

# Tlingit-Haida Regional Housing Authority

## Wrangell Duplex

Wrangell, AK

PARTICIPANTS

**CLIENT:**  
TLINGIT-HAIDA REGIONAL HOUSING AUTHORITY  
5446 JENKINS DRIVE  
JUNEAU, AK 99801  
907.780.6868

**ELECTRICAL ENGINEER:**  
EIC ENGINEERING  
6927 OLD SEWARD HWY, SUITE 200  
ANCHORAGE, AK 99518  
907.348.9712

**ARCHITECT / CIVIL ENGINEER:**  
R&M ENGINEERING-KETCHIKAN, INC.  
7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
907.225.7917

**MECHANICAL ENGINEER:**  
SAM THORNTON MECHANICAL ENGINEERING  
PO BOX 7162  
KETCHIKAN, AK 99901  
907.220.7849

CODE REVIEW

**PROJECT LOCATION:**  
Lot 1A, Wrangell, AK

**IRC 2021 REVIEW**

**I. TYPE OF CONSTRUCTION (Chapter 6)**  
V-B  
SPRINKLED - No

**II. USE & OCCUPANCY CLASSIFICATION (Chapter 3)**  
R-3 Residential

**III. OCCUPANCY SEPARATIONS (Table 508.4)**  
1-Hour Separation Between Dwelling Units

**IV. BUILDING AREA (Table 503)**  
ALLOWED: UL SF/STORY, 3 STORIES  
PROPOSED: 2417 SF, 1 STORY

**V. BUILDING HEIGHT (Table 503)**  
ALLOWED: 40'  
PROPOSED: 16' - 5"

**VI. OCCUPANT LOAD (Table 1004.1.2)**  
RESIDENTIAL 2417 GROSS SF / 200 12

ZONING REVIEW

**CITY AND BOROUGH OF WRANGELL TITLE 20 REVIEW**

**LEGAL DESCRIPTION:** LOT 1A

**PARCEL NUMBER:** 02-032-700

**ZONING:** SFR, SINGLE FAMILY RESIDENTIAL

**LOT SIZE:** 18825 SF  
**COVERAGE:**  
MAXIMUM: 50%  
PROPOSED: 12.8%

**BUILDING GROSS AREA:** 2417 SF

**BUILDING HEIGHT:**  
MAXIMUM: 25' - 0"  
PROPOSED: 16' - 5"

**SETBACKS:**  
MINIMUM: FRONT 20'; BACK 20'; SIDEYARD 5'  
PROPOSED: See Site Plan

**PARKING:**  
MINIMUM: 2  
PROPOSED: 2+

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REVISIONS

Wrangell Duplex

STATUS:

PERMIT  
DOCUMENTS

DRAWN BY: NMG  
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DATE: 2.7.23  
PROJECT #: 222321

**R&M**  
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SHEET DESCRIPTION:

Cover Sheet

G100

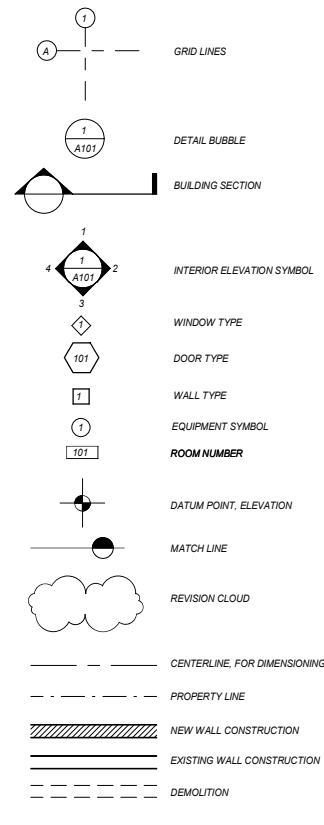
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## ARCHITECTURAL ABBREVIATIONS

