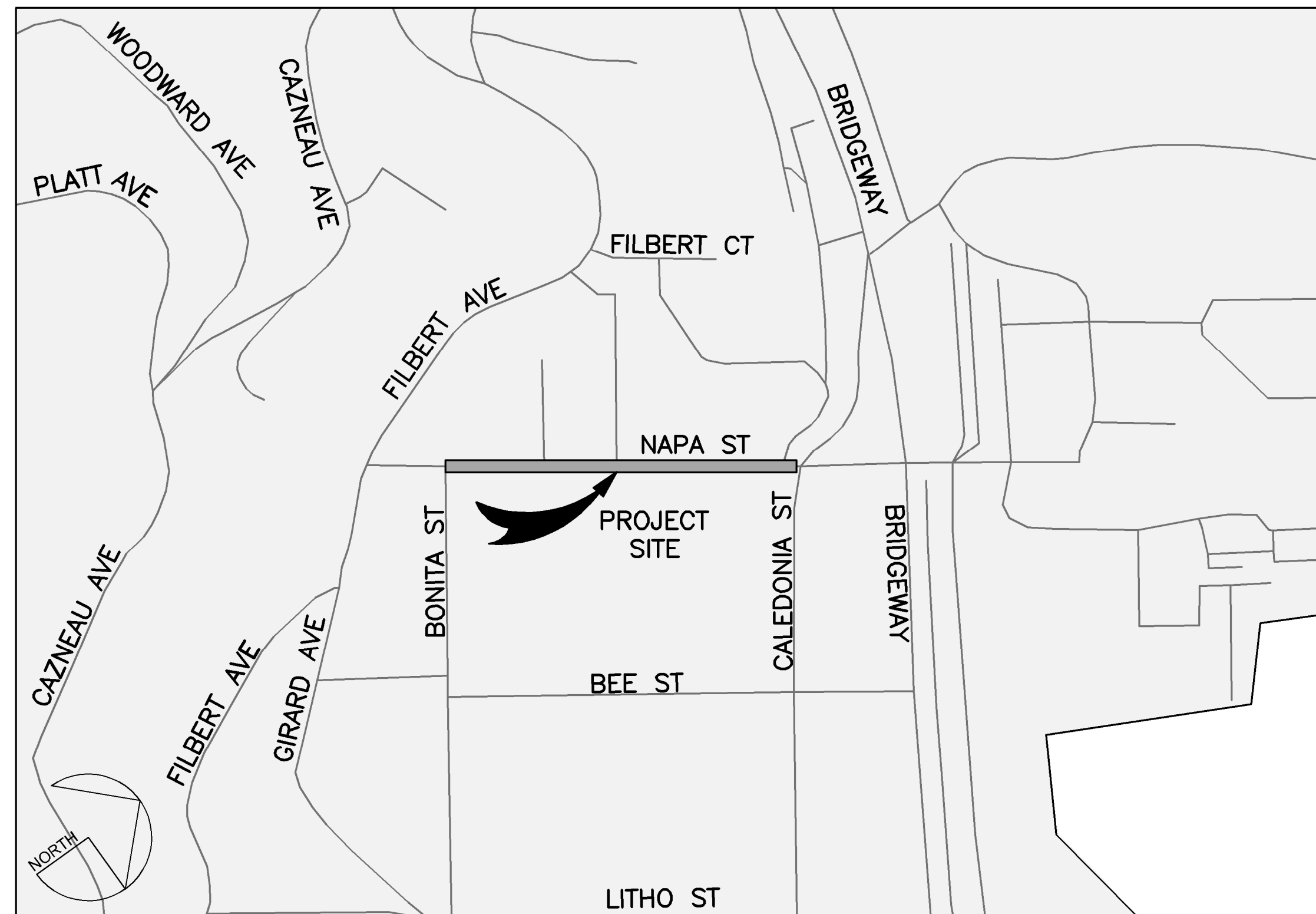


NAPA STREET DRAINAGE IMPROVEMENT PROJECT

CITY OF SAUSALITO
MARIN COUNTY, CA



LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

SHEET INDEX

<u>SHEET TITLE</u>	<u>DWG. NO.</u>	<u>SHEET NO.</u>
TITLE SHEET	TS01	01
EXISTING CONDITIONS	EX01	02
EXISTING CONDITIONS	EX02	03
DEMOLITION PLAN	DM01	04
DEMOLITION PLAN	DM02	05
UTILITY PLAN AND PROFILE	UT01	06
UTILITY PLAN AND PROFILE	UT02	07
STORM DRAIN LATERAL PROFILES	UT03	08
HORIZONTAL CONTROL PLAN	HZ01	09
CONSTRUCTION DETAILS	CD01	10
CONSTRUCTION DETAILS	CD02	11
CONSTRUCTION DETAILS	CD03	12

STATEMENT OF APPROVAL

APPROVAL OF THESE PLANS DOES NOT RELEASE THE CONTRACTOR OF THE RESPONSIBILITY FOR CORRECTIONS OF MISTAKES, ERRORS OR OMISSIONS CONTAINED THEREIN. IF DURING THE COURSE OF CONSTRUCTION OF THE IMPROVEMENTS, PUBLIC INTEREST REQUIRES A MODIFICATION FOR A DEPARTURE FROM SPECIFICATIONS AND DETAILS OF THE CITY OF SAUSALITO OR THESE PLANS, THE PUBLIC WORKS DIRECTOR SHALL HAVE THE AUTHORITY TO REQUIRE SUCH MODIFICATION OR DEPARTURE AND TO SPECIFY SUCH MODIFICATION OR DEPARTURE AND TO SPECIFY THE MANNER IN WHICH THE SAME IS TO BE MADE.

