOCATED EXISTING UNDERGROUND SEWER LINE BEFORE INSTALLING YARD POLE AND DOWN GUY.
2. YARD POLE TO BE INSTALLED WITHIN THE RIGHT OF WAY.
3. CONTRACTOR SHALL CLEAR A MINIMUM 4 FOOT WIDE PATH FOR OVERHEAD SERVICE DROP. TCP TO BE ACQUIRED FOR PROPERTY BEFORE CLEARING IS PERFORMED.
4. FEATURE INDICATED WAS NOT SURVEYED.

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								Conductor			# of guy anc.	No.	Guy Unit 'E'	Min. Lead or Span (Ft)	Lead N-pos (Ft)	Guy Strand		Anchor Unit 'F'					
					Deg.	Dir.	Height (Ft)	Class	Burial Depth (Ft)	Qty.	Asmbly	FT	Qty.	Asmbly	#	AWG	Type						Dia. (in)	Grade		Qty	Description	Qty	Description	
16+35.37'-23.23' RT	RETIRE		17+34.65'-39.10' RT	16+29.19'-54.19' RT														2	1	E1.1XX					F3.10					
" "	SALVAGE	107	17+34.65'-39.10' RT	16+29.19'-54.19' RT			35	4	-				2	J3.1B	1	2/0	TRIPLEX													
16+38.30'-27.19' RT	NEW		17+34.65'-39.10' RT	16+29.19'-54.19' RT														1	1	E1.1XX			3/8	EHS	F3.10					
" "	ADD	104	17+34.65'-39.10' RT	16+29.19'-54.19' RT			35	4	5.5				2	J3.1B	1	2/0	TRIPLEX													
16+29.19'-54.19' RT	EXIST	32	16+35.37'-23.23' RT				30	6	-				2	J3.1B																
" "	SALVAGE		16+35.37'-23.23' RT												1	2/0	TRIPLEX													
16+29.19'-54.19' RT	NEW		16+38.30'-27.19' RT															1	1	E1.1XX			3/8	EHS	F3.10					
" "	ADD	29	16+38.30'-27.19' RT												1	2/0	TRIPLEX													

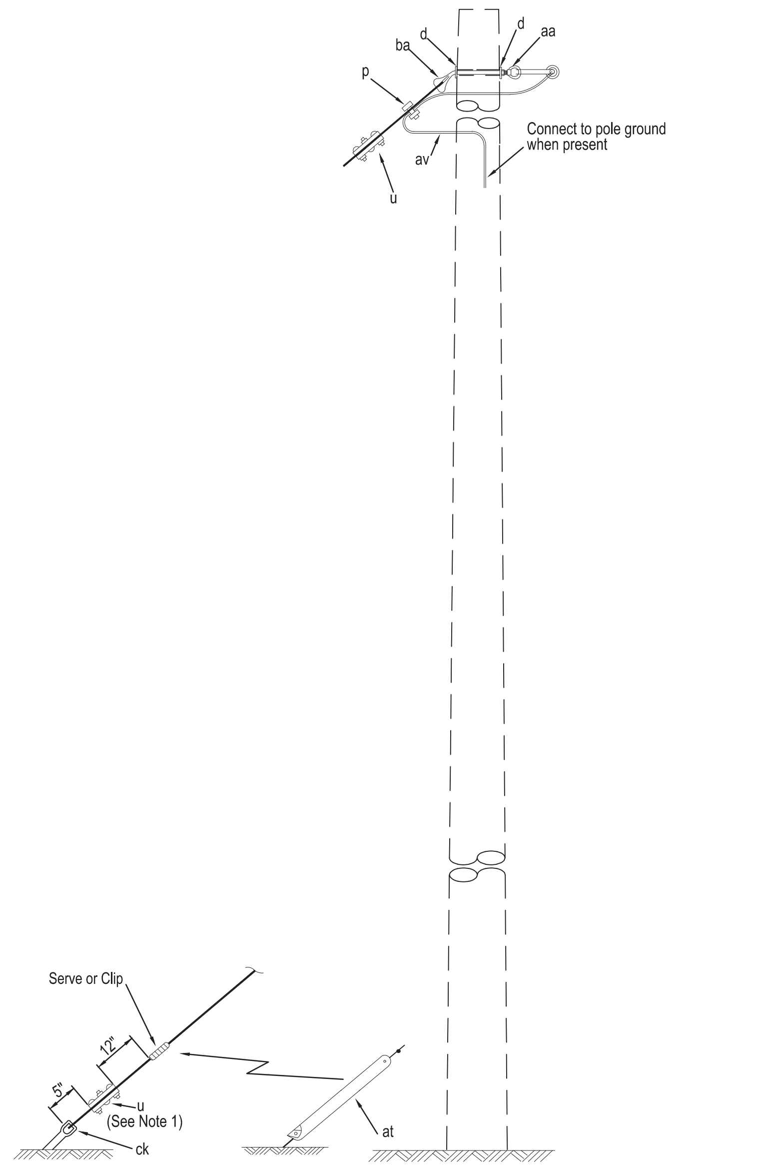
ELECTRICAL SECONDARY RELOCATION PLANS

STATE OF ALASKA 49TH
Michael S. Goulding
Apr 26, 2019
EE-9705
REGISTERED PROFESSIONAL ENGINEER

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\E\Electrical Secondary Relocation\Segment 1 South\E0026spep1147.01FB-U32-SS Fri, Apr/26/19 03:19pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U33-SS	U34-SS



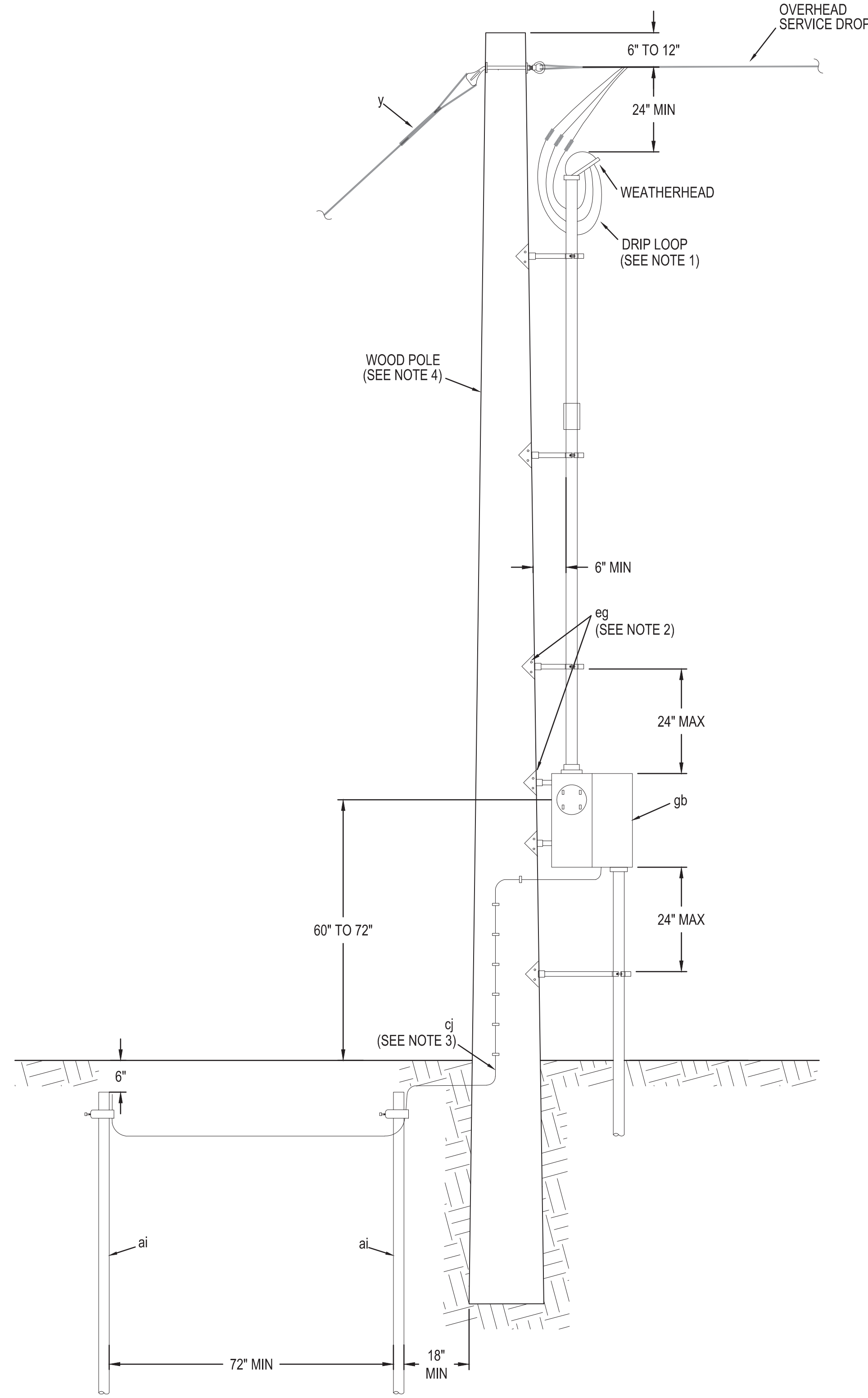
ITEM	QTY	MATERIAL
c	1	BOLT, MACHINE, 5/8" x REQ'D LENGTH
d	2	WASHER, 3" SQUARE, CURVED
p		CONNECTORS, GUY BOND AND AS REQ'D
u	2	DEADEND FOR GUY STRAND (SEE NOTE 1)
ba	1	ANGLE THIMBLE EYEBOLT
y		GUY WIRE AS REQ'D (SEE NOTE 3)
at	1	GUY MARKER
av		JUMPERS, AS REQ'D
ck	1	CLAMP, ANCHOR BONDING
aa	1	GALVANIZED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

NOTES:

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

1 U33-SS E1.1XX: SINGLE DOWN GUY

SCALE: NTS



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

NOTES:

1. 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.
2. STANDOFF TO BE A MINIMUM 15 INCHES. PROVIDE ONE MINIMUM PER SECTION OF CONDUIT.
3. STAPLE GROUNDING ELECTRODE CONDUCTOR EVERY 6 INCHES. STAPLES SHALL BE COPPER CLAD.
4. POLE BASE BELOW GRADE TO BE WRAPPED WITH THREE LAPS OF POLYETHYLENE SHEETING TO RESIST FROST JACKING.

2 U33-SS Q2.1XX: POLE TYPE SERVICE ASSEMBLY

SCALE: NTS

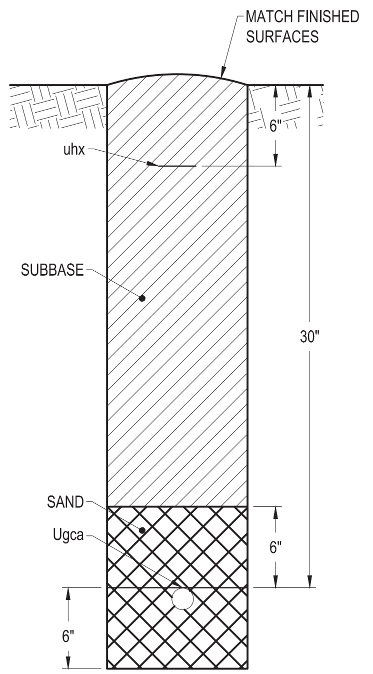
ELECTRICAL DETAILS

STATE OF ALASKA 49 TH Michael S. Goulding Apr 26, 2019 EE-9705 REGISTERED PROFESSIONAL ENGINEER

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\E\Electrical Secondary Relocation\Segment 1 South\E0033dt011147.01FB-U33-SS Fri, Apr/26/19 03:19pm

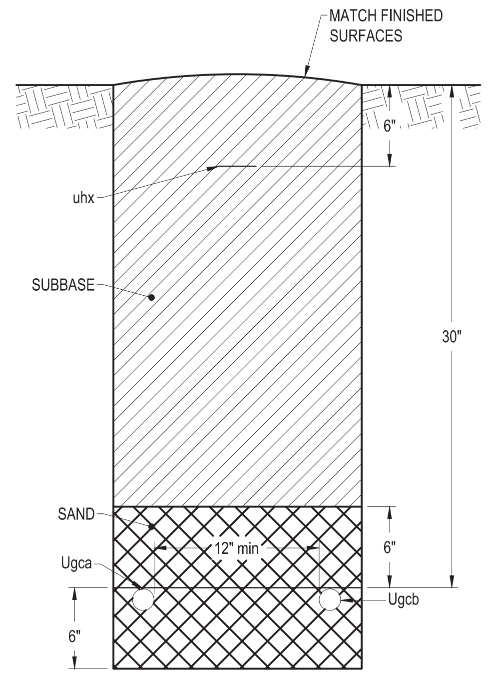
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	U34–SS	U34–SS



UR2

TRENCHING UNIT
ONE CONDUIT



UR2-1

TRENCHING UNIT
POWER AND TELEPHONE CCONDUIT

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

1
U34–SS

UR2XX: TRENCHES FOR CONDUITS

SCALE: NTS

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\E\Electrical Secondary Relocation\Segment 1 South\E0034dt021147.01FB-U34-SS Fri, Apr/26/19 03:19pm

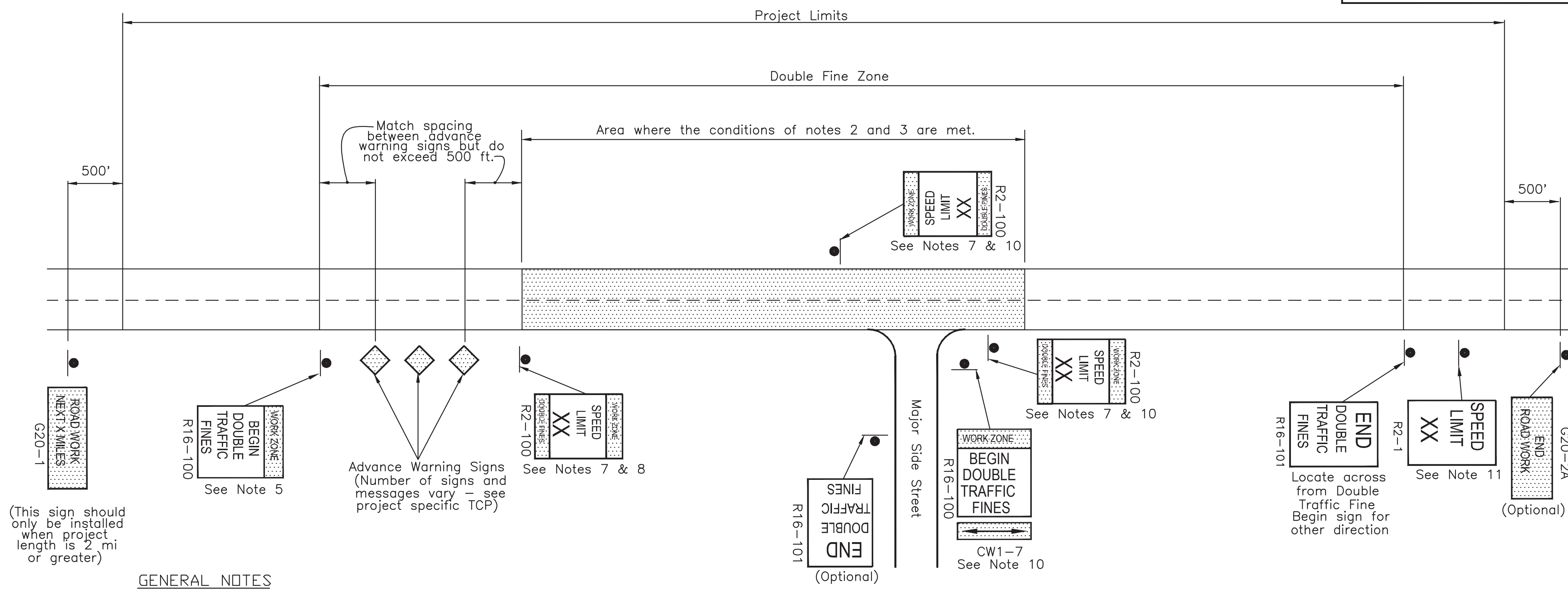
ELECTRICAL DETAILS

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	V1-SS	V16-SS

C-04.12

SHEET 1 of 1



GENERAL NOTES

1. Signs are shown for one direction only (with one exception). Signs for the other direction mirror those shown.

2. Double fine signs shall be used only where one or more of the following conditions exist:
   a. Active work areas (where road workers and/or machines are presently working on or adjacent to a road)
   b. Detours on new temporary roads built for that purpose (this does not include detours on existing streets)
   c. Sections of paved roads where pavement has been removed.
   d. Roads being paved where unmatched asphalt lifts result in a vertical lip between lanes.