AB	ANCHOR BOLT	F/F	FACE TO FACE	MACH	MACHINE	SHR	SHOWER
ABV	ABOVE	F F	FINISH FLOOR	MAN	MANUAL	SHT	SHEET(ING)
ACOUS	ACOUSTICAL	FA	FIRE ALARM	MATL	MATERIAL	SHV	SHELVES, SHELVING
ACT	ACOUSTICAL CEILING TILE	FBD	FIBERBOARD	MAX	MAXIMUM	SIM	SIMILAR
AD	AREA DRAIN	FD	FLOOR DRAIN	MEC	MEDICINE CABINET	SK	SINK
ADDL	ADDITIONAL	FDC	FIRE DEPARTMENT CONNECTION	MECH	MECHANICAL	SP	SPACE, SPACING
ADJ	ADJUSTABLE	FND	FOUNDATION	MEMB	MEMBRANE	SPEC	SPECIFICATION
AFB	ABOVE FINISHED FLOOR	FDV	FIRE DEPARTMENT VALVE	MET	METAL	SPKLR	SPEAKER
AFR	ABOVE FINISHED GRADE	FE	FIRE EXTINGUISHER	MFR	MANUFACTURER	SQ	SQUARE
AFS	ABOVE FINISHED SLAB	FEB	FIRE EXTINGUISHER BRACKET	MH	MANHOLE	SO	SQUARE INCH
AL	ALUMINUM	FEC	FIRE EXTINGUISHER CABINET	MIN	MINIMUM	ST	STANDARD
ALT	ALTERNATE	FHY	FIRE HYDRANT	MIR	MIRROR	STL	STANDARD
AP	ACCESS PANEL	FIN	FINISH	MISC	MISCELLANEOUS	STOR	STORAGE
APPROX	APPROXIMATE(LY)	FIN GR	FINISH GRADE	MOD	MODULAR	STRUCT	STRUCTURAL
ARCH	ARCHITECT(URAL)	FL	FLOOR(ING)	MTD	MOUNTED	SUSP CLG	SUSPENDED CEILING
ASPH	ASPHALT	FLASH	FLASHING	MTG	MOUNTING	SERV	SERVICE
AUTO	AUTOMATIC	FLEX	FLEXIBLE	MULL	MULLION	SYM	SYMBOL
		FLR SK	FLOOR SINK				
BD	BOARD	FLUOR	FLUORESCENT	(N)	NEW	T	TREAD
BKG	BACKING	FMR	FEMININE NAPKIN RECEPTACLE	N	NORTH	T&B	TOP & BOTTOM
BLDG	BUILDING	FNTD	FEMININE NAPKIN-TAMPON DISPENSER	NAT	NATURAL	T&G	TONQUE & GROOVE
BLKG	BLOCKING	FOC	FACE OF CONCRETE	NIC	NOT IN CONTRACT	TB	TOWEL BAR
BLW	BELOW	FOF	FACE OF FINISH	NO	NUMBER	TEL	TELEPHONE
BOT	BOTTOM	FOM	FACE OF MASONARY	NOM	NOMINAL	TEMP	TEMPORARY
BRKT	BRACKET	FOS	FACE OF STUD	NRC	NOISE REDUCTION COEFFICIENT	THK	THICK, THICKNESS
BSMT	BASEMENT	FRFP	FIREPROOFING	NTS	NOT TO SCALE	THRES	THRESHOLD
BTW	BETWEEN	FRZ	FREEZER	OA	OVERALL	THRU	THROUGH
BURS	BUILT UP ROOFING SYSTEM	FSB	FOLDING SHOWER BENCH	OC	ON CENTER	TOL	TOLERANCE
		FSTNR	FASTENER	OD	OUTSIDE DIAMETER	TYP	TYPICAL
CAB	CABINET	FT	FOOT, FEET	OCFI	OWNER FURNISHED-CONTRACTOR INSTALLED		
CB	CATCH BASIN	FTG	FOOTING	OH	OPPOSITE HAND		
CCTV	CLOSED CIRCUIT TELEVISION	FURN	FURNITURE	OPNG	OPENING	UC	UNDER COUNTER
CG	CORNER GUARD	FURR	FURNISHING	OPF	OPPOSITE	UNFIN	UNFINISHED
CEM	CEMENT	FUS	FOLDING UTILITY SEAT	OVHD	OVERHEAD	UR	URINAL
CER	CERAMIC	FUT	FUTURE			UTIL	UTILITY
CER TILE	CERAMIC TILE	FKTR	FKTURE	PBD	PARTICLE BOARD	VAC	VACUUM
CL	CENTERLINE			PCF	POUNDS PER CUBIC FOOT	VB	VINYL BASE
CLG	CEILING	GAUGE		PERF	PERFORATED	VCT	VINYL COMPOSITION TILE
CLJ	CONTROL JOINT	GALVZ	GALVANIZED	PERM	PERIMETER	VERT	VERTICAL
CLR	CLEAR	GB	GRAB BAR	PERP	PERPENDICULAR	VEST	VESTIBULE
CMU	CONCRETE MASONRY UNIT	GC	GENERAL CONTRACTOR	PH	PANIC HARDWARE	VF	VERIFY IN FIELD
CNTR	COUNTER	GL	GLASS	PL	PROPERTY LINE	VNR	VENER
CO	CASED OPENING	GL BLK	GLASS BLOCK	PLAM	PLASTIC LAMINATE	VOL	VOLUME
CONC	CONCRETE	GLULAM	GLUE LAMINATED	PLAT	PLAT FORM	WVC	VINYL WALL COVERING
CONF	CONFERENCE	GLZ	GLAZING	PLMBG	PLUMBING		
CONN	CONNECTION	GND	GROUND	PLF	POUNDS PER LINEAL FOOT		
CONSTR	CONSTRUCTION	GR	GRADE, GRADING	PLYWD	PLYWOOD		
CONT	CONTINUOUS	GRV	GRAVEL	PNL	PANEL		
CORR	CORROD	GVP BD	GYP SUM BOARD	PREFAB	PREFABRICATED		
CRPT	CARPET			PRKG	PARKING		
CSWK	CASEWORK	H	HIGH	PROJ	PROJECT		
CT	CARPET TILE	HB	HOSE BIB	PRCP	PROPERTY		
CUST	CUSTOM	HCC	HOLLOW CORE	PSF	POUNDS PER SQUARE FOOT		
CW	COLD WATER	HCP	HANDICAPPED	PSI	POUNDS PER SQUARE INCH		
		HD	HEAD	PT	POINT		
DBL	DOUBLE	HDBD	HARDBOARD	PTD	PAPER TOWEL DISPENSER		
DEMO	DEMOLISH	HDWE	HARDWARE	PTD/R	PAPER TOWEL DISPENSER W/ RECEPTACLE		
DET	DETAIL	HM	HOLLOW METAL	PTR	PAPER TOWEL RECEPTACLE		
DF	DRINKING FOUNTAIN	HNDRL	HANDRAIL	PVMT	PAVEMENT		
DIAM	DIAMETER	HR	HOUR	PWR	POWER		
DIAG	DIAGONAL	HT	HEIGHT	QT	QUARRY TILE		
DIFF	DIFFUSER	HVAC	HEATING, VENTILATION, AIR CONDITIONING, & COOLING	QTR	QUARTER		
DM	DIMENSION	HW	HOT WATER	QTY	QUANTITY		
DIM PT	DIMENSION POINT	ID	INSIDE DIAMETER				
DSP	DISPENSER	INCAID	INCANDESCENT				
DIST	DISTANCE	INCL	INCLUDING				
DLV	DOOR LOUVER	INFO	INFORMATION				
DMPF	DAMP PROOFING	INSUL	INSULATION				
DN	DOWN	INT	INTERIOR				
DR	DRAIN	JAN	JANITOR				
DS	DOWNSPOUT	JB	JUNCTION BOX				
DT	DRAIN TILE	JT	JOINT				
DWG	DRAWING						
DWGS	DRAWINGS	KIT	KITCHEN				
DWR	DRAWER	KPL	KICK PLATE				
		KS	KNEE SPACE				
(E)	EXISTING	LAB	LABORATORY				
E	EAST	LAM	LAMINATE				
EA	EACH	LAV	LAVATORY				
ECAB	ELECTRICAL CABINET	LB	LOAD				
EG	EDGE GUARD	LF	LINEAL FOOT				
EFS	EXTERIOR INSULATION FINISH SYSTEM	LG	LENGTH				
EL	ELEVATION	LH	LEFT HAND				
ELEC	ELECTRICAL	LIN	LINEAR				
ELEV	ELEVATION	LKR	LOCKER				
EMER	EMERGENCY	LT	LIGHT				
ENCL	ENCLOSURE	LT WT	LIGHT WEIGHT				
ENGR	ENGINEER	LTG	LIGHTING				
EO	ELECTRICAL OUTLET						
EQL SP	EQUALLY SPACED						
EQUIP	EQUIPMENT						
EQUIV	EQUIVALENT						
EXP	EXPANSION						
EXPO	EXPOSED						
EXIST	EXISTING						
EXT	EXTERIOR						

## DRAWING SYMBOLS



REVISIONS

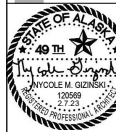
Wrangell Duplex

STATUS:

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SHEET DESCRIPTION:  
Abbreviations & Symbols

G101

SHEET:

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## GENERAL NOTES

1) SEE TABLE 1 FOR SURVEY BASIS AND CONTROL.