APPROVED FOR THE CITY OF SAUSALITO

BY: _____ DATE _____
JONATHON GOLDMAN, PE CFM
DIRECTOR OF PUBLIC WORKS

CITY OF SAUSALITO

ANDREW A. DAVIDSON
CITY OF SAUSALITO SENIOR ENGINEER
415.289.4180
420 LITHO STREET
SAUSALITO, CA 94965

ENGINEER

DAYNE JOHNSON
925.940.2208
DJOHNSON@BKF.COM
BKF ENGINEERS
1646 N CALIFORNIA BLVD SUITE 400
WALNUT CREEK, CA 94596

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D



711 GRAND AVENUE
SUITE 200
SAN RAFAEL, CA 94801
415-832-7880 (TEL)
415-832-7979 (FAX)

BKF
ENGINEERS / SURVEYORS / PLANNERS

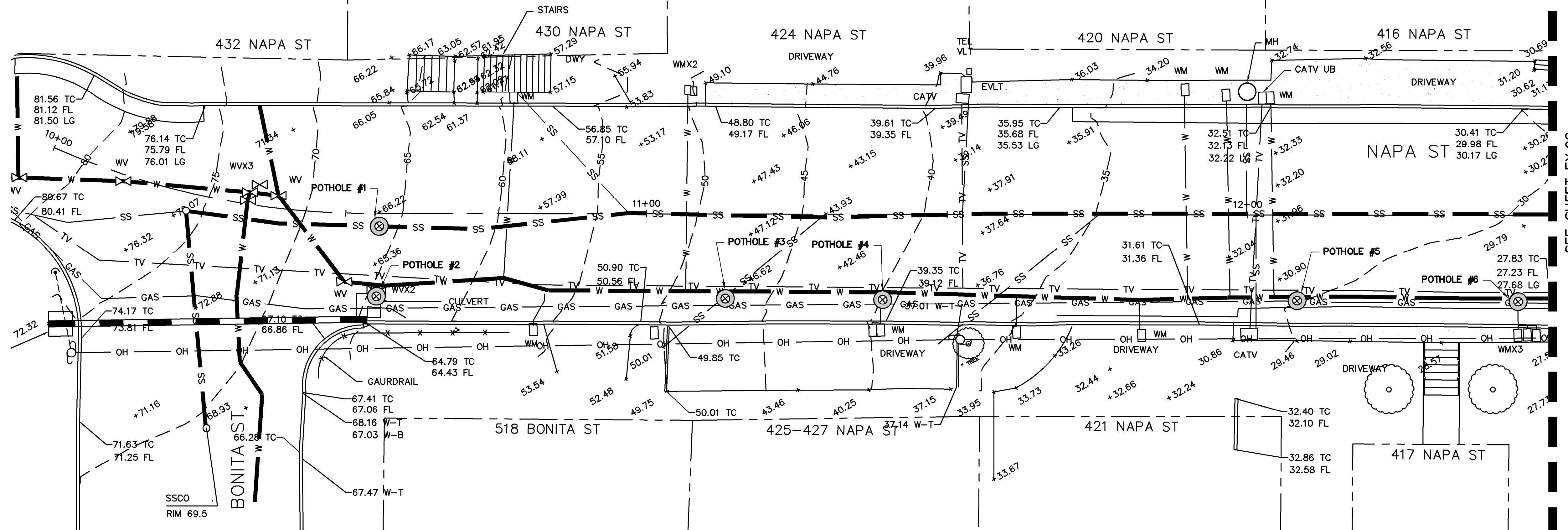
CHECKED: D. JOHNSON
APPROVED: D. JOHNSON
DRAWN: C. LINDBERG
DESIGNED: C. LINDBERG

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
CITY OF SAUSALITO
TITLE SHEET
MARIN COUNTY CALIFORNIA
SAUSALITO

DATE DEC 2017	SCALE AS SHOWN
BKF PROJECT NO. 20165244	
CLIENT CITY OF SAUSALITO	
SHEET NO. 01 OF 12	
DRAWING NO. TS01	



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EXISTING CONDITIONS
 SCALE: 1"=10'

SEE SHEET EX.02

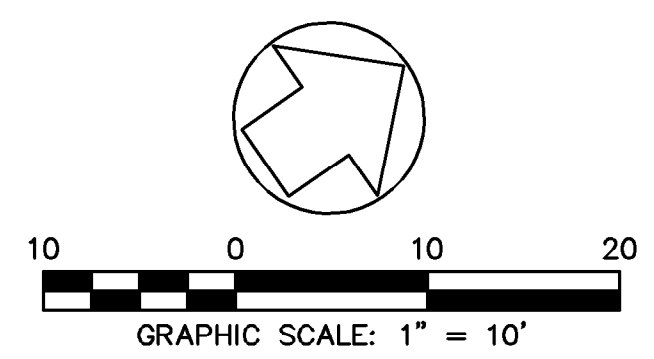
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- MONUMENT
- VALVE (AS NOTED)
- FIRE HYDRANT
- WATER METER
- SIGN
- STREET LIGHT
- GUY ANCHOR
- UTILITY POLE
- SANITARY SEWER MANHOLE
- COMMUNICATION MANHOLE
- UTILITY BOX (AS NOTED)
- TREE
- POTHOLE
- WATER LINE
- CATV LINE
- SANITARY SEWER LINE
- GAS LINE
- ELECTRIC LINE
- OVERHEAD UTILITY LINE
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE

EXISTING CONDITIONS ABBREVIATIONS

- AC ASPHALT CONCRETE
- BOB BOTTOM OF BOX
- CATV CABLE TELEVISION
- CB CATCH BASIN
- CLDR CENTERLINE DOOR
- CONC CONCRETE
- CMP CORRUGATED METAL PIPE
- DI DROP INLET
- DWY DRIVEWAY
- E ELECTRIC
- EP EDGE OF PAVEMENT
- FL FLOWLINE
- HCR HANDICAP RAMP
- INV INVERT ELEVATION
- RWL RAIN WATER LEADER
- SD STORM DRAIN
- SDMH STORM DRAIN MANHOLE
- SSCO SANITARY SEWER CLEAN OUT
- TG TOP OF GRATE
- TYP TYPICAL
- UB UTILITY BOX
- WM WATER METER
- WV WATER VALVE

POTHOLE INFORMATION					
POTHOLE NUMBER	PAVEMENT THICKNESS	UTILITIES PRESENT	MATERIAL	SIZE	DEPTH
1	4" ASPHALT / 6" CONCRETE	SANITARY SEWER	VITRIFIED CLAY	8"	60"
		WATER	WHITE TAPE WRAPPED STEEL (MAGNETIC)	8"	32.5"
2	4" ASPHALT / 2" CONCRETE	GAS	BLACK STEEL (MAGNETIC)	2"	42"
		WATER	WHITE TAPE WRAPPED STEEL (MAGNETIC)	8"	28"
3	6" ASPHALT / 6" CONCRETE	GAS	BLACK STEEL (MAGNETIC)	2"	23"