3. Double fine signs shall be confined to the areas where the above conditions exist, with the following exceptions:
   a. If the project is 2 miles or shorter in length, the entire project may be posted for double fines when the above conditions exist on any part of the project.
   b. When the above conditions exist at multiple locations separated by less than 2 miles, the locations and the intervening segments may be posted as a single double fine zone.

4. Double fine signs shall be removed or covered when work activity ceases for more than two days and conditions b, c, or d of note 2 are not met.

5. The R16-100 "BEGIN" sign may be used in place of the first advance warning sign. However, when this is done, the appropriate advance warning sign must be reinstalled when the double fine sign is taken down or covered.

6. When a double fine zone is longer than 2 miles, work zone speed limit signs shall be posted at spacings not greater than 2 miles within the double fine zone.

7. "Work zone speed limit signs", as used here, refer either to 1) R2-100 signs or 2) standard R2-1 regulatory speed limit signs with CW20-102 "DOUBLE FINES" plates mounted below.

8. The limit shown on work zone speed limit signs shall be either the existing limit before construction or, if a work zone speed limit order has been approved in accordance with ADOT&PF Procedure 05.05.020 PDR, a reduced limit.

9. All existing regulatory speed limit signs within double fine zones shall either be replaced with R2-100 signs or supplemented with CW20-102 plates.

10. Signs shall be installed at major intersections within the double fine zone to warn entering drivers of double fines. This may be done with a R16-100 sign with a CWI-7 arrow panel on the side street or with two work zone speed limit signs on the main street on either side of the intersection. Use of R16-100 signs on side streets eliminates the need for "Road Work Ahead" signs on those streets. If the speed limit has been reduced, the two work zone speed limit signs are mandatory.

11. At the end of each double fine zone, install an R2-1 sign showing the speed limit for the road beyond the double fine zone.

REVISIONS		
Date	Description	By
6/11/99	Revised Notes	KJS
2/28/03	Rev. Notes & Sign No's	KJS

State of Alaska
Department of Transportation
& Public Facilities

LOCATION OF DOUBLE TRAFFIC FINE SIGNS

C-04.12

STANDARD DRAWING
C-04.12

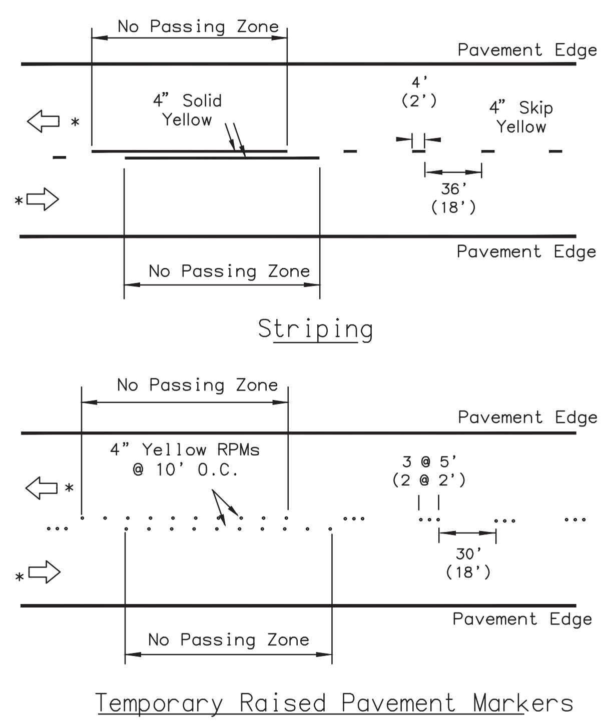
4/26/2019

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AECL 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design_S1-SIDES\Production\06173_V1_STD DWG_C0412-V1 Fri, Apr/26/19 04:41pm

NO.	DATE	REVISION

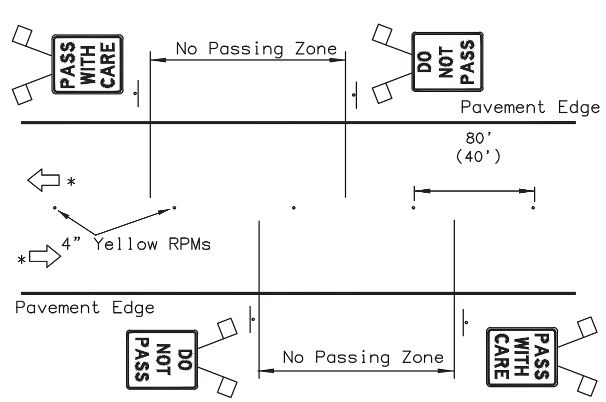
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	V2-SS	V16-SS

C-05.20



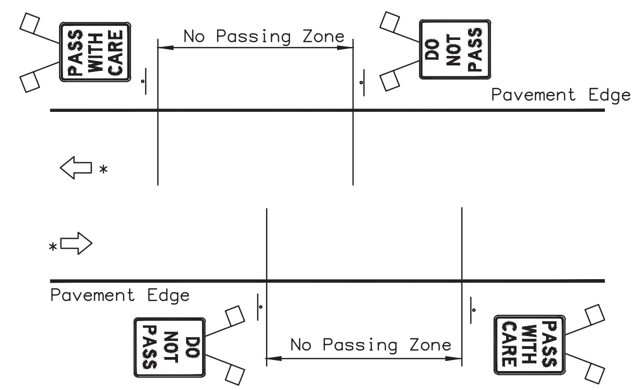
DETAIL A

Two-lane road: No Passing Zones indicated with pavement markings.



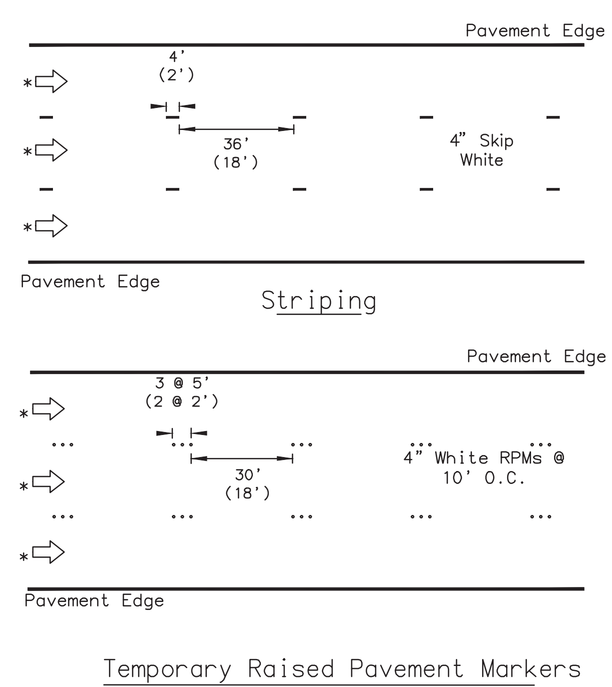
DETAIL B

Two-lane road: No Passing Zones indicated by signs only. Raised pavement markers for centerline delineation.



DETAIL C

Two-lane road: No Passing Zones indicated by signs only (see Note 2c). No centerline delineation.



DETAIL D

Multilane one-way road: Lane dividing lines

* Direction of Travel

GENERAL NOTES:

1. Final pavement markings conforming to Part 3 of the Alaska Traffic Manual should be installed before paved roads are open to public travel. If that is not practical, install interim pavement markings as shown on this drawing. Maintain interim pavement markings until final pavement markings are installed.

2. No interim pavement markings are required:
   a. on projects that will not have permanent markings when finished.
   b. in work zones that are open to public travel for no more than one work shift during daytime or for no more than one hour at night.
   c. where DO NOT PASS and PASS WITH CARE signs are installed on two lane roads as shown in Detail C, no pavement markings are required:
      1) for 3 days if seasonal ADT is above 2000, or
      2) for 1 month if seasonal ADT is below 2000.

3. Interim pavement markings should not be in place longer than 14 calendar days before being replaced with permanent markings conforming to Part 3 of the Alaska Traffic Manual unless the Engineer provides written approval.

4. Where R4-1 DO NOT PASS signs are used, install at the beginning of no passing zones and at no more than 1500' spacings within no passing zones.

5. Install high level warning devices on all DO NOT PASS and PASS WITH CARE signs.

6. Offset temporary markings 8"-12" from the future location of permanent markings if applied on the same lift of pavement.

7. Dimensions in parenthesis apply to curves with a radius of 1000 feet or less or where posted speed limit is 30 mph or less.

REVISIONS		
Date	Description	By
4/28/10	RPM spacing, signs	KJS

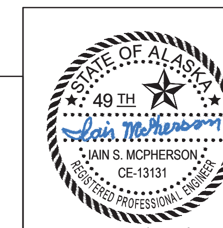
Sheet 1 of 1

State of Alaska
Department of Transportation
& Public Facilities

INTERIM
PAVEMENT MARKINGS

C-05.20

STANDARD DRAWING
C-05.20



4/26/2019

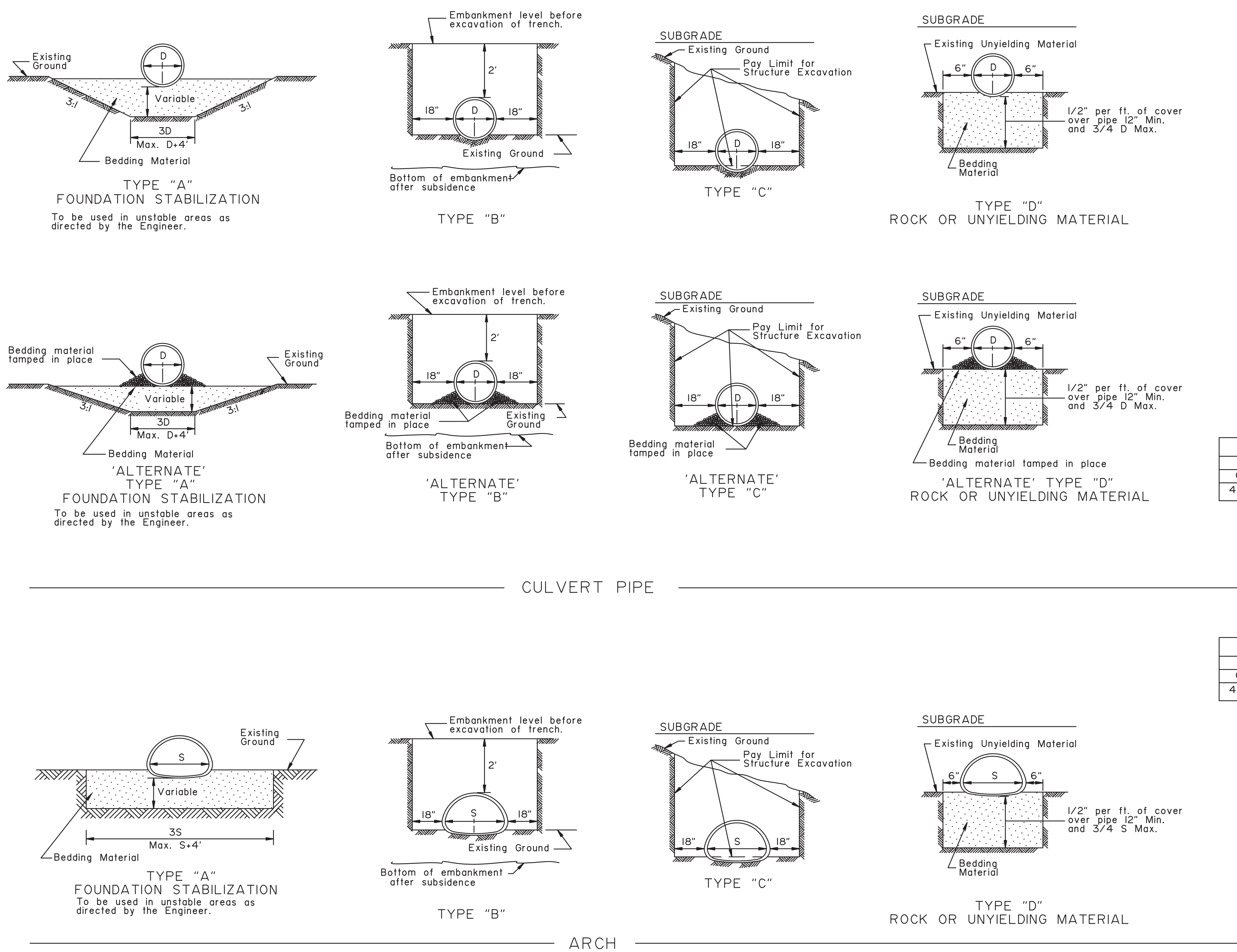
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. AELC 1102
Z:\PROJECTS\DOTPF\University Avenue Traffic Design_S1-SIDES\Production\06173_V2_STD DWG_C0520-V2 Fri, Apr/26/19 04:42pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V3-SS	V16-SS

D-01.02

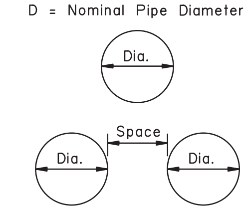
SHEET | of |



GENERAL NOTES:

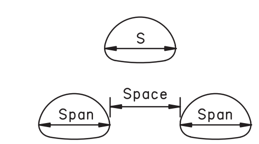
1. Sidefill shall be placed and compacted with care under haunches of pipe and shall be brought up evenly and simultaneously on both sides of pipe to 1 foot above the top of the full length of the pipe.
2. Alternate installation methods may only be used when specified or approved by the Engineer.