2) EXISTING UNDERGROUND ELECTRICAL LINES SHOWN ON THESE PLANS WERE DEVELOPED BY AN ONSITE MEETING WITH R&M AND THE CITY AND BOROUGH OF WRANGELL. NO LOCATES WERE PERFORMED DUE TO THE LACK OF EQUIPMENT AND CONGESTION OF UTILITIES ON THE SITE. LINES SHOWN ARE SYMBOLIC ONLY AND REPRESENT ASSUMED LOCATIONS BASED ON THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL VERIFY EXISTING WATERLINE LOCATIONS IN THE FIELD.

3) EXISTING WATER LINES SHOWN ON THESE PLANS WERE LOCATED BY THE CITY AND BOROUGH OF WRANGELL OR BASED ON ASBUILTS AND/OR LOCAL KNOWLEDGE. DUE TO THE CONGESTION OF UTILITIES IN SOME AREAS, THE LINES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY EXISTING WATERLINE LOCATIONS IN THE FIELD.

4) THE PROFILES SHOWN IN THESE PLANS HAVE A VERTICAL EXAGGERATION OF 2.0





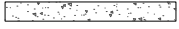






















5) THE CONTRACTOR SHALL INSTALL THE NEW WATER LINE ACCORDING TO THE COORDINATES AND DIMENSIONS GIVEN ON THE PLAN SHEETS. GENERALLY,

6) THE CONTRACTOR SHALL SAW-CUT CONCRETE AS NEEDED FOR SEWER MAIN INSTALLATION. SAW-CUT SHALL NOT EXCEED 10' IN WIDTH. LOCATIONS OF NEW MANHOLE CENTER ARE APPROXIMATE ONLY. FIELD ADJUSTMENTS +/- 1' ALONG THE PROPOSED ALIGNMENT IS PERMISSIBLE.

11) THE CITY OF WRANGELL WILL PROVIDE A FUSION MACHINE AND ELECTRO FUSION MACHINE. FUSION MACHINE IS A MACELROY MODEL 412. THE ELECTROFUSION MACHINE IS AN IPEX GENESIS F3, MODEL 10EF-328-0001.

12) THESE PLANS MEET THE LEAD-FREE REQUIREMENTS OF THE SAFE DRINKING WATER ACT, SECTION 1417, 18 AAC 80.205(b)(7), 18 AAC 80.500 INCLUDING NOT CONTAINING MORE THAN 0.2% LEAD WHEN USED WITH RESPECT TO SOLDER AND FLUX AND B) NOT HAVING MORE THAN A WEIGHTED AVERAGE OF 0.25 PERCENT LEAD WHEN USED WITH RESPECT TO WETTED SURFACES OF PIPES, PIPE FITTING, PLUMBING FITTING, AND FIXTURES.

## LEGEND

FEATURE DESCRIPTION	EXISTING	PROPOSED	FEATURE DESCRIPTION	EXISTING	PROPOSED
PROPERTY LINE	----	=====	UTILITY POLE		
PROPERTY LINE (INFORMATIONAL) CENTERLINE	----	N/A	GUY ANCHOR		
CONCRETE		AS NOTED	CONTROL POINT (AS NOTED)		N/A
ASPHALT		AS NOTED	FOUND MONUMENT (AS NOTED)		N/A
BUILDING LINE		AS NOTED	STORM DRAIN MANHOLE		
BUILDING OVERHANG	----	AS NOTED	STORM CATCH BASIN		
EDGE OF ASPHALT/CONCRETE	----	----- (PATCH) -----	SANITARY SEWER MANHOLE		
EDGE OF GRAVEL	----	N/A	SANITARY SEWER CLEANOUT		
TOP/TOE/DITCH (GENERAL)	----	N/A	BOLLARD/POST (TYPE AS NOTED)		N/A
OVERHEAD UTILITY LINE	---XDH---XDH---XDH---	---E---E---E---E---	WATER VALVE		
UNDERGROUND UTILITY LINE	---UGP---UGP---UGP---	N/A	FIRE HYDRANT		
STORM DRAIN	---XSD---XSD---XSD---	N/A	LIGHT POLE		N/A
SEWER LINE	---XSS---XSS---XSS---	---SS---SS---SS---	ELECTRICAL METER		N/A
SEWER LINE (RECORD)	---SSRD---SSRD---	N/A	SIGN		N/A
WATER LINE	---XV---XV---XV---XV---	---V---V---V---V---	TEST PIT		N/A
WATER SERVICE	N/A	---W SERV---W SERV---W SERV---			
WATER LINE (RECORD)	---WRD---WRD---	N/A			
FENCE	---X---X---X---X---	---O---O---O---O---			
GUARD RAIL		N/A			
MAJOR CONTOUR	----	N/A			
MINOR CONTOUR	----	N/A			

NOTE: LINE WEIGHTS VARY BETWEEN SHEETS

TABLE 1.

SURVEY CONTROL POINTS		
Point #	Northing	Easting
1	1693609.41	2941777.29
2	1693172.11	2941826.99
3	1693967.62	2941715.36
4	1693679.18	2942235.50
5	1693656.57	2942013.41
6	1693817.25	2941984.67
7	1688896.53	2939254.39
8	1695862.61	2938157.98
9	1699348.05	2938452.98
10	1693586.13	2942249.21
11	1693563.52	2942027.12
12	1692913.95	2941856.28
13	1693724.20	2941998.38
14	1688803.48	2939268.09
15	1695769.56	2938171.69
16	1699254.99	2938466.69
17	1692820.90	2941869.99
18	1693516.35	2941791.00
19	1693079.06	2941840.69
20	1693874.57	2941729.06

SURVEY CONTROL POINTS		
Point #	Northing	Easting
500	1693982.90	2941764.86
501	1693632.86	2941804.76
502	1693593.00	2941809.19
503	1693679.10	2942212.32
504	1693661.37	2942234.17
505	1693568.32	2942247.88
506	1693889.84	2941778.57
507	1693539.81	2941818.47
508	1693499.95	2941822.89
509	1693586.05	2942226.03
600	1693919.16	2941780.01
601	1694011.31	2941785.03
602	1693923.66	2941854.88
603	1693926.42	2941900.51
604	1693826.11	2941793.72
605	1693918.25	2941798.73
606	1693830.61	2941868.58
607	1693833.36	2941914.22