		SANITARY SEWER	VITRIFIED CLAY	4"	43"
		WATER	WHITE TAPE WRAPPED STEEL (MAGNETIC)	8"	35.5"
4	6" ASPHALT / 6" CONCRETE	WATER LATERAL	COPPER	3/4"	42"
		CATV	WHITE PLASTIC	2 X 2"	18.5"
		GAS	BLACK STEEL (MAGNETIC)	2"	33"
5	6" ASPHALT / 12" CONCRETE	WATER	WHITE TAPE WRAPPED STEEL (MAGNETIC)	8"	44"
		GAS	BLACK STEEL (MAGNETIC)	2"	58.5"
6	6" ASPHALT	WATER	WHITE TAPE WRAPPED STEEL (MAGNETIC)	8"	32"
		WATER LATERAL	COPPER	3 X 3/4"	34"
		CATV	WHITE PLASTIC	2 X 2"	19"
		GAS	BLACK STEEL (MAGNETIC)	2"	52"



REVISIONS		DATE	APPROV
NO.	DESCRIPTION	BY	DATE

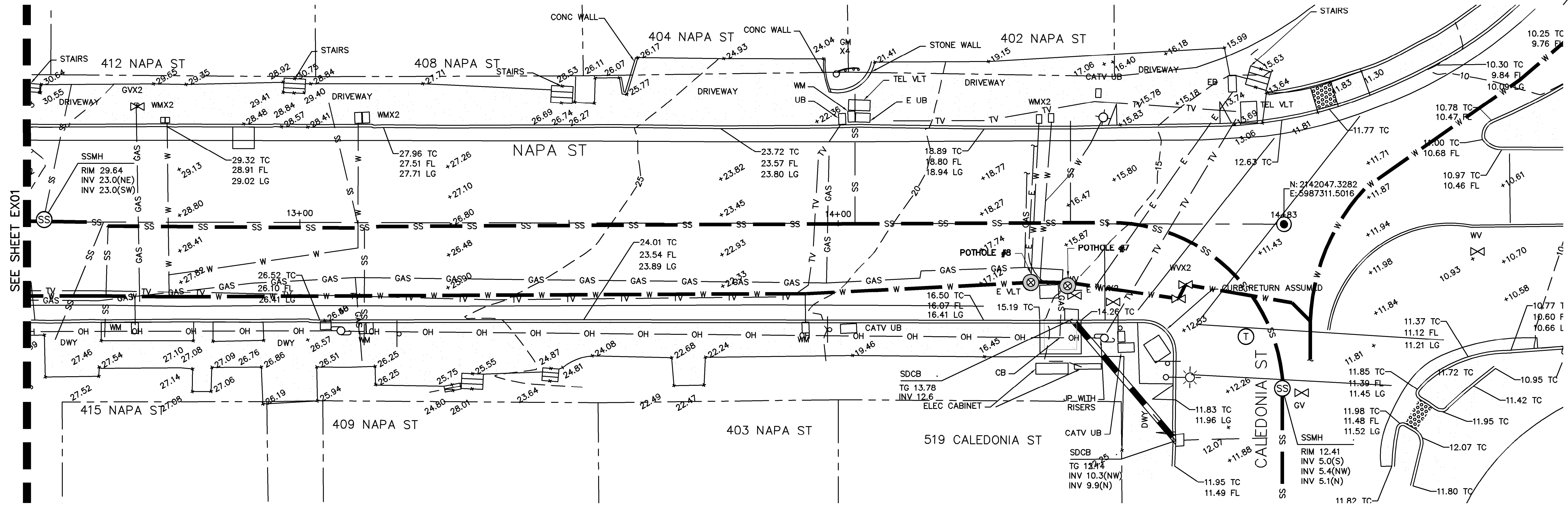
<p>BKF ENGINEERS / SURVEYORS / PLANNERS</p> <p>711 GRAND AVENUE SUITE 240 SAN RAFAEL, CA 94901 (415) 456-1111 415-883-7878 (FAX)</p>	<p>CHECKED: C. LINDBERG DRAWN: C. LINDBERG</p> <p>APPROVED: D. JOHNSON DESIGNED: D. JOHNSON</p>
--	---