D = Nominal Pipe Diameter



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

S = Nominal Pipe Arch Span



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

REVISIONS		
Date	Description	By
12/1/87	Delete ref. to Specs.	Gdo
4/1/93	Delete Alt. Arch	Gdo

State of Alaska
Department of Transportation & Public Facilities

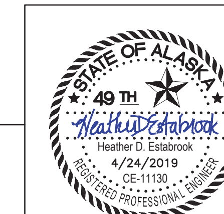
CULVERT PIPE & ARCH INSTALLATION DETAILS

APPROVED

Date 7/15/82

D-01.02

CULVERT PIPE & ARCH INSTALLATION 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 1C\1C-C\Details\d0102_11147.01FB-V3-SS Wed, Apr/24/19 04:18pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V4-SS	V16-SS

D-04.21

CORRUGATED CIRCULAR STEEL PIPE

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

GAGE	0.064"		0.079"		0.109"		0.138"		0.168"	
Dia. (In)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)
12	12	100+	12	100+	12	100+	12	100+	12	100+
15	12	100+	12	100+	12	100+	12	100+	12	100+
18	12	100+	12	100+	12	100+	12	100+	12	100+
21	12	100+	12	100+	12	100+	12	100+	12	100+
24	12	100+	12	100+	12	100+	12	100+	12	100+
27	12	100+	12	100+	12	100+	12	100+	12	100+
30	12	99	12	100+	12	100+	12	100+	12	100+
36	12	83	12	100+	12	100+	12	100+	12	100+
42	12	71	12	88	12	100+	12	100+	12	100+
48	12	62	12	77	12	100+	12	100+	12	100+
54			12	66	12	93	12	100+	12	100+
60					12	79	12	100+	12	100+
66					12	68	12	88	12	100+
72							12	75	12	93
78									12	79
84									12	66

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

GAGE	0.064"		0.079"		0.109"		0.138"		0.168"	
Dia. (In)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)
36	12		12		12	100+	12	100+	12	100+
42	12		12		12	100+	12	100+	12	100+
48	12		12	76	12	100+	12	100+	12	100+
54	12	63	12	79	12	100+	12	100+	12	100+
60	12	56	12	71	12	99	12	100+	12	100+
66	12	52	12	64	12	90	12	100+	12	100+
72	12	47	12	59	12	82	12	100+	12	100+
78	12	44	12	54	12	77	12	98	12	100+
84	12	41	12	51	12	71	12	92	12	100+
90	12	37	12	47	12	67	12	86	12	100+
96	12	35	12	44	12	62	12	80	12	98
102	18	33	18	42	18	59	18	76	18	93
108			18	40	18	55	18	71	18	87
114			18	36	18	51	18	66	18	80
120			18	34	18	46	18	61	18	75
126					18	44	18	56	18	70
132					18	41	18	53	18	64
138					18	37	18	49	18	60
144							18	44	18	55
150									18	52

Minimum & Maximum Cover For 5" x 1" Steel Pipe*

GAGE	0.064"		0.079"		0.109"		0.138"		0.168"	
Dia. (In)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)
36	12	81	12	90	12	100+	12	100+	12	100+
42	12	71	12	77	12	100+	12	100+	12	100+
48	12	62	12	68	12	100+	12	100+	12	100+
54	12	56	12	70	12	98	12	100+	12	100+
60	12	50	12	63	12	88	12	100+	12	100+
66	12	46	12	57	12	80	12	100+	12	100+
72	12	42	12	52	12	73	12	95	12	100+
78	12	39	12	48	12	68	12	87	12	100+
84	12	36	12	45	12	63	12	81	12	99
90	12	33	12	42	12	59	12	76	12	93
96	12	31	12	39	12	55	12	71	12	87
102	18	29	18	37	18	52	18	67	18	82
108			18	35	18	49	18	63	18	77
114			18	32	18	45	18	58	18	71
120			18	30	18	41	18	54	18	66
126					18	39	18	50	18	62
132					18	36	18	47	18	57
138					18	33	18	43	18	53
144							18	39	18	49
150									18	47

*Table for pipe with helical lockseams or helical welded seams ONLY.

Minimum & Maximum Cover For 6" x 2" Steel Structural Plate Pipe**

GAGE	ALL	0.111"	0.140"	0.170"	0.188"	0.218"	0.249"	0.280"
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
60	12	46	68	90	100+	100+	100+	100+
66	12	42	62	81	93	100+	100+	100+
72	12	38	57	75	86	100+	100+	100+
78	12	35	52	69	79	95	100+	100+
84	12	33	49	64	73	88	100+	100+
90	12	31	45	60	68	82	97	100+
96	12	29	43	56	64	77	91	100+
102	18	27	40	52	60	73	86	94
108	18	25	38	50	57	69	81	88
114	18	24	36	47	54	65	77	84
120	18	23	34	45	51	62	73	80
126	18	22	32	42	49	59	69	76
132	18	21	31	40	46	56	66	72
138	18	20	29	39	44	54	63	69
144	18	19	28	37	43	51	61	66
150	24	18	27	36	41	49	58	64
156	24	17	26	34	39	47	56	61
162	24	17	25	33	38	46	54	59
168	24	16	24	32	36	44	52	57
174	24	16	23	31	35	42	50	55
180	24	15	22	30	34	41	48	53
186	24	15	22	29	33	40	47	51
192	24		21	28	32	38	45	50
198	30		20	27	31	37	44	48
204	30		20	26	30	36	43	47
210	30		19	25	29	35	41	45
216	30			25	28	34	40	44
222	30			24	27	33	39	43
228	30			23	27	32	38	42
234	30			23	26	31	37	41
240	30				25	31	36	40
246	36				25	30	35	39
252	36					29	34	38
258	36					28	34	37
264	36					28	33	36
270	36					27	32	35
276	36						31	34
282	36						31	34
288	42						30	33
294	42							32
300	42							32
306	42							31
312	42							30

**Longitudinal seams use (4) 3/4" dia. bolts per foot.

CORRUGATED STEEL PIPE-ARCH

Minimum & Maximum Cover For 2 2/3" x 1/2" Steel Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft): 2 Tons Corner Bearing Pressure	Max. Cover (Ft): 3 Tons Corner Bearing Pressure @
17 x 13	3	0.064	12	16	18
21 x 15	3	0.064	12	15	14
24 x 18	3	0.064	12	15	13
28 x 20	3	0.064	12	15	11
35 x 24	3	0.064	12	15	7
42 x 29	3 1/2	0.064	12	15	7
49 x 33	4	0.079	12	15	6
57 x 38	5	0.109	12	15	8
64 x 43	6	0.109	12	15	9
71 x 47	7	0.138	12	15	10
77 x 52	8	0.168	12	15	10
83 x 57	9	0.168	12	15	10

Minimum & Maximum Cover For 3" x 1" Steel Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft): 2 Tons Corner Bearing Pressure	Max. Cover (Ft): 3 Tons Corner Bearing Pressure @
40 x 31	5	0.079	12	25	12
46 x 36	6	0.079	12	25	13
53 x 41	7	0.079	12	25	13
60 x 46	8	0.079	15	25	13
66 x 51	9	0.079	15	25	13
73 x 55	12	0.079	18	24	16
81 x 59	14	0.079	18	21	17
87 x 63	14	0.079	18	20	16
95 x 67	16	0.079	18	20	17
103 x 71	16	0.079	18	20	15
112 x 75	18	0.079	21	20	16
117 x 79	18	0.109	21	19	15
128 x 83	18	0.138	24	19	14
137 x 87	18	0.138	24	19	13
142 x 91	18	0.138	24	19	12
150 x 96	18	0.138	30	19	
157 x 96	18	0.138	30	19	
164 x 105	18	0.138	30	19	
171 x 110	18	0.138	30	19	

Minimum & Maximum Cover For 5" x 1" Steel Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft): 2 Tons Corner Bearing Pressure	Max. Cover (Ft): 3 Tons Corner Bearing Pressure @
40 x 31	5	0.109	12	25	12
46 x 36	6	0.109	15	25	13
53 x 41	7	0.109	15	25	13
60 x 46	8	0.109	18	25	13
66 x 51	9	0.109	18	25	13
73 x 55	12	0.109	18	24	16
81 x 59	14	0.109	18	21	17
87 x 63	14	0.109	18	20	16
95 x 67	16	0.109	18	20	17
103 x 71	16	0.109	18	20	15
112 x 75	18	0.109	21	20	16
117 x 79	18	0.109	21	19	15
128 x 83	18	0.109	24	19	14
137 x 87	18	0.109	24	19	13
142 x 91	18	0.109	24	19	12
150 x 96	18	0.138	30	19	
157 x 96	18	0.138	30	19	
164 x 105	18	0.138	30	19	
171 x 110	18	0.138	30	19	

Minimum & Maximum Cover For 6" x 2" Steel Structural Plate Pipe-Arch**

Span x Rise (Ft-In x Ft-In)	Corner Radius (In)	Minimum Gage (In)	2 Tons Corner Bearing Pressure: Min. Cover (In)	2 Tons Corner Bearing Pressure: Max. Cover (Ft)	3 Tons Corner Bearing Pressure @: Min. Cover (In)	3 Tons Corner Bearing Pressure @: Max. Cover (Ft)
6-1 x 4-7	18	0.111	18	16	12	24
7-0 x 5-1	18	0.111	18	14	12	21
7-11 x 5-7	18	0.111	18	13	12	19
8-10 x 6-1	18	0.111	24	11	18	17
9-9 x 6-7	18	0.111	24	10	18	15
10-11 x 7-1	18	0.111	24	9	18	14
11-10 x 7-7	18	0.111	24	7	18	13
12-10 x 8-4	18	0.111	30	6	24	12
14-1 x 8-9	18	0.111	30	5	24	11
15-4 x 9-3	18	0.111	NS	NS	24	10
15-10 x 9-10	18	0.111	NS	NS	24	9
16-7 x 10-1	18	0.111	NS	NS	24	9
13-3 x 9-4	31	0.111	24	13	24	17
14-2 x 9-10	31	0.111	24	12	24	16
15-4 x 10-4	31	0.111	24	11	24	15
16-3 x 10-10	31	0.111	24	11	24	14
17-2 x 11-4	31	0.111	30	10	30	13
18-1 x 11-10	31	0.111	30	10	30	12
19-3 x 12-4	31	0.111	30	9	30	13
19-11 x 12-10	31	0.140	30	9	30	13
20-7 x 13-2	31	0.140	36	7	36	13

NS = Not Suitable

METAL THICKNESSES & GAGES

STEEL: ZINC COATED	STEEL: UNCOATED	GAGE NO. (For Info Only)
0.064	0.0598	16
0.079	0.0747	14
0.109	0.1047	12
0.138	0.1345	10
0.168	0.1644	8
0.188	0.1838	7
0.218	0.2145	5
0.249	0.2451	3
0.280	0.2758	1

@This column shall not be used unless specified on the plans or approved by the Region Geotechnical Engineer.

**Longitudinal seams use (4) 3/4" dia. bolts per foot.

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.

2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.

3. No more than one type of pipe may be used on any single installation or installation grouping.

4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.

5. See Standard Drawing "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.

6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the top of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.

7. These tables have been developed for an H-20 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2000 AASHTO "LRFD Bridge Design Specifications".

REVISIONS

Date	Description	By
8/10/00	Pipe Tables & G. Notes.	DFD
10/31/03	Pipe Table Updates & New Sheet 4.	LRG

Sheet 1 of 2

State of Alaska
Department of Transportation
& Public Facilities

PIPE AND ARCH TABLES

10/31/03

D-04.21

STATE OF ALASKA
49 TH
Heather D. Estabrook
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

PIPE AND ARCH TABLES (1 OF 2)

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V5-SS	V16-SS

D-04.21

Minimum & Maximum Cover For Aluminum Spiral Rib Circular Pipe*								
GAGE	0.060"		0.075"		0.105"		0.135"	
Dia. (In)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)
12	24	35	24	50				
18	24	34	24	49				
24	24	25	24	36	24	63	24	82
30	24	19	24	28	24	50	24	65
36	24	15	24	24	24	41	24	54
42			24	19	24	35	24	46
48			24	17	24	30	24	40
54			24	14	24	27	24	35
60			24	12	24	24	24	30

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. Corrugations

Minimum & Maximum Cover For Aluminum Spiral Rib Pipe-Arch*				
		Soil Corner Bearing Capacity of 2 Tons/ s.f.		
		0.060"	0.075"	0.105"
Span x Rise (In. x In.)	Min. Cover (In.)	Max. Cover (ft.)	Max. Cover (ft.)	Max. Cover (ft.)
20 x 16	12	13		
23 x 19	12	14		
27 x 21	12	13		
33 x 26	12	13		
40 x 31	12	13		
46 x 36	12	14		
53 x 41	18		13	
60 x 46	18		20	
66 x 51	18		21	
73 x 55	18			21
81 x 59	18			17
87 x 63	18			17
95 x 67	18			17

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. Corrugations

ALUMINUM SPIRAL RIB PIPE

STEEL SPIRAL RIB PIPE

Minimum & Maximum Cover For Steel and Aluminized Steel Spiral Rib Circular Pipe*								
GAGE	0.064"		0.079"		0.109"		0.138"**	
Dia. (In)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)
18	12							
24	12	51	12	72	12	121		
30	12	41	12	58	12	97		
36	12	34	12	48	12	81		
42	12	29	12	41	12	69		
48	12	26	12	36	12	61		
54	18	23	18	32	18	54		
60	18	21	18	29	18	49	18	73
66	18	19	18	26	18	44	18	65
72			18	24	18	40	18	59
78			24	22	24	37	24	55
84			24	21	24	35	24	52
90					24	32	24	47
96					24	30	24	44
102					30	29	30	43
108					30	27	30	41

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. Corrugations
**¾ x ¾ x 7½ in. Corrugations Only.

Minimum & Maximum Cover For Steel Spiral Rib Arch-Pipe*				
		Soil Corner Bearing Capacity of 2 Tons/ s.f.		
		0.064"	0.079"	0.109"
Span x Rise (In. x In.)	Min. Cover (In.)	Max. Cover (ft.)	Max. Cover (ft.)	Max. Cover (ft.)
20 x 16	12	13		
23 x 19	12	14		
27 x 21	12	13		
33 x 26	12	13		
40 x 31	12	13		
46 x 36	12	14		
53 x 41	18		13	
60 x 46	18		20	
66 x 51	18		21	
73 x 55	18			21
81 x 59	18			17
87 x 63	18			17
95 x 67	18			17

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. Corrugations

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Drawing "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the top of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an H-20 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2000 AASHTO "LRFD Bridge Design Specifications".