REVISIONS:

THRHA  
WRANGELL DUPLEX

STATUS:

Construction  
Documents

DRAWN BY: TSS  
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DATE: 02/05/23  
PROJECT #: 222201.03

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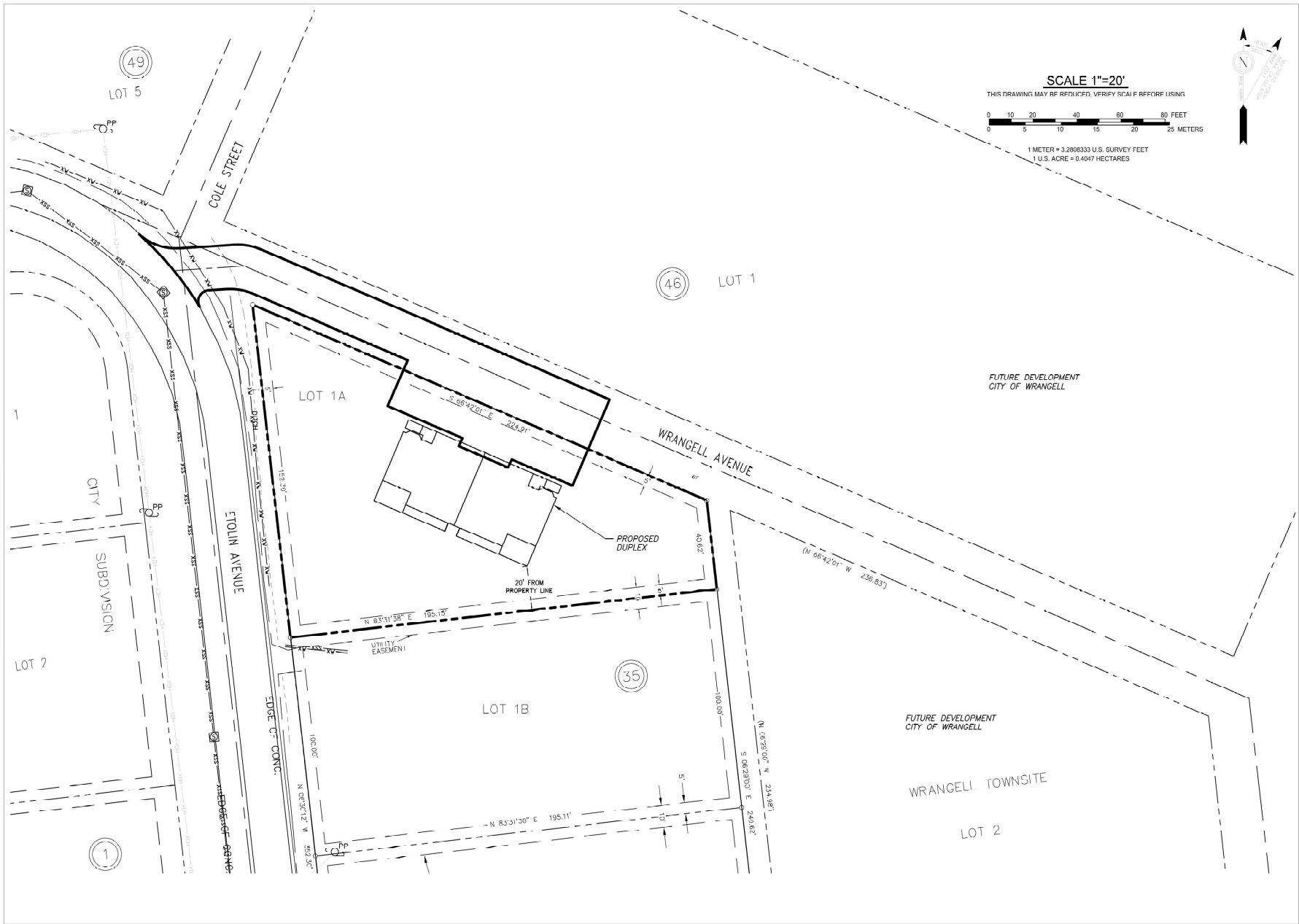
Notes, Symbols, &  
Tables

**C001**

SHEET:

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SHEET: 3 of 11



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WRANGELL DUPLEX

STATUS:  
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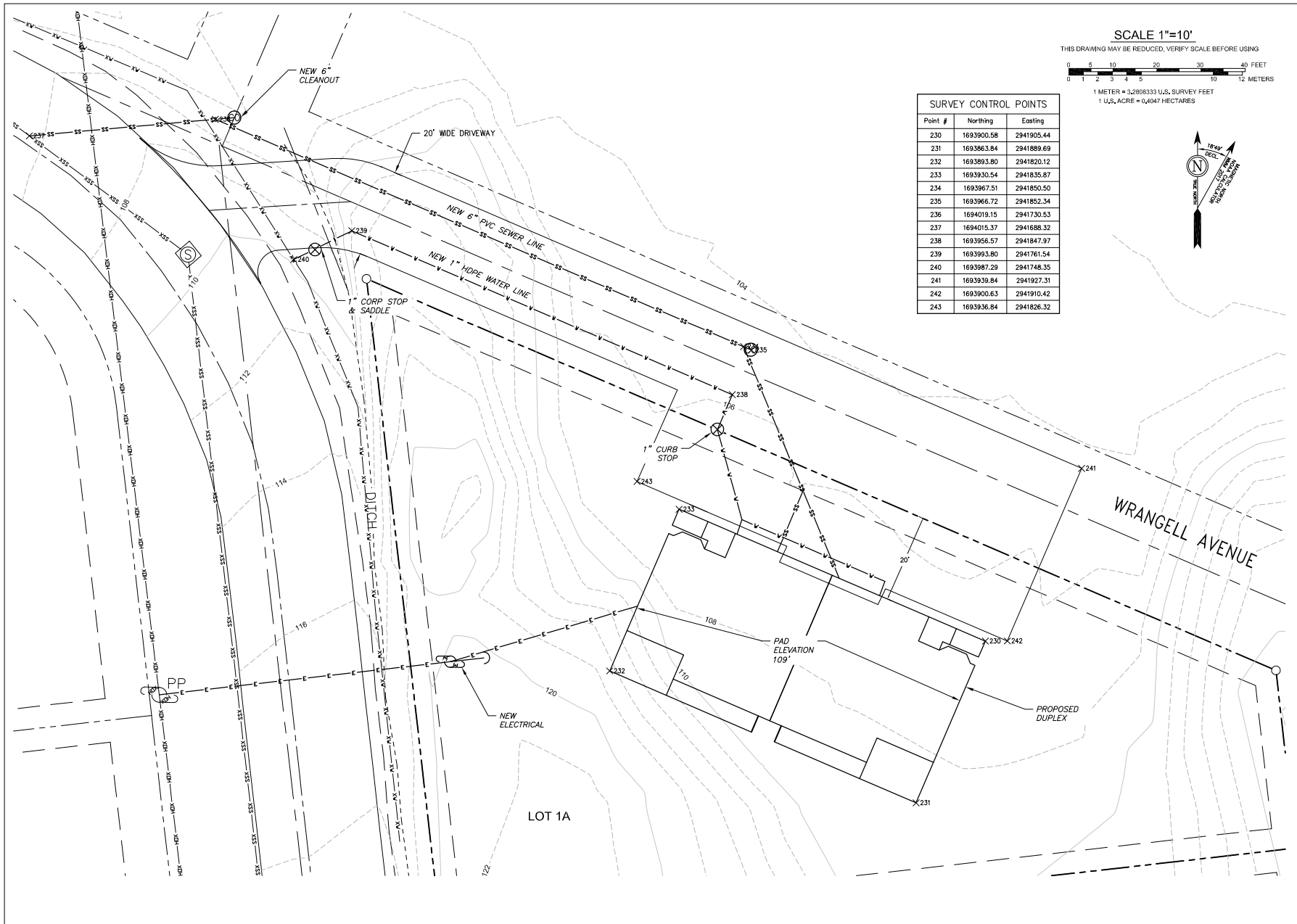
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Location Map