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 EXISTING CONDITIONS

SAUSALITO MARIN COUNTY CALIFORNIA

DATE: DEC 2017	SCALE: AS SHOWN
BKF PROJECT NO: 20165244	
CLIENT: CITY OF SAUSALITO	
SHEET NO: 02 OF 12	
DRAWING NO: EX01	

k:\2016\165244_Sausalito_NapaSt\ENG\SHEETS\01_NEXCOND.dwg 12-07-17 12:05:40 PM john
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EXISTING CONDITIONS
 SCALE: 1"=10'

EXISTING CONDITIONS LEGEND

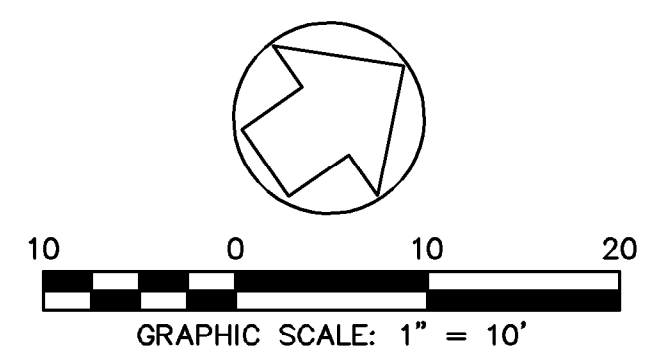
- ⊙ MONUMENT
- ⊕ VALVE (AS NOTED)
- ⊙ FIRE HYDRANT
- WM WATER METER
- ⊙ SIGN
- ⊙ STREET LIGHT
- ⊙ GUY ANCHOR
- ⊙ UTILITY POLE
- ⊙ SANITARY SEWER MANHOLE
- ⊙ COMMUNICATION MANHOLE
- ⊙ UTILITY BOX (AS NOTED)
- ⊙ TREE
- ⊙ POTHOLE
- W — WATER LINE
- TV — CATV LINE
- SS — SANITARY SEWER LINE
- GAS — GAS LINE
- E — ELECTRIC LINE
- OH — OVERHEAD UTILITY LINE
- ▭ CONCRETE SIDEWALK
- ▨ DETECTABLE WARNING SURFACE