REVISIONS		
Date	Description	By
8/10/00	Pipe Tables & G. Notes.	DFD
10/31/03	New Sheet 4.	LRG

Sheet 2 of 2

State of Alaska
Department of Transportation
& Public Facilities

PIPE AND ARCH TABLES

D-04.21

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 1C\1C-C\Details\d0421d_11147.01FB-V5-SS Wed, Apr/24/19 04:20pm

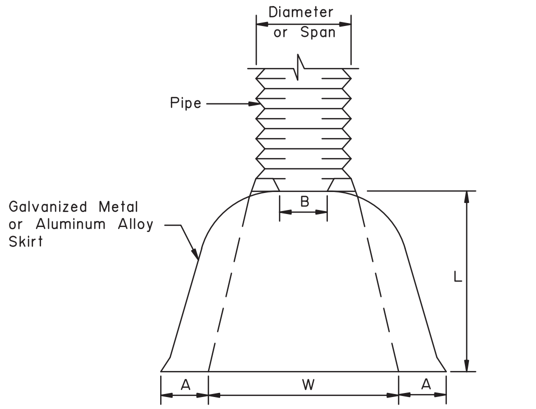
PIPE AND ARCH TABLES (2 OF 2)

STATE OF ALASKA
49 TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

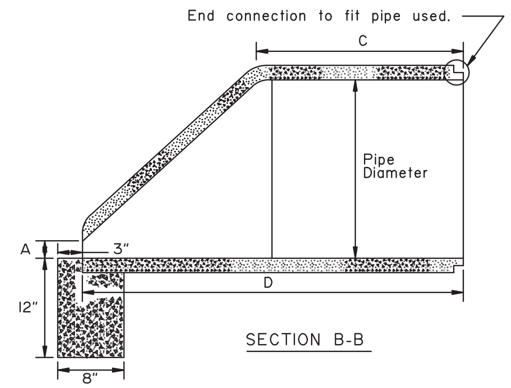
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V6-SS	V16-SS

D-06.10



PLAN

ROUND AND PIPE ARCH

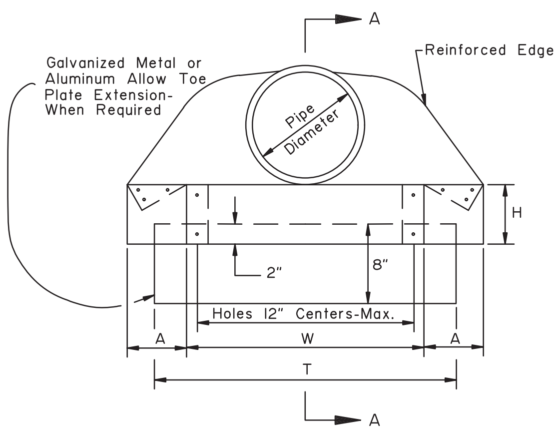


SECTION B-B

MINIMUM DIMENSIONS					
Pipe Diameter	A	B	C	D	E
12"	4"	1 3/4"	24"	46"	24"
18"	9"	2"	25"	50"	36"
24"	9 1/2"	2 1/2"	30"	72"	48"
30"	12"	3"	20"	73"	60"
36"	15"	3 3/8"	35"	97"	72"
42"	21"	3 3/4"	35"	98"	78"
48"	24"	4 1/4"	26"	98"	84"
54"	27"	4 5/8"	33"	99"	82"

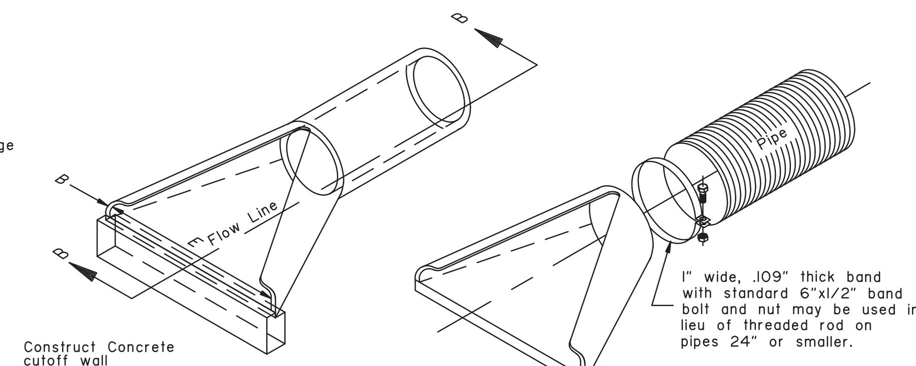
ROUND PIPE

Pipe Diam. Inches	Thickness For Aluminum	Thk. for Galv. Metal	A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.	Skirt	Approx. Slope
			Dimension Inches							
12"	0.060	0.064	6"	6"	6"	21"	24"	34"	1 Pc.	2 1/2
15"	0.060	0.064	7"	8"	6"	26"	30"	40"	1 Pc.	2 1/2
18"	0.060	0.064	8"	10"	6"	31"	36"	46"	1 Pc.	2 1/2
21"	0.060	0.064	9"	12"	6"	36"	42"	52"	1 Pc.	2 1/2
24"	0.075	0.064	10"	13"	6"	41"	48"	58"	1 Pc.	2 1/2
30"	0.075	0.079	12"	16"	8"	51"	60"	70"	1 Pc.	2 1/2
36"	0.105	0.079	14"	19"	9"	60"	72"	94"	2 Pc.	2 1/2
42"	0.105	0.109	16"	22"	11"	69"	84"	106"	2 Pc.	2 1/2
48"	0.105	0.109	18"	27"	12"	78"	90"	112"	2 Pc.	2 1/4
54"	0.105	0.109	18"	30"	12"	84"	102"	122"	2 Pc.	2 1/4
60"	0.135	0.109	18"	33"	12"	87"	114"	134"	3 Pc.	2 1/4
66"	0.135	0.109	18"	36"	12"	87"	120"	142"	3 Pc.	2 1/4
72"	0.135	0.109	18"	39"	12"	87"	126"	146"	3 Pc.	2 1/4
78"	— —	0.109	18"	42"	12"	87"	132"	152"	3 Pc.	1 1/4
84"	— —	0.109	18"	45"	12"	87"	138"	158"	3 Pc.	1 1/6



ELEVATION

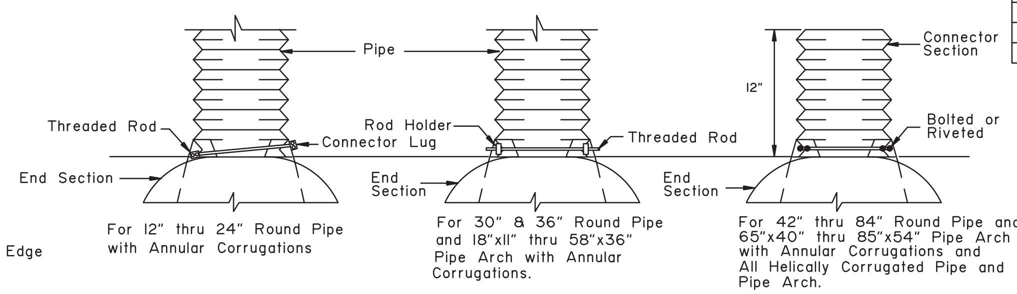
ROUND PIPE



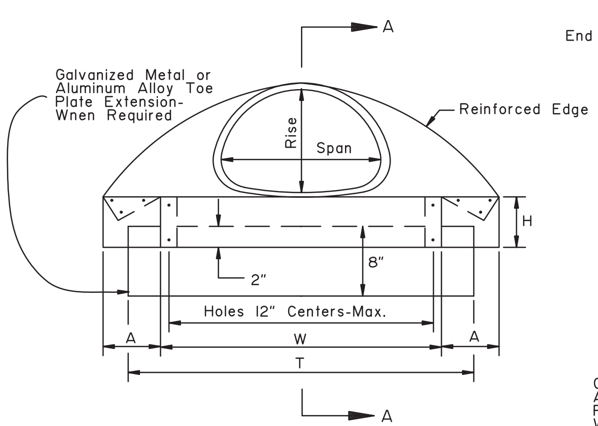
PRECAST CONCRETE END SECTION

PIPE-ARCH

Span	Rise	Thickness for Aluminum	Thk. for Galv. Metal	A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.	Skirt	Approx. Slope
Pipe-Arch Dimension Inches				Dimension Inches							
17"	13"	0.060	0.064	7"	9"	6"	19"	30"	40"	1 Pc.	2 1/2
21"	15"	0.060	0.064	7"	10"	6"	23"	36"	46"	1 Pc.	2 1/2
24"	18"	0.060	0.064	8"	12"	6"	28"	42"	52"	1 Pc.	2 1/2
28"	20"	0.075	0.064	9"	14"	6"	32"	48"	58"	1 Pc.	2 1/2
35"	24"	0.075	0.079	10"	16"	6"	39"	60"	70"	1 Pc.	2 1/2
42"	29"	0.105	0.079	12"	18"	8"	46"	75"	85"	1 Pc.	2 1/2
49"	33"	0.105	0.109	13"	21"	9"	53"	85"	103"	2 Pc.	2 1/2
57"	38"	0.105	0.109	18"	26"	12"	63"	90"	114"	2 Pc.	2 1/2
64"	43"	0.105	0.109	18"	30"	12"	70"	102"	130"	2 Pc.	2 1/4
71"	47"	0.135	0.109	18"	33"	12"	77"	114"	144"	3 Pc.	2 1/4
77"	52"	0.135	0.109	18"	36"	12"	84"	120"	158"	3 Pc.	2 1/4
83"	57"	0.135	0.109	18"	39"	12"	90"	126"	170"	3 Pc.	2 1/4

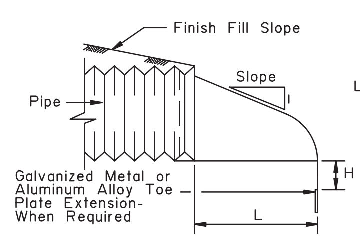


DESIGN A

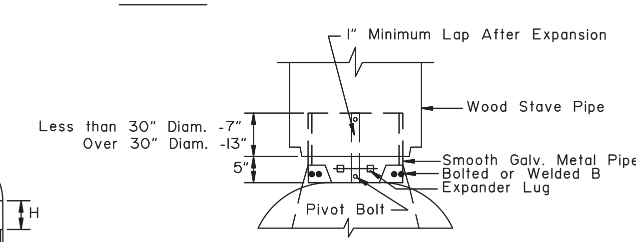


ELEVATION

PIPE ARCH



SECTION A-A



DESIGN B

METAL END SECTION CONNECTED TO WOOD STAVE PIPE

GENERAL NOTES:

1. Toe plate extensions will be required only when provided for on the plans. When required, the toe plate extensions shall be punched with holes to match those in lip of skirt and fastened with 3/8 inch or larger galvanized nuts and bolts and shall be the same gage as the end section.
2. Galvanized Metal or Aluminum Alloy End Sections may be used on Wood Stave and Plastic Pipe.
3. All 3 piece bodies shall have 12 gage sides and 10 gage center panels. Multiple panel bodies shall have lap seams which are to be tightly joined by 3/8" galvanized rivets or bolts.

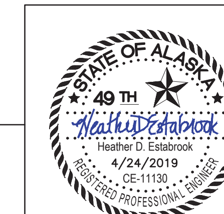
REVISIONS		
Date	Description	By
3/1/83	Arch Dimensions	WJF/HK
8/10/00	Note 2	DFD

Sheet 1 of 3

State of Alaska
Department of Transportation
& Public Facilities

CULVERT END SECTIONS

D-06.10



CULVERT END SECTIONS

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 1C\1C-C\Details\d0610a_11147.01FB-V6-SS Wed, Apr/24/19 04:21pm

NO.	DATE	REVISION

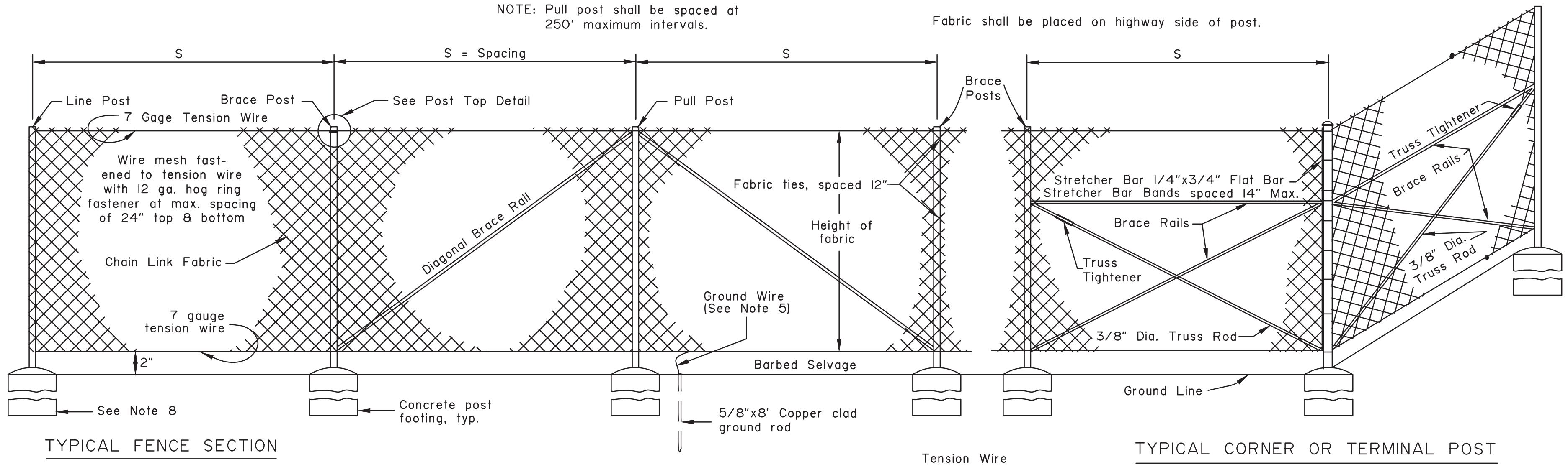
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V7-SS	V16-SS

F-01.03

SHEET | of |

NOTE: Pull post shall be spaced at 250' maximum intervals.

Fabric shall be placed on highway side of post.



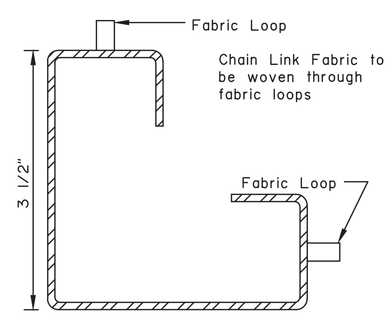
TYPICAL FENCE SECTION

TYPICAL PULL POST

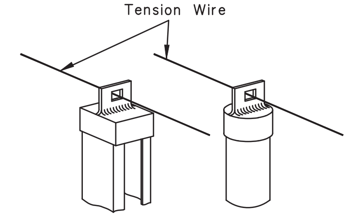
TYPICAL CORNER OR TERMINAL POST

GENERAL NOTES:

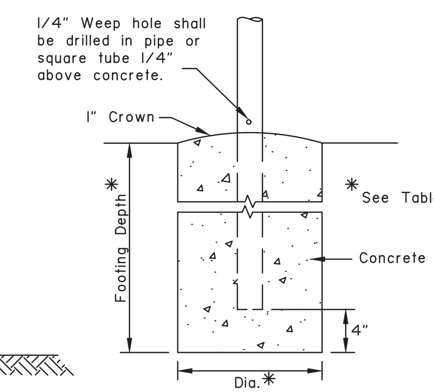
1. Use equal pole spacing (S). Maximum pole spacing is 10 feet unless directed otherwise by the Engineer.
2. Securely fasten post tops to post.
3. Securely fasten brace rails and truss rods to post with brace bands.
4. Provide truss rods with a tensioning adjusting mechanism.
5. Attach ground wire to fence fabric with a split bolt.
6. Stretch fabric to a smooth uniform appearance.
7. Details shown indicate general design and dimensions may vary among manufacturers.
8. Set line, pull, corner, and terminal posts in concrete footings unless in muskeg or shown otherwise in the plans.