**C100**

SHEET:  
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REVISIONS:

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WRANGELL DUPLEX

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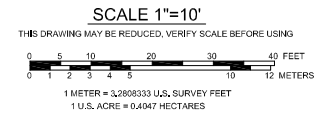
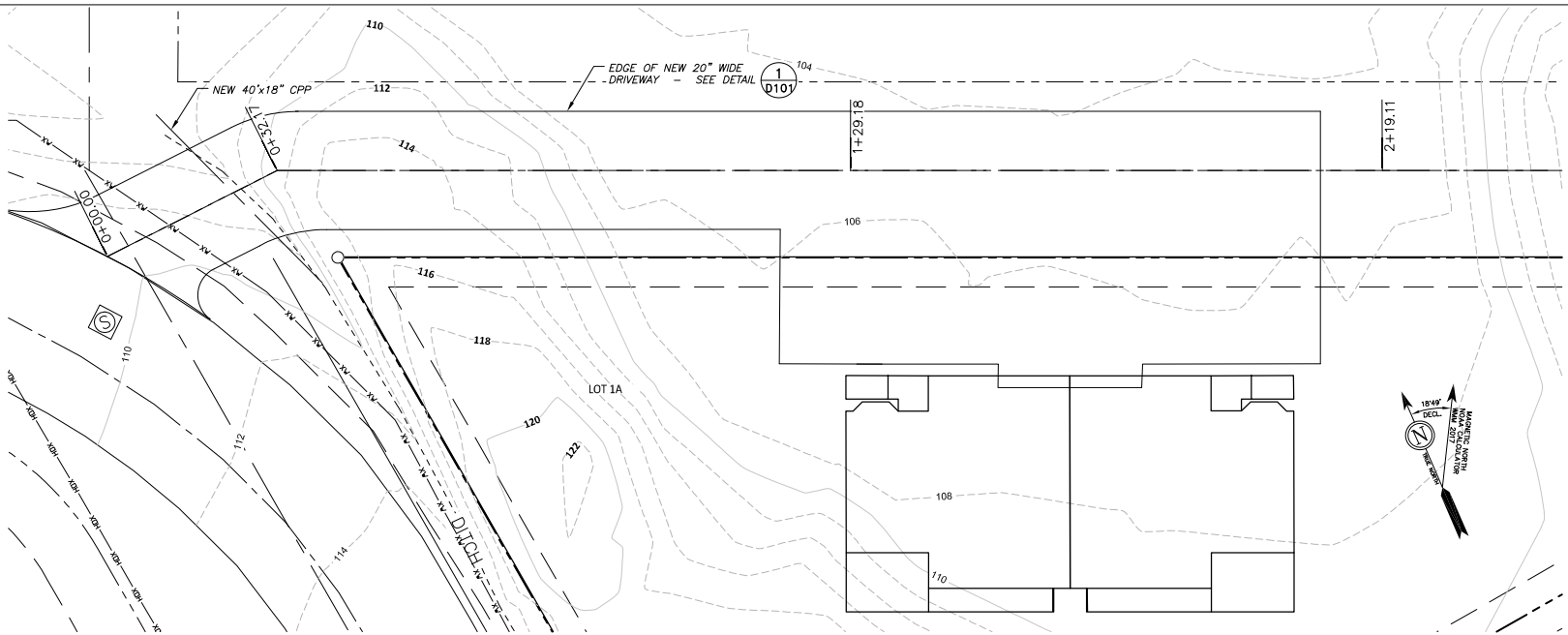
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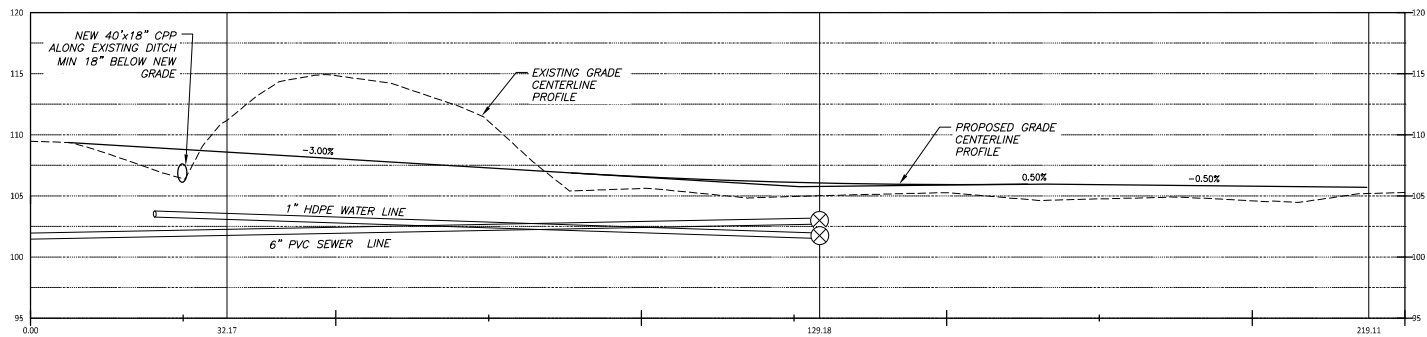
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Profile View of ROAD CENTERLINE  
HORIZONTAL SCALE: 1" = 10' VERTICAL SCALE: 1" = 5'  
VERTICAL EXAGGERATION: 2