EXISTING CONDITIONS ABBREVIATIONS

- AC ASPHALT CONCRETE
- BOB BOTTOM OF BOX
- CATV CABLE TELEVISION
- CB CATCH BASIN
- CLDR CENTERLINE DOOR
- CONC CONCRETE
- CMP CORRUGATED METAL PIPE
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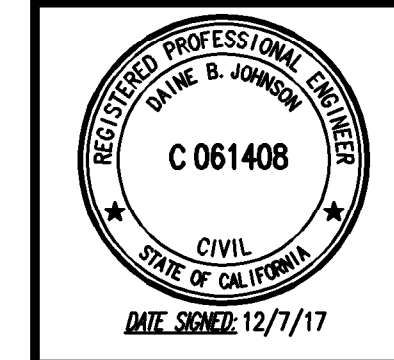
POTHOLE INFORMATION

POTHOLE NUMBER	PAVEMENT THICKNESS	UTILITIES PRESENT	MATERIAL	SIZE	DEPTH
7	4" ASPHALT	WATER	WHITE TAPE WRAPPED STEEL (MAGNETIC)	8"	33"
		GAS	BLACK STEEL (MAGNETIC)	2"	23"
		ELECTRIC	GREY PLASTIC	2"x2"	40"
		ELECTRIC	GREY PLASTIC	2"x4"	25"/28"
8	4" ASPHALT / 1" SLURRY	WATER	WHITE TAPE WRAPPED STEEL (MAGNETIC)	8"	32"
		ELECTRIC	GREY PLASTIC	4"	24"



REVISIONS

NO.	DESCRIPTION	BY	DATE	APPROV



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711 GRAND AVENUE
 SUITE 240
 SAN RAFAEL, CA 94901
 (415) 453-7379 (FAX)
 (415) 453-7379 (TEL)

CHECKED: C. LINDBERG
 APPROVED: D. JOHNSON

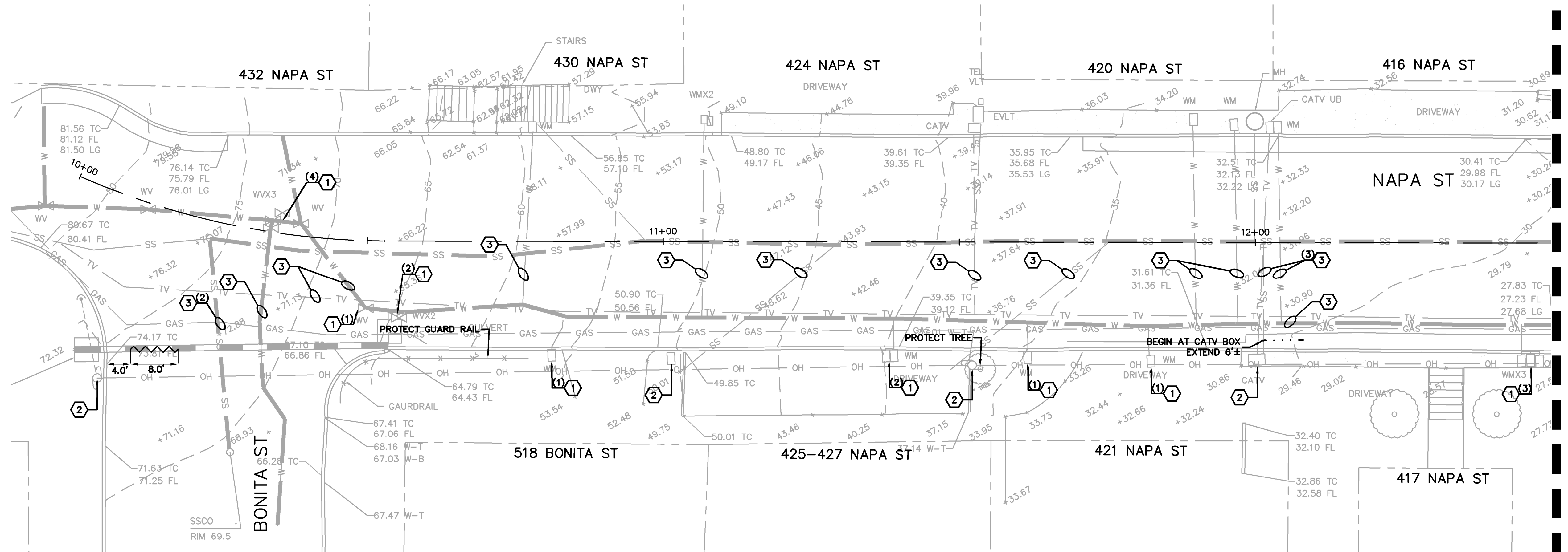
NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 EXISTING CONDITIONS