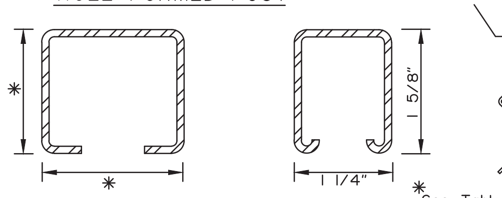
ROLL FORMED POST



LINE POST TOPS

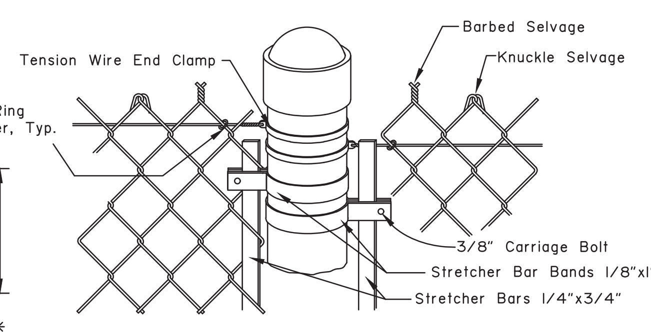


CONCRETE POST FOOTING

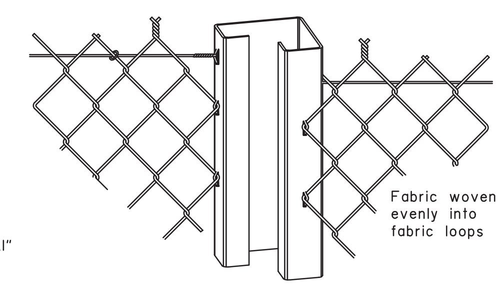


C POST

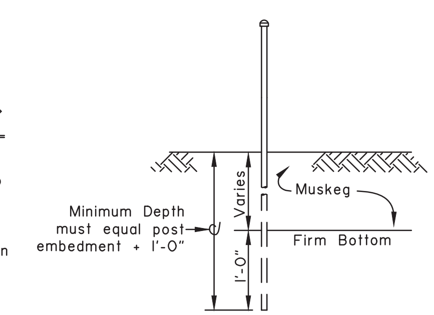
ROLL FORMED BRACE



PIPE STYLE POST TOP

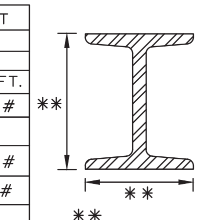


ROLL FORMED POST TOP



POST SETTING IN MUSKEG AREAS

FABRIC HEIGHT	POST														TOP OR BRACE RAIL						ALTERNATE POST	
	END-CORNER-PULL								LINE-BRACE												LINE-BRACE	
	PIPE		SQUARE TUBE		ROLL FORMED		FOOTING		PIPE		C POST		FOOTING		PIPE		ROLL FORMED		H POST		H POST	
	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.	DEPTH	DIA.	SIZE	WT/FT.	SIZE	WT/FT.	DEPTH	DIA	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.
3'	2"	3.65#	2" x 2"	4.31#	3 1/2"x3 1/2"	4.84#	40"	10"	1 1/2"	2.72#	1 7/8"x1 5/8"	2.28#	28"	10"	1 1/4"	2.27#	1 5/8"	1.35#	1 1/2"x 1 5/16"	2.27#	1 7/8"x1 5/8"	2.72#
4'	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
5'	2"	3.65#	2" x 2"	4.31#	3 1/2"x3 1/2"	4.84#	40"	10"	1 1/2"	2.72#	1 7/8"x1 5/8"	2.28#	28"	10"	"	"	"	"	"	"	1 7/8"x1 5/8"	2.72#
6'	2 1/2"	5.79#	2 1/2"x2 1/2"	5.59#	3 1/2"x3 1/2"	4.84#	48"	15"	2"	3.65#	2 1/4"x1 45/64"	2.64#	40"	12"	"	"	"	"	"	"	2 1/4"x2"	4.1#
7'	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
8'	2 1/2"	5.79#	2 1/2"x2 1/2"	5.59#	3 1/2"x3 1/2"	4.84#	48"	15"	2"	3.65#	2 1/4"x1 45/64"	2.64#	40"	12"	"	"	"	"	"	"	2 1/4"x2"	4.1#



H POST

REVISIONS		
Date	Description	By
2/01/15	8' Ground rod fix	LRG
1/16/17	Remove concrete class	LRG

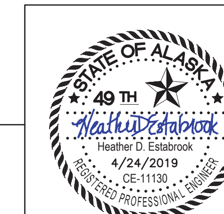
State of Alaska DOT&PF
3132 Channel Dr., Juneau, AK
Phone: (907) 465-2960

CHAIN LINK FENCE

F-01.03

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 1C\1C-C\Details\F0103_11147.01FB-V7-SS Wed, Apr/24/19 04:22pm

CHAIN LINK FENCE

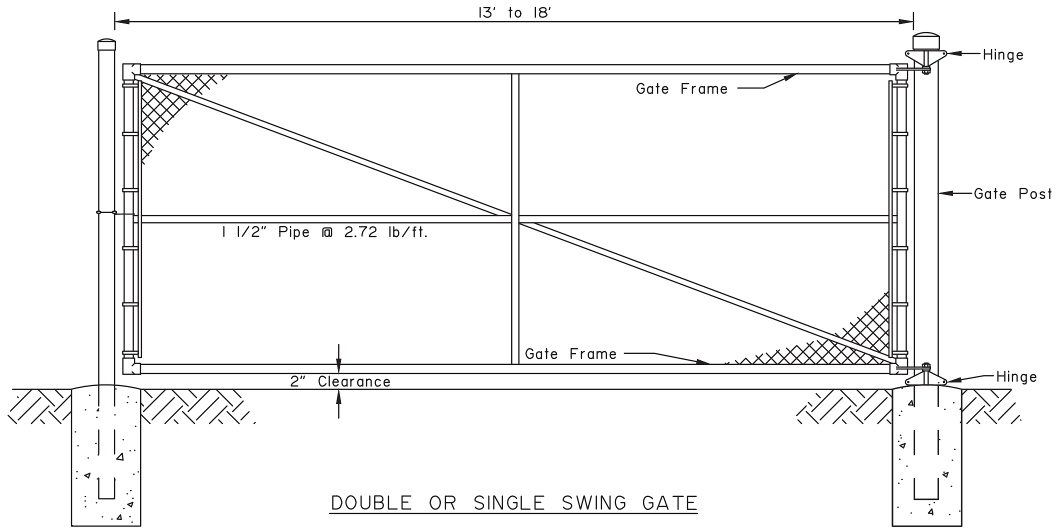


NO.	DATE	REVISION

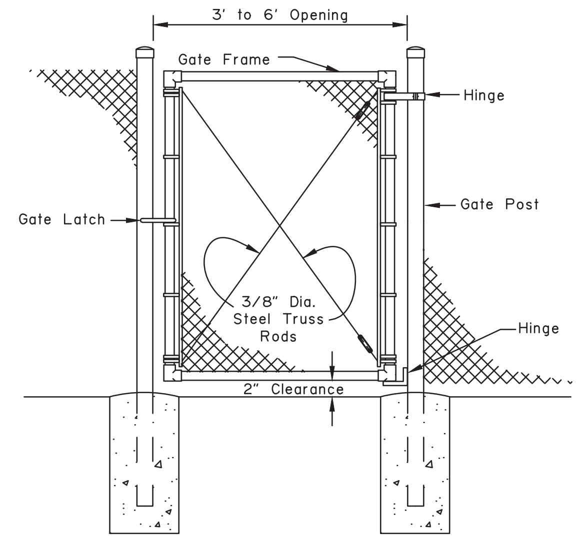
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V8-SS	V16-SS

F-03.02

SHEET | of |



DOUBLE OR SINGLE SWING GATE

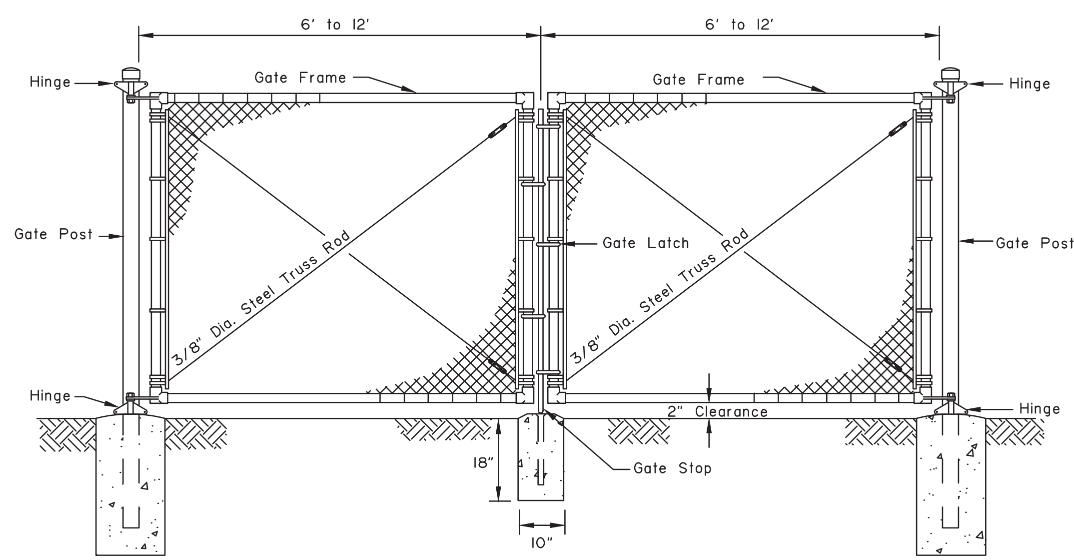


PEDESTRIAN GATE

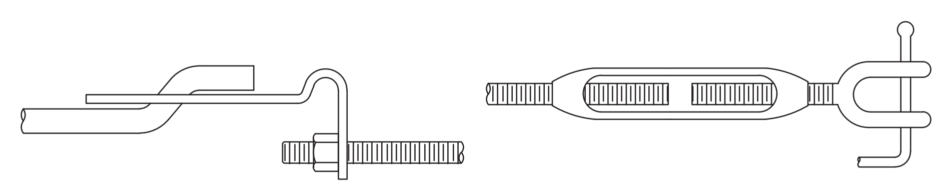
GENERAL NOTES:

1. Details shown are to indicate general design only. Dimensions may vary slightly among the manufacturers.
2. Gate fabric shall be of the same design and height of line fence fabric.
3. Gate fabric shall be furnished with knuckle selvage top and bottom.
4. Concrete footings shall be of the same depth as end posts with a diameter 1 1/2 times larger except as shown for gate stop.
5. Gate frames may be fabricated by welding or riveting and shall be braced to eliminate sagging. Hinges, latches and other gate appurtenances shall be of sufficient strength and design to assure easy trouble free operation.

Gate Fabric Height	Gate Opening		GATE POST						GATE FRAME			
	SINGLE GATE	DOUBLE GATE	ST'D PIPE		SQUARE TUBE		ROLL FORMED		ST'D PIPE		SQUARE TUBE	
			SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.
3' to 5'	3' to 6'	6' to 12'	2"	3.65#	2" x 2"	4.31 #	3 1/2"x3 1/2"	5.14 #	1 1/2"	2.72#	2" x 2"	4.31 #
"	7' to 12'	13' to 24'	2 1/2"	5.79#	2 1/2"x2 1/2"	5.59#	" "	"	"	"	" "	"
"	13' to 18'	25' to 36'	"	"	" "	"	" "	"	"	"	" "	"
6' to 8'	3' to 6'	6' to 12'	2 1/2"	5.79#	2 1/2"x2 1/2"	5.59#	3 1/2"x3 1/2"	5.14 #	1 1/2"	2.72#	" "	"
"	7' to 12'	13' to 24'	3 1/2"	9.11 #	3 1/2"x3 1/2"	8.14 #	———	———	2"	3.65#	" "	"
"	13' to 18'	25' to 36'	6"	18.97#	6" x 6"	18.82#	———	———	"	"	2" x 2"	4.31 #



DOUBLE SWING GATE



TYPICAL TRUSS ROD TIGHTENERS

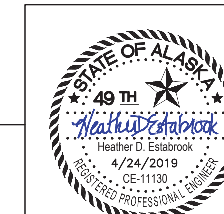
REVISIONS		
Date	Description	By
3/1/83	Revised General Notes	WF/HK
1/16/17	Revised concrete	LRG

State of Alaska DOT&PF
3132 Channel Dr., Juneau, AK
Phone: (907) 465-2960

CHAIN LINK FENCE GATE

F-03.02

CHAIN LINK FENCE GATE



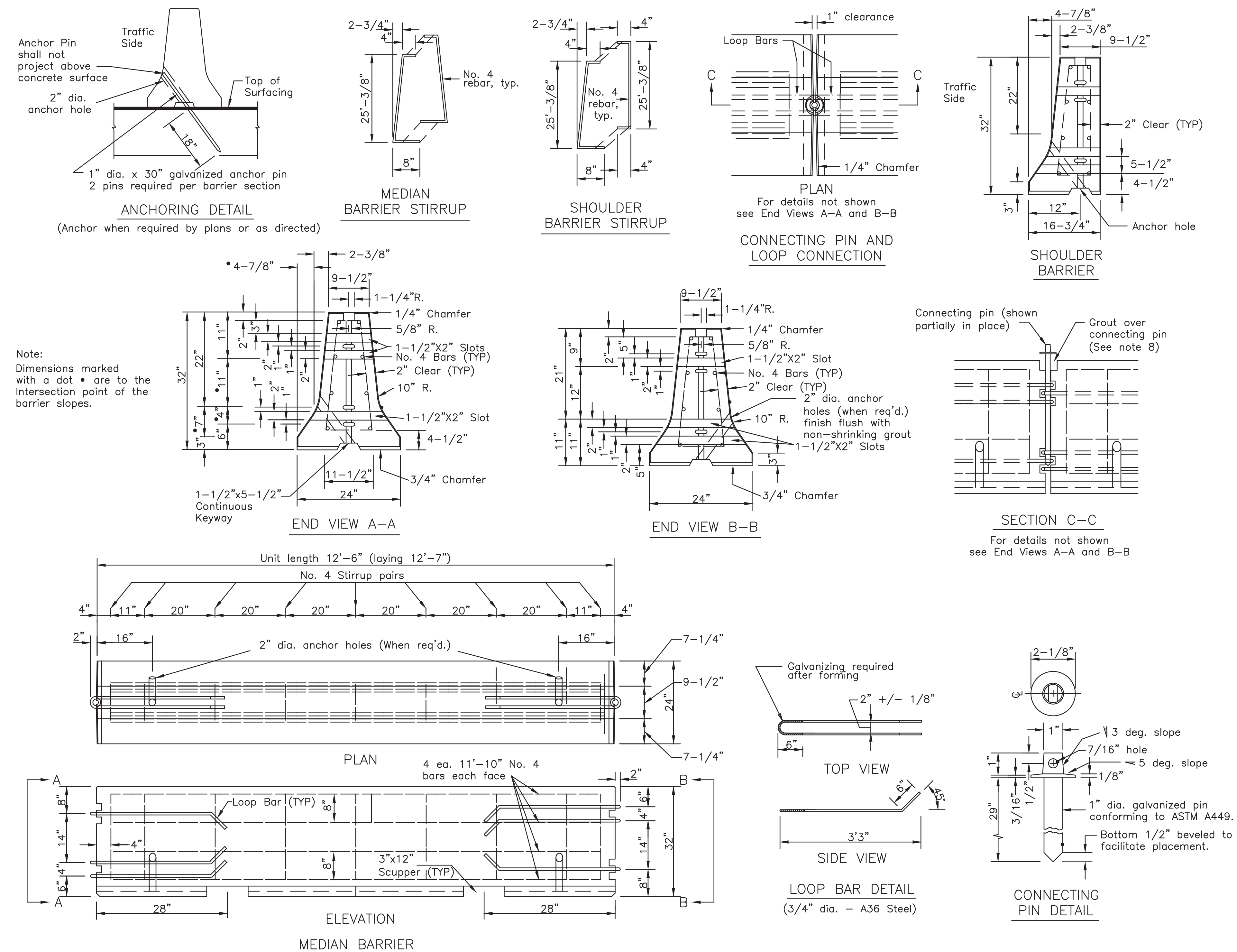
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\Details\F0302_11147.01FB-V8-SS Wed, Apr/24/19 04:23pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V9-SS	V16-SS