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# THRHA WRANGELL DUPLEX

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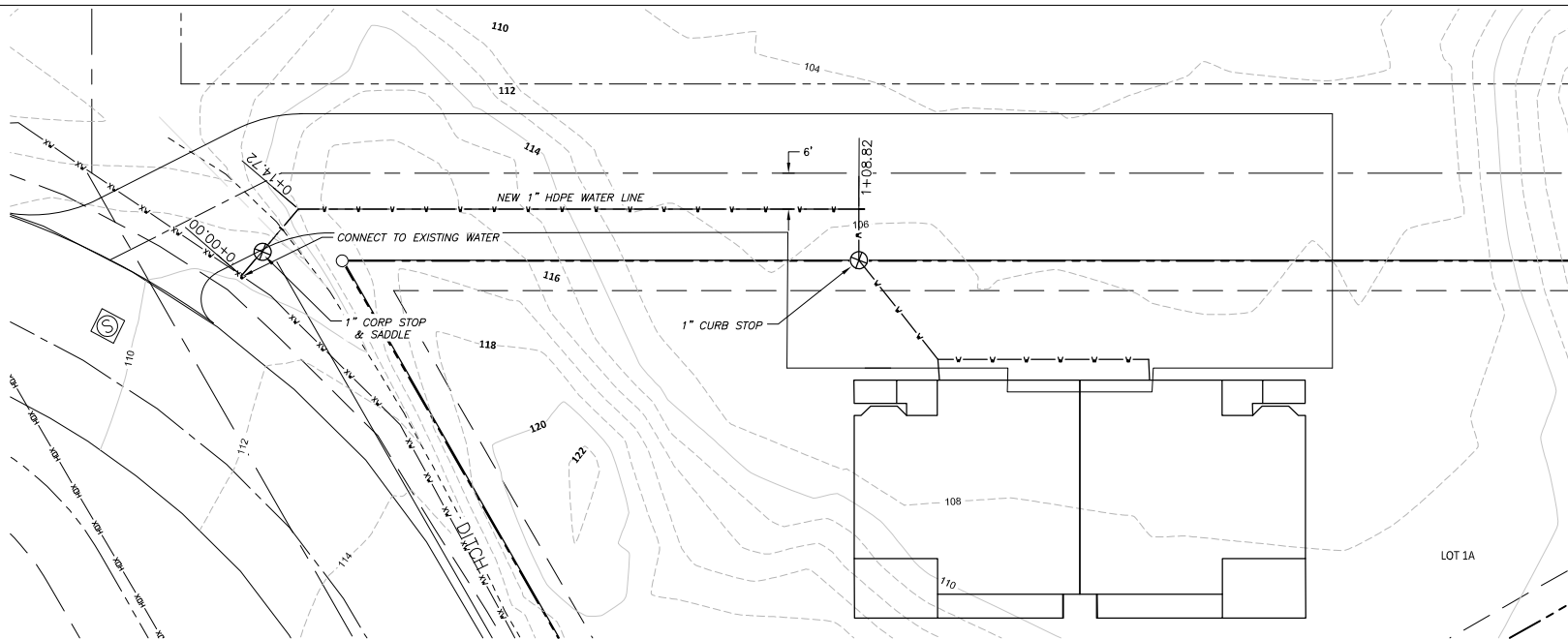


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Roadway Plan & Profile

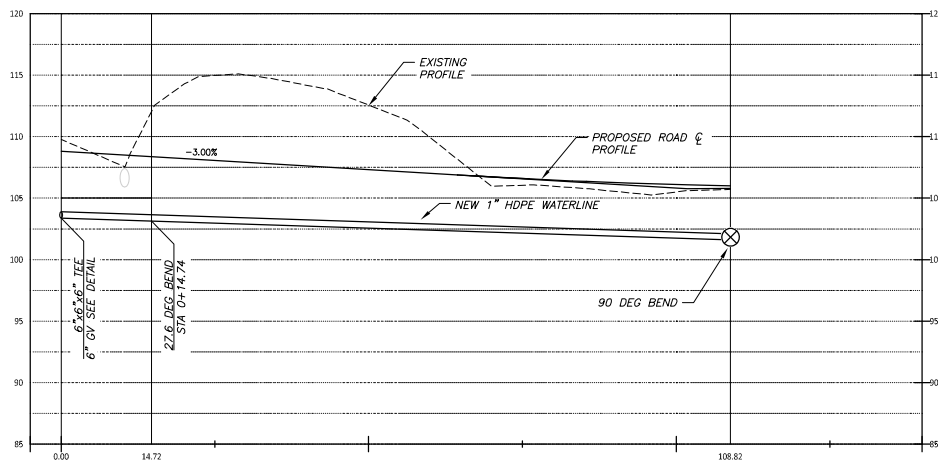
**C200**

SHEET:  
7 of 11





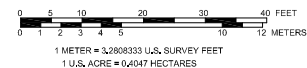
Profile View of NEW WATER MAIN  
HORIZONTAL SCALE: 1" = 10' VERTICAL SCALE: 1" = 5'  
VERTICAL EXAGGERATION: 2



LOT 1A

SCALE 1"=10'

THIS DRAWING MAY BE REDUCED. VERIFY SCALE BEFORE USING



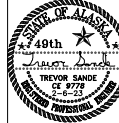
REVISIONS:

THRHA  
WRANGELL DUPLEX

STATUS:  
Construction  
Documents

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CHECKED BY: ISS  
DATE: 02.06.23  
PROJECT #: 222301.03

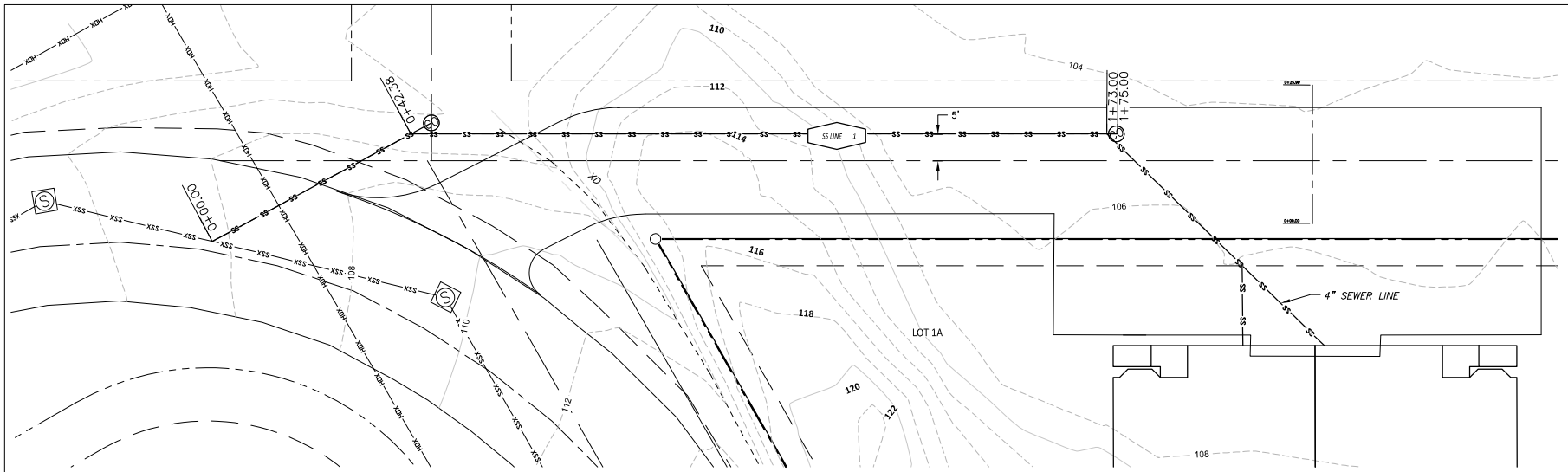
**R&M**  
RAM ENGINEERING-KETCHIKAN, INC.  
7180 REVILLA ROAD, SUITE 200  
KETCHIKAN, ALASKA 99901  
PH: 907.225.7917  
www.ketchikanengineer.com



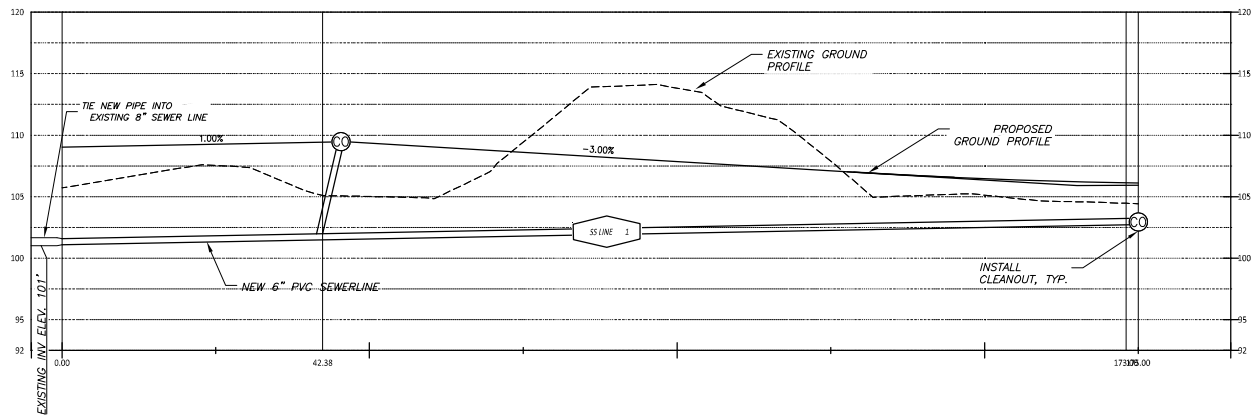
SHEET DESCRIPTION:  
Water Line Plan &  
Profile

**C201**

SHEET:  
8 of 11



Profile View of NEW SEWER MAIN  
HORIZONTAL SCALE: 1" = 10' VERTICAL SCALE: 1" = 5'  
VERTICAL EXAGGERATION: 2



SS LINE 1  
NEW 175.00 LF  
6" C900 PVC  
S=0.01 FT/FT  
SEE D100/D3

SCALE 1"=10'

THIS DRAWING MAY BE REDUCED. VERIFY SCALE BEFORE USING



1 METER = 3.2808333 U.S. SURVEY FEET  
1 U.S. ACRE = 0.4047 HECTARES

REVISIONS:

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STATUS:

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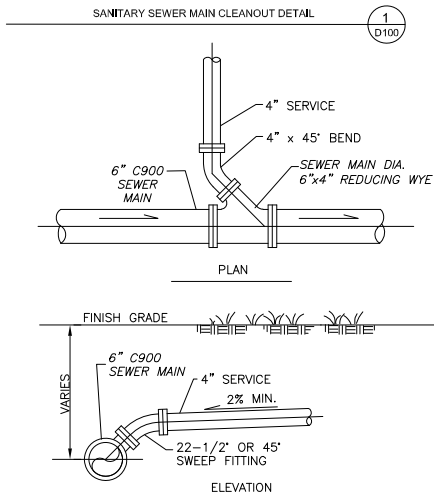
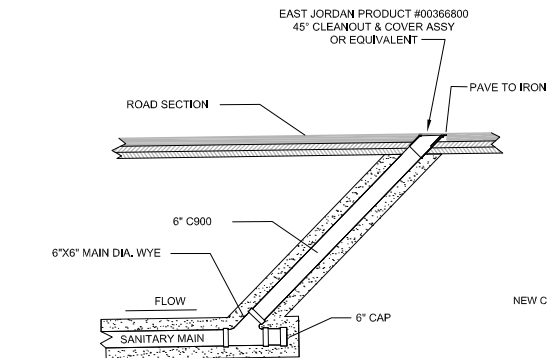
SHEET DESCRIPTION:

Sewer Line Plan &  
Profile

C202

SHEET:

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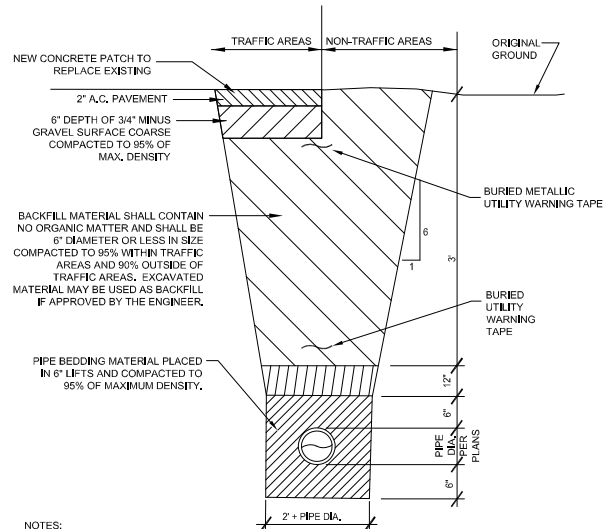
#### SEWER SERVICE CONNECTION NOTES:

- SERVICE CONNECT SHALL BE 6" MINIMUM DIAMETER.
- SEWER SERVICE PIPING SHALL BE C900 PVC.
- DISTANCE FROM WYE TO MANHOLE, AND THREE MEASURED DISTANCES FROM END OF SERVICE PIPE TO PERMANENT OBJECTS, SHALL BE NOTED ON AS-BUILT PLANS.

#### SEWER SERVICE CONNECTION DETAIL FOR FUTURE DEVELOPMENT

2  
D100

NOT TO SCALE



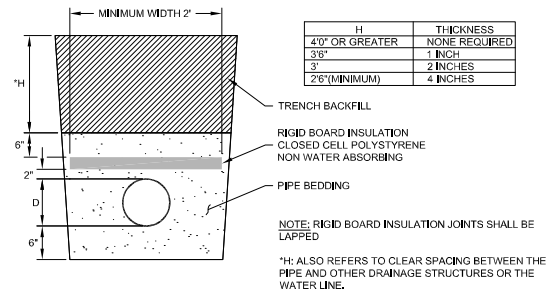
#### NOTES:

- BACKFILL MATERIAL SHALL BE PLACED IN 12" MAXIMUM LIFTS.
- TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH LOCAL, STATE, AND OSHA REGULATIONS AND REQUIREMENTS.
- INDICATED SLOPE IS FOR PAY QUANTITY DETERMINATION ONLY FOR IMPORTED BACKFILL GRAVEL AND RESURFACING REQUIREMENTS.
- IF UNSUITABLE PIPE FOUNDATION MATERIAL IS ENCOUNTERED DURING EXCAVATION, ENGINEER MAY DIRECT THE CONTRACTOR TO OVER-EXCAVATE AND BACKFILL WITH SUITABLE MATERIAL.
- THE DITCH LINE, IF ONE EXISTS, SHALL BE RESHAPED IN SUCH A MANNER TO ALLOW POSITIVE DRAINAGE TO MATCH PRE-CONSTRUCTION CONDITIONS.

3  
D100

#### TYPICAL TRENCH DETAIL

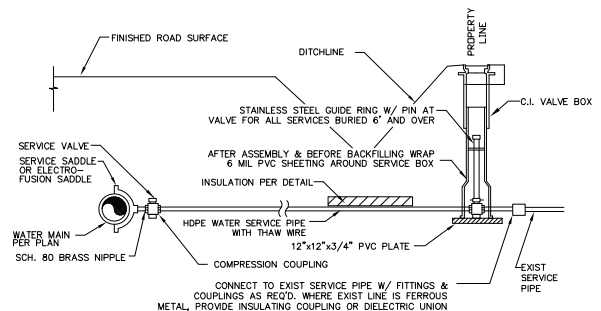
NOT TO SCALE



#### PIPE INSULATION REQUIREMENTS

4  
D100

NOT TO SCALE



#### NOTES:

- INSTALL TOP OF VALVE BOX IN SHOULDER OF DRIVEWAY OUT OF TRAFFIC AREAS
- ALLOW 12" FOR RAISING VALVE BOX.
- VALVE COVER SHALL BE MARKED "WATER"
- ENLARGED BASE IS REQUIRED FOR 1" SERVICE VALVES AND LARGER.
- WHERE THERE IS NO EXIST. SERVICE, TERMINATE COPPER TUBING W/ COPPER TUBE x FEMALE IPT COUPLING & BRASS PLUG.
- 4" RIGID FOAM INSULATION UNDER DITCHLINE

5  
D100

#### TYPICAL BURIED WATER SERVICE - 2" AND SMALLER

REVISIONS:

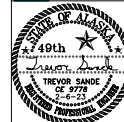
THRHA  
WRANGELL DUPLEX

#### STATUS:

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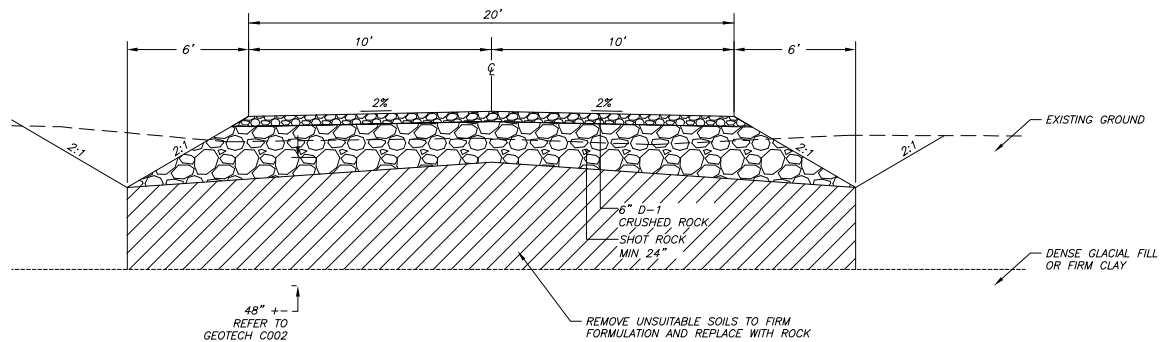
#### SHEET DESCRIPTION:

Details

D100

#### SHEET:

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1 WRANGELL AVENUE TYPICAL ROAD SECTION  
D102 NOT TO SCALE

REVISIONS:

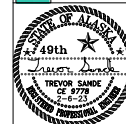
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WRANGELL DUPLEX

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Construction  
Documents

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DATE: 02.06.23  
PROJECT #: 222301.03

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SHEET DESCRIPTION:

Details

**D101**

SHEET:

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