G-46.12

SHEET 1 of 2



GENERAL NOTES

1. Barriers may be used for temporary and permanent applications.
2. Provide 36" unobstructed smooth deflection area behind barrier for unanchored applications. Provide 12" unobstructed smooth deflection area behind barrier for anchored applications.
3. When anchored, install anchor pins on the side facing traffic. Precast barrier used as permanent median barrier in medians less than 8' in width shall be anchored to the roadway. When anchored in medians, install anchor pins on both sides of the barrier.
4. Provide 2" clearance between all metal reinforcement and the nearest face of concrete unless otherwise shown.
5. Normal use of precast barrier units is restricted to curvatures with radii greater than 770'.
6. Use narrow base shoulder barrier only at locations with full height backfill or equivalent structural support placed behind barrier.
7. When scuppers are not required plug them with a minimum 2" of grout.
8. Concrete grout for grouting over pins, pinning holes or grouting of scuppers shall be a non-shrinking grout, weak in strength and of thick consistency.
9. This precast concrete barrier is NCHRP 350 TL-3 approved.

REVISIONS		
Date	Description	By
4/28/10	Correct dims, Note 1	KJS
1/16/17	Minor corrections	LRG

State of Alaska DOT&PF
3132 Channel Dr., Juneau, AK
Phone: (907) 465-2960

PRECAST CONCRETE "F" SHAPE BARRIER

G-46.12

PRECAST CONCRETE "F" SHAPE BARRIER

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

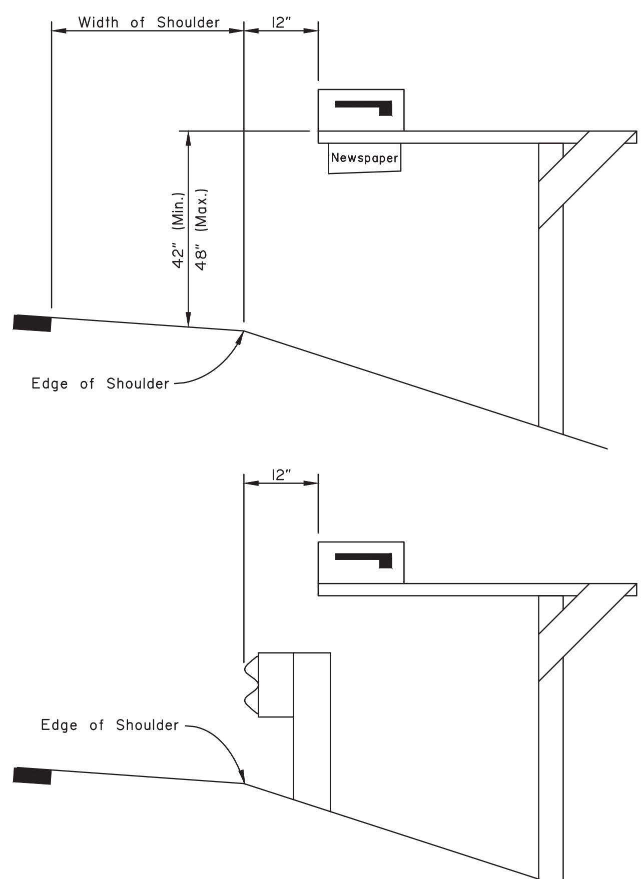
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\Details\g4612p1_11147.01FB-V9-SS Wed, Apr/24/19 04:24pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V10-SS	V16-SS

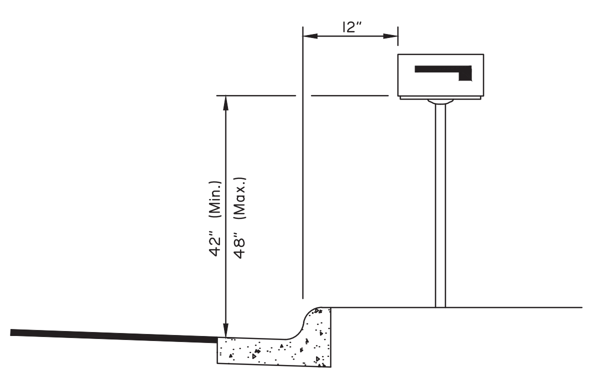
M-20.14

SHEET 1 of 1



WOOD POST (RURAL) INSTALLATION

Single or Double Box



METAL POST (URBAN) INSTALLATION

Single or Double Box

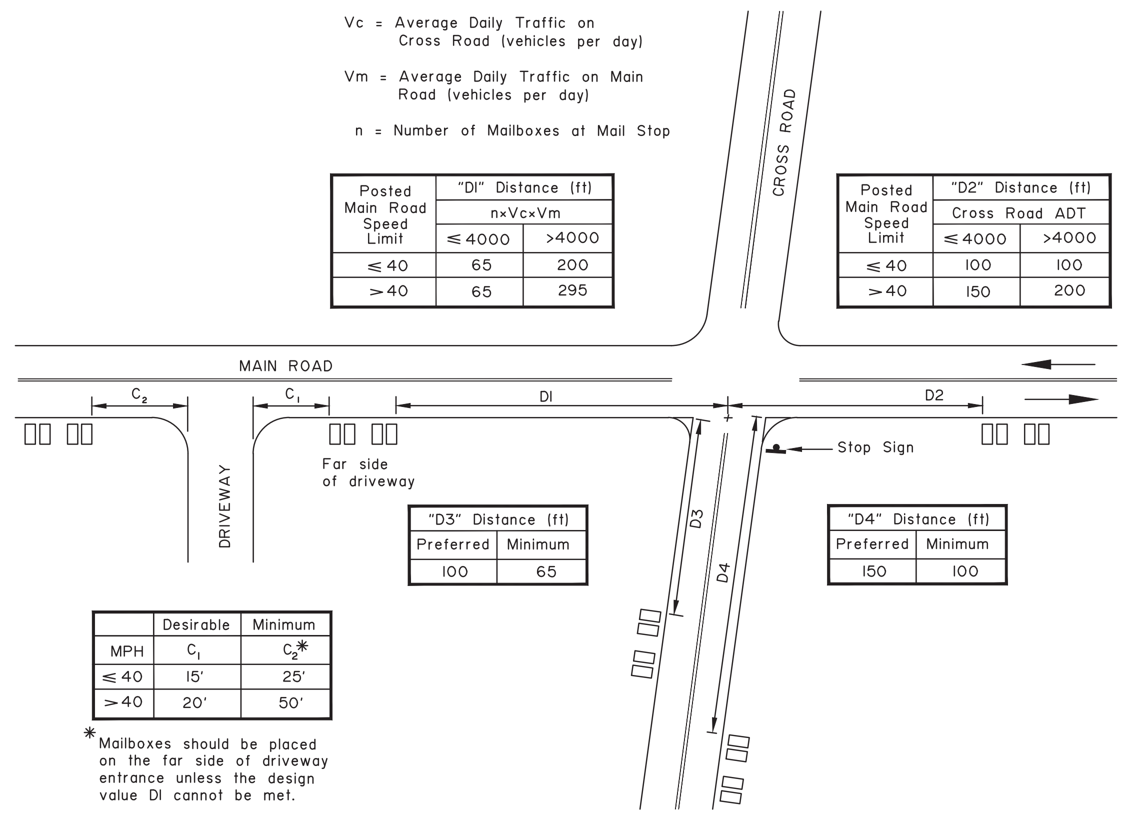
Vc = Average Daily Traffic on Cross Road (vehicles per day)

Vm = Average Daily Traffic on Main Road (vehicles per day)

n = Number of Mailboxes at Mail Stop

Posted Main Road Speed Limit	"D1" Distance (ft)	
	n×Vc×Vm	
	≤4000	>4000
≤40	65	200
>40	65	295

Posted Main Road Speed Limit	"D2" Distance (ft)	
	Cross Road ADT	
	≤4000	>4000
≤40	100	100
>40	150	200



"D3" Distance (ft)	
Preferred	Minimum
100	65

"D4" Distance (ft)	
Preferred	Minimum
150	100

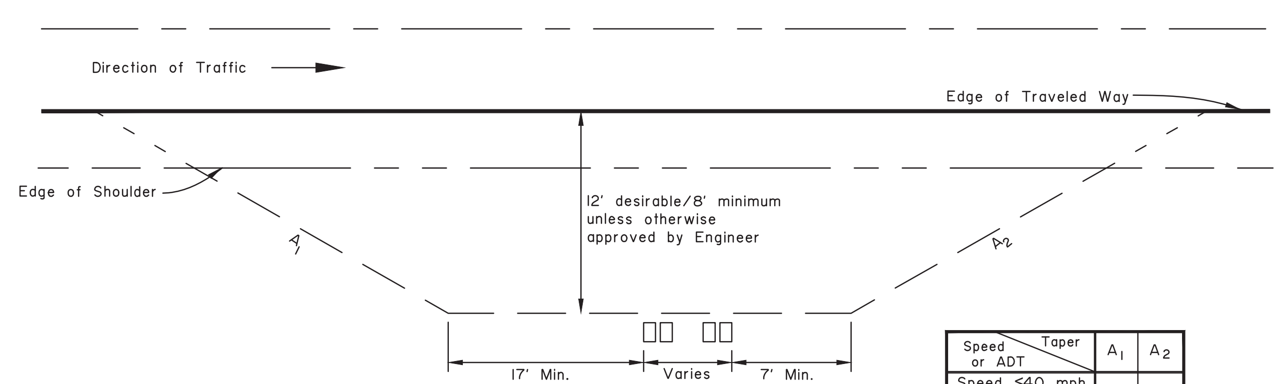
	Desirable	Minimum
MPH	C_1	C_2*
≤40	15'	25'
>40	20'	50'

*Mailboxes should be placed on the far side of driveway entrance unless the design value D1 cannot be met.

MAILBOX LOCATION AT INTERSECTIONS AND DRIVEWAYS

GENERAL NOTES:

1. Install mailboxes conforming to U.S. Postal Service requirements.
2. Mailbox supports shall not present a rigid, unyielding impact resistant hazard to road traffic, but shall be flexible and yielding to vehicular impact. Install crashworthy supports in accordance with Standard Drawing M-23.
3. Installation shall be on the right side of roadway in the direction of mail carrier travel with the exception of one-way streets where they may be placed on either side.
4. Locate mailboxes to minimize dangers to road traffic, carriers and postal recipients.
5. Provide a minimum shoulder width of 8' unless otherwise approved by Engineer. Install single and double mailbox supports separated by at least 3', and desirably 4', from each other. More than two boxes on a single support is allowable only as shown on M-23.
6. Newspaper receptacles shall conform to the same setback and support regulations as mailboxes. Where newspaper receptacles and mailboxes are to be mounted together, the newspaper receptacle may be mounted beneath the mailbox or on the side of the mailbox support opposite the reflecting marker.



TURNOUTS FOR GROUPED BOXES

Speed or ADT \ Taper	A_1	A_2
Speed ≤40 mph and ADT ≤400	4:1	2.5:1
Speed >40 mph or ADT >400	20:1	12:1

TURNOUT TAPERS

REVISIONS		
Date	Description	By
4/28/10	Tables, details & notes	KJS
1/16/17	Revise d/w distances	LRG

State of Alaska DOT&PF
3132 Channel Dr., Juneau, AK
Phone: (907) 465-2960

MAILBOX LOCATION

M-20.14

MAILBOX LOCATION

STATE OF ALASKA 49TH
Heather D. Estabrook
4/24/2019
CE-11130
REGISTERED PROFESSIONAL ENGINEER

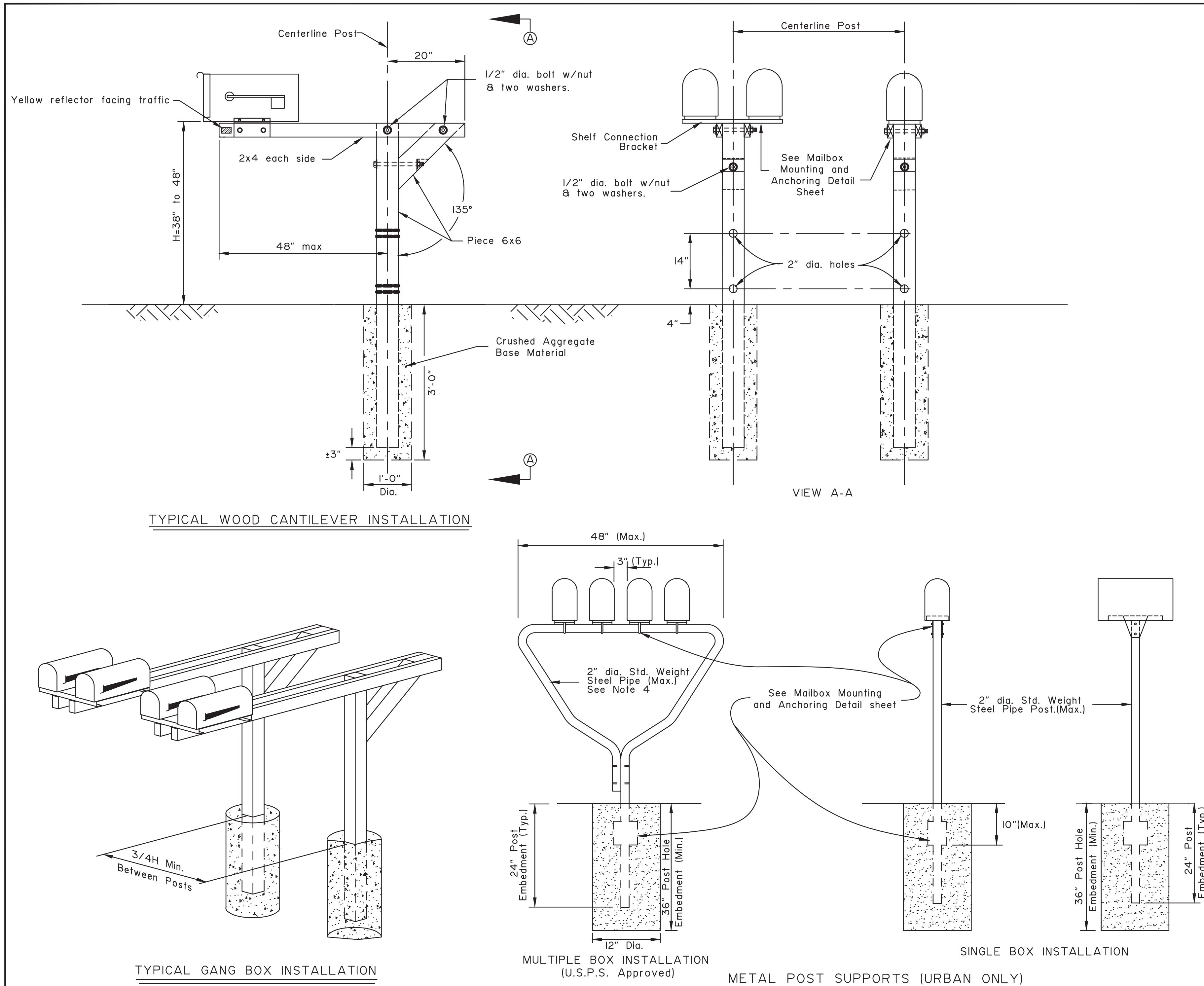
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 2700 GAMBELL STREET, SUITE 500, ANCHORAGE, AK 99503, (907)743-3200
P:\2011\11147.01FB\C\Segment Improvement Packages\Segment 1C\1C-C\Details\m2014_11147.01FB-V10-SS Wed, Apr/24/19 04:25pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V11-SS	V16-SS

M-23.12

SHEET 1 of 2



GENERAL NOTES:

1. See Standard Drawing, 'Mailbox Location', for locating posts and boxes along roadway.
2. Posts shall be 6"x6" Treated Wood Post S4S or 2" (Max.) Standard Weight Steel Pipe.
3. Each support structure shall not accomodate more than two mailboxes unless the support structure conforms to the requirements of the U.S. Postal Service and is approved by the Engineer.
4. Other steel or aluminum structural sections may be used except, the stiffness properties equivalent to the 2" dia. standard weight steel pipe shall not be exceeded.
5. Reflectors shall have a minimum area of 4.5 sq. in.

REVISIONS		
Date	Description	By
9/15/91	Mod w/USPS specs.	Gdo
4/1/93	Revise Embedment Depth	Gdo
1/1/96	Del. Specs./Min. Height	Gdo

State of Alaska
Department of Transportation & Public Facilities

MAILBOX INSTALLATION

M-23.12

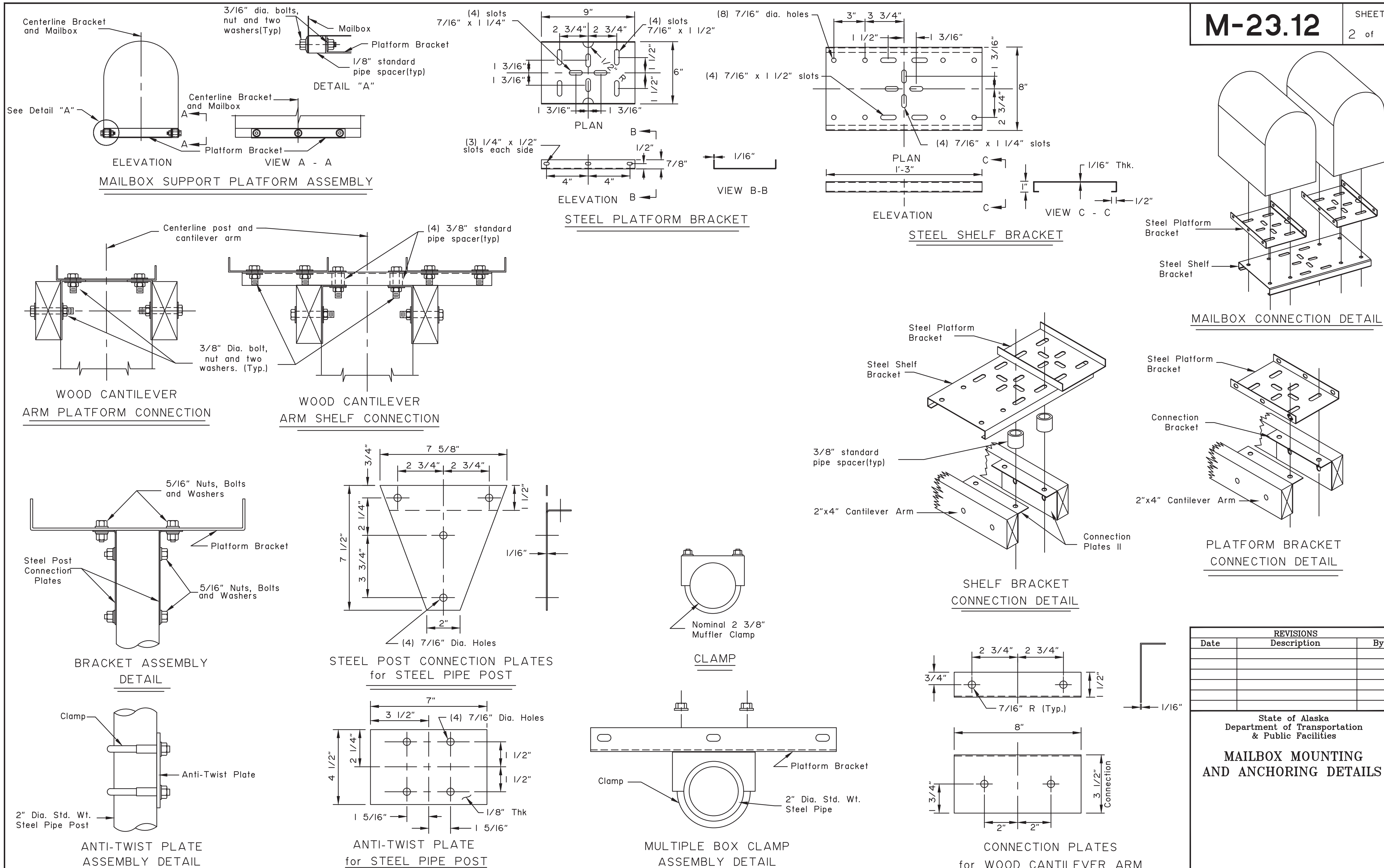
STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

MAILBOX INSTALLATION

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 1C\1C-C\Details\m2312p1_11147.01FB-V11-SS Wed, Apr/24/19 04:26pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0617012/NFHWY00270	2019	V12-SS	V16-SS



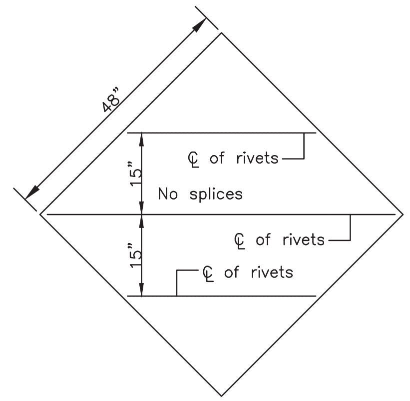
MAILBOX MOUNTING AND ANCHORING DETAILS

STATE OF ALASKA 49TH Heather D. Estabrook 4/24/2019 CE-11130 REGISTERED PROFESSIONAL ENGINEER

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 1C\1C-C\Details\m2312p2_11147.01FB-V12-SS Wed, Apr/24/19 04:27pm

S-00.11

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

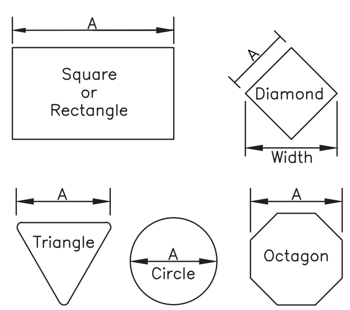


SIGN POST SPACING NOTES:

1. Install sign support in accordance with the table above, unless otherwise required by plans or specifications.
2. Exceptions:
   a. Use one post for all E5-1 gore signs, regardless of width.
   b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See Standard Drawing S-30 for the sizes of wood posts and P.S.T.s that may be used within 7'. See Manufacturer's documentation for breakaway couplings and tubes that may be used within 7'.
4. See Standard Drawing S-31 for frangible couplings, hinges, and foundations for tube and W-shape sign supports.

GENERAL NOTES

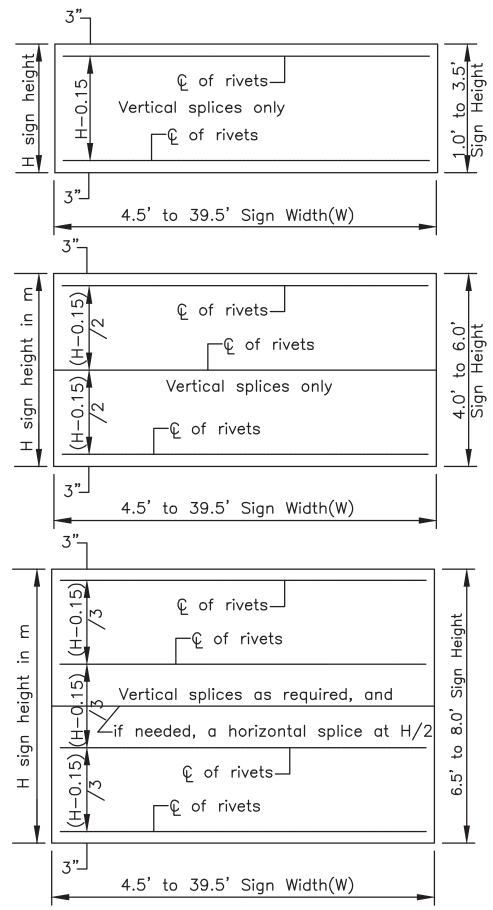
1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer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



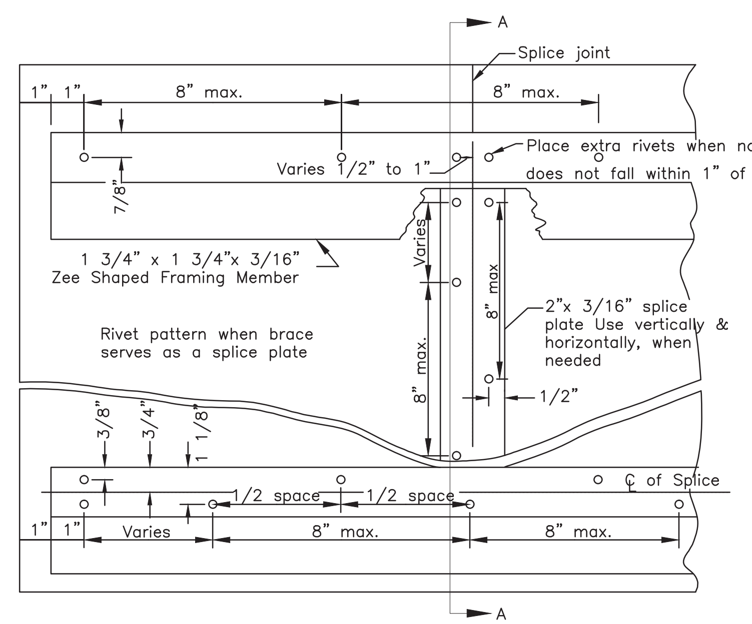
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

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

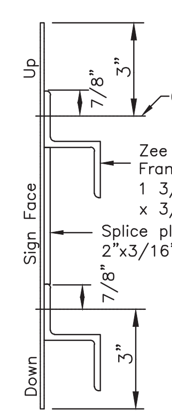
LIGHT SIGNS



WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

REVISIONS		
Date	Description	By
4/28/10	Delete pipe, rev notes	KJS

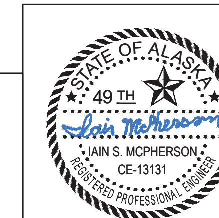
Sheet 1 of 1

State of Alaska
Department of Transportation & Public Facilities

SIGN FRAMING AND POST SPACING

S-00.11

STANDARD DRAWING
C-00.11



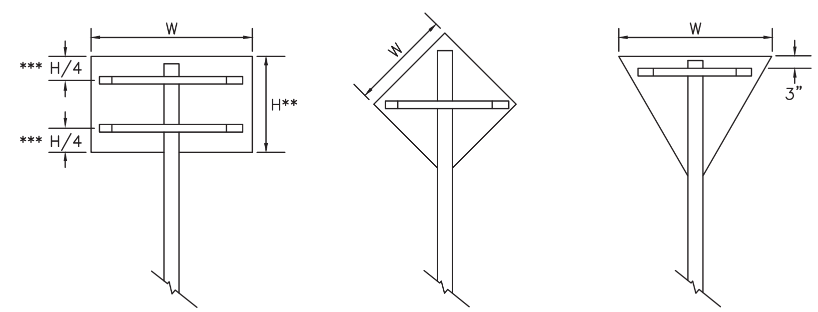
4/26/2019

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-SIDES\Production\06173_V15_STD DWG_C0011-V13 Fri, Apr/26/19 04:42pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	V14-SS	V16-SS

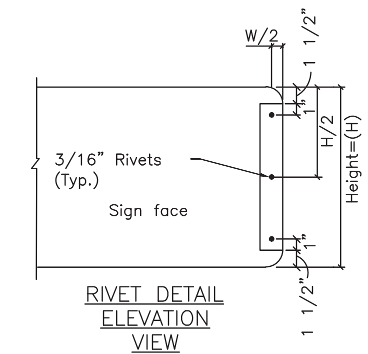
S-01.01



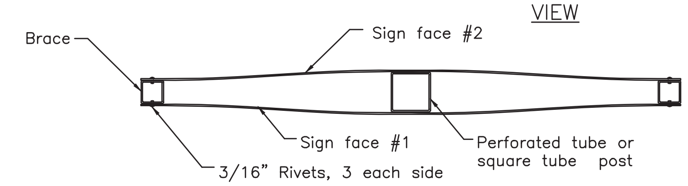
*** Use one brace when H ≤ 18"
Use two braces when 18"< H < 48"
Use three braces when H ≥ 48"

** Position of brace may be varied to match Predrilled mounting holes in panel

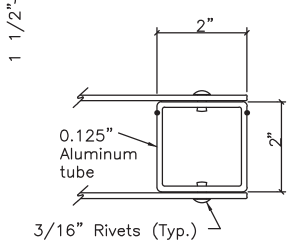
SIGN BRACING PLACEMENT



RIVET DETAIL ELEVATION VIEW

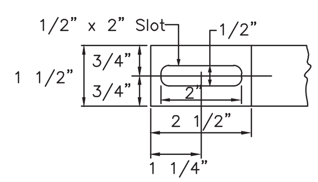


PLAN VIEW

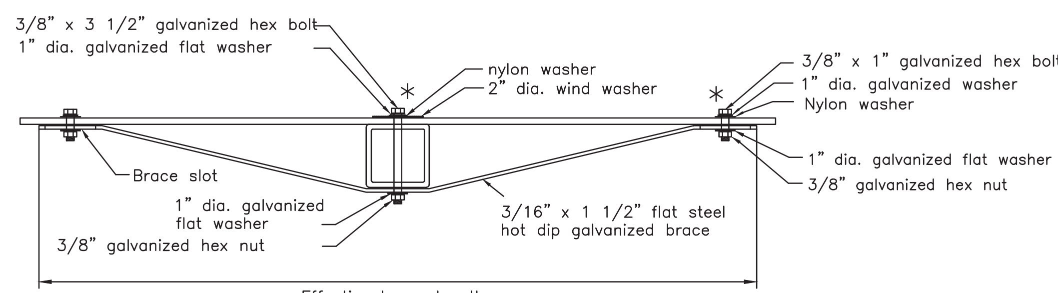


END BRACE DETAIL

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



DETAIL OF BRACE SLOT
Elevation view



TUBE POST SIGN BRACING
Plan view

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

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

< 30" No bracing required and use square tube

DRAWING NOT TO SCALE

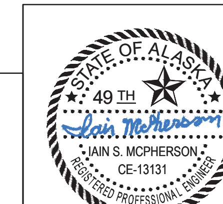
REVISIONS		
Date	Description	By
1/16/17	Bolt size & type	LRG

State of Alaska DOT&PF

BRACING FOR SIGNS MOUNTED ON SINGLE POST

S-01.01

STANDARD DRAWING
C-01.01



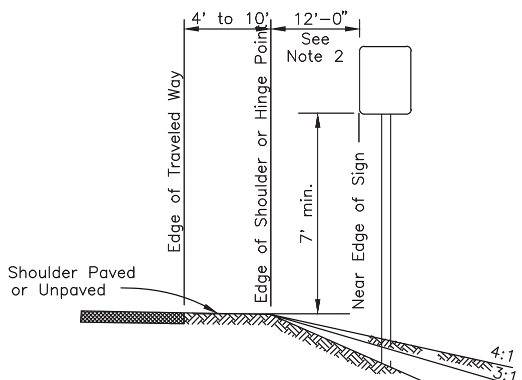
4/26/2019

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-SIDES\Production\06173_V16_STD DWG_C0101-V14 Fri, Apr/26/19 04:42pm

NO.	DATE	REVISION

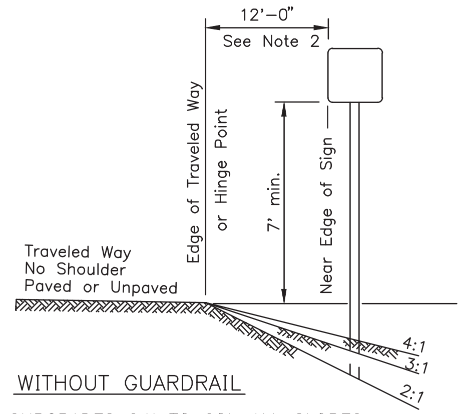
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	06177003/Z632130000	2019	V15-SS	V16-SS

S-05.01



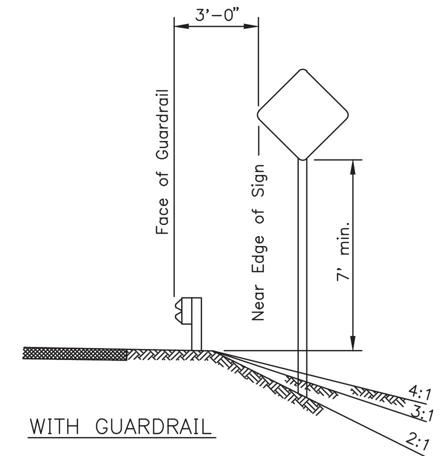
WITHOUT GUARDRAIL

SUBGRADES OVER 28', ALL SLOPES



WITHOUT GUARDRAIL

SUBGRADES 24' TO 28', ALL SLOPES

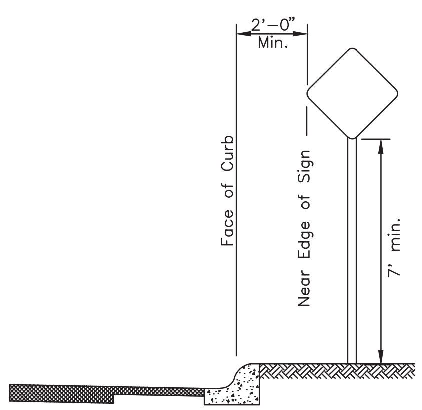


WITH GUARDRAIL

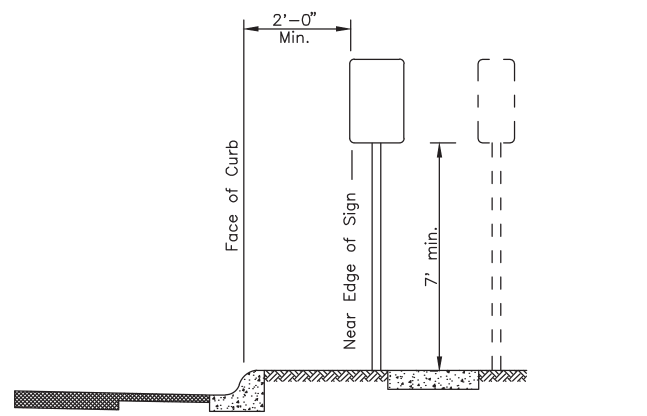
ALL SUBGRADES, ALL SLOPES

GENERAL NOTES

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

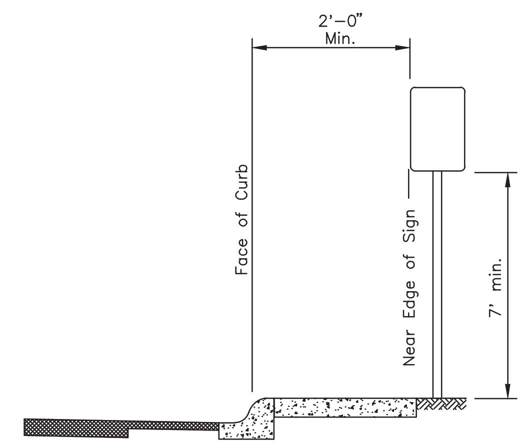


CURB WITHOUT SIDEWALK

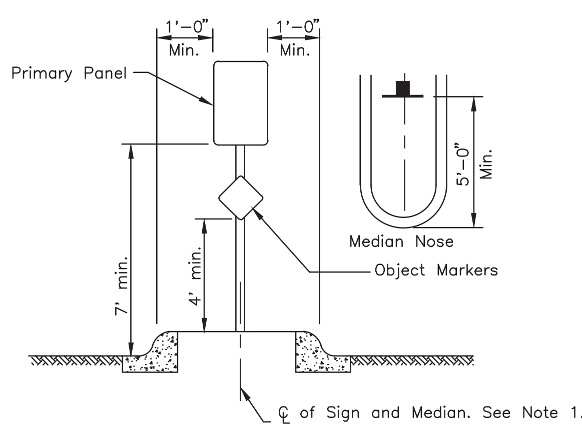


CURB WITH PARKWAY AND SIDEWALK

(If R/W width permits, signs should be placed behind sidewalk.)

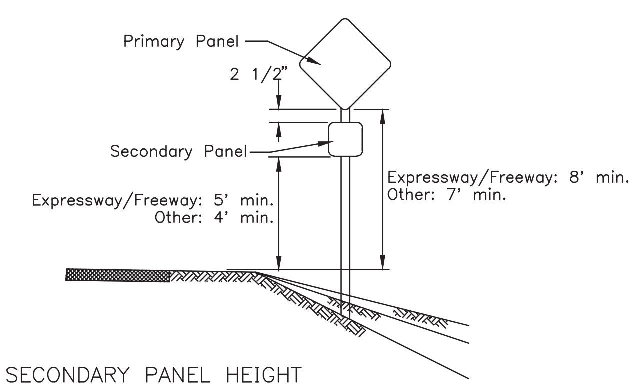


CURB WITH SIDEWALK WITHOUT PARKWAY



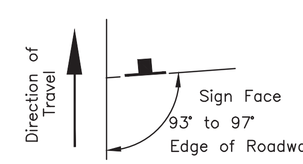
RAISED MEDIANS

Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT

ALL TWO PANEL MOUNTING



SIGN POSITIONING

REVISIONS		
Date	Description	By
4/3/01	Revised Sign Heights	KJS

Sheet 1 of 1

State of Alaska
Department of Transportation
& Public Facilities

POST MOUNTED SIGN
OFFSET AND HEIGHT

S-05.01

STANDARD DRAWING
C-05.01

STATE OF ALASKA
49TH
IAIN S. MCPHERSON
CE-13131
REGISTERED PROFESSIONAL ENGINEER
4/26/2019

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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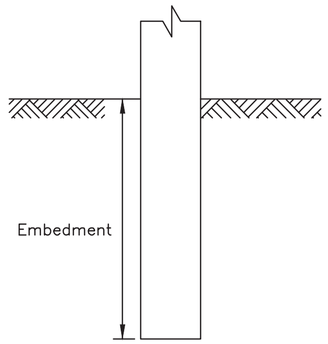
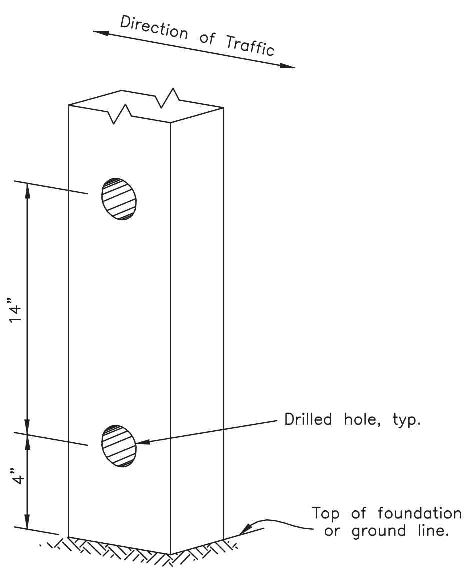
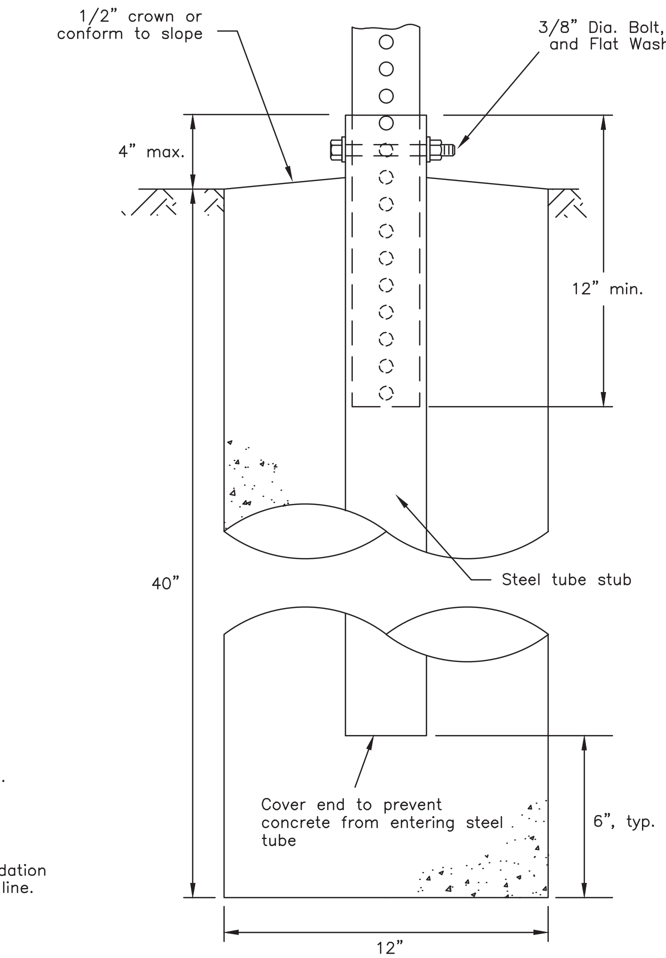
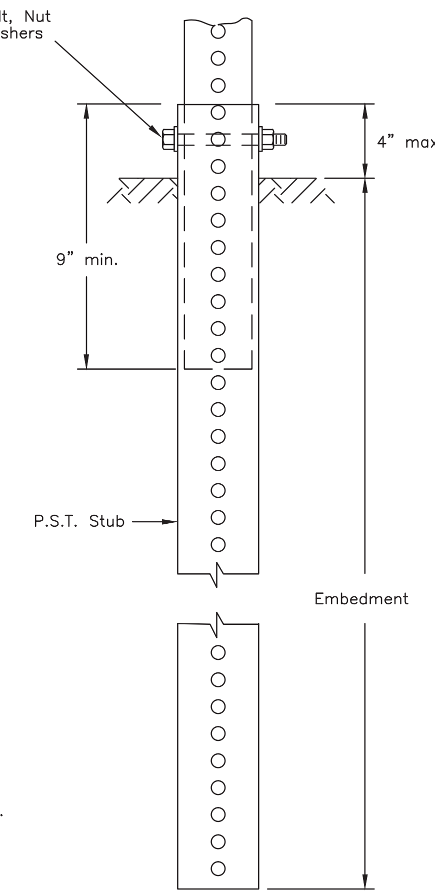
S-30.04







SLEEVE TYPE
CONCRETE FOUNDATION



SLEEVE TYPE *
SOIL EMBEDMENT

GENERAL NOTES:

1. Refer to Std Dwg S-00 for sign framing details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Do not install wood posts larger than 6"x8".
5. Do not use the supports on this drawing for multiple support signs if supports are separated by more than 7 feet.
6. Treat all field cuts and field drilled holes in wood posts in accordance with Section 730-2.04 of the Standard Specifications.

WOOD SIGN POSTS			
SIZE	HOLE DIA.	EMBEDMENT*	NO. OF POSTS WITHIN 7 Ft. PATH
4"x4"	NONE	36"	2
4"x6"	1 1/2"	36"	2
6"x6"	1 1/2"	40"	1
6"x8"	3"	48"	1

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

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

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

PERFORATED STEEL TUBE (PST) POSTS

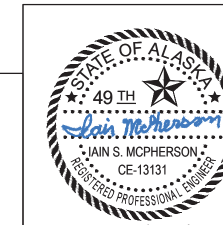
REVISIONS		
Date	Description	By
4/2/01	Revised PST table Added Note 3	KJS
2/12/02	Revised wood posts	KJS
1/16/17	Rev. note 1, et. al.	LRG

State of Alaska DOT&PF

LIGHT SIGN STRUCTURE POST EMBEDMENT

S-30.04

STANDARD DRAWING
C-30.04



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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