SAUSALITO MARIN COUNTY CALIFORNIA

DATE: DEC 2017 SCALE: AS SHOWN
 BKF PROJECT NO: 20165244
 CLIENT: CITY OF SAUSALITO
 SHEET NO: 03 OF 12
 DRAWING NO: EX02



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DEMOLITION PLAN
 SCALE: 1"=10'

DEMOLITION PLAN LEGEND

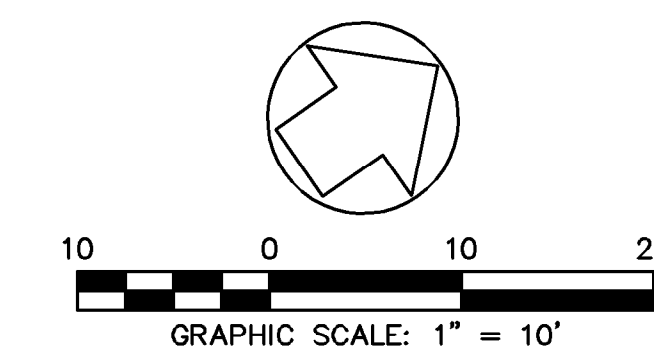
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- REMOVE EXISTING CURB AND GUTTER FOR PROPOSED STORM DRAIN SEE STORM DRAIN PLAN FOR DETAILS
- REMOVE EXISTING CULVERT

DEMOLITION PLAN KEYNOTES

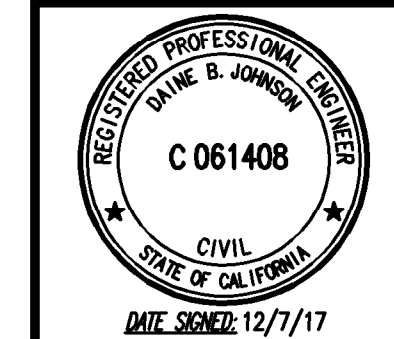
- PROTECT WATER STRUCTURE(S), SEE NOTE 1
- PROTECT ELECTRIC STRUCTURE(S), SEE NOTE 1
- PROTECT UTILITY LINE(S), SEE NOTE 1

DEMOLITION NOTES

1. CONTRACTOR SHALL PROTECT ALL EXISTING FENCES, WALLS, TREES, PRIVATE LANDSCAPING, CURBS, ABOVE GROUND UTILITIES (JOINT POLES, STREET LIGHTS), AND UNDERGROUND UTILITIES (STORM DRAIN, SANITARY SEWER, WATER, AND GAS) UNLESS OTHERWISE NOTED. CONTRACTOR SHALL BE AWARE OF SHALLOW UTILITIES AND PROTECT IN PLACE THROUGHOUT CONSTRUCTION. SEE SECTION 10 OF SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE TO LEGALLY DISPOSE OF ALL REMOVED MATERIALS AT THE CONTRACTORS EXPENSE.
3. SHALLOW UTILITIES MAY BE PRESENT. CONTRACTOR SHALL IDENTIFY AND LOCATE ALL UTILITIES IN PROJECT AREA PRIOR TO CONSTRUCTION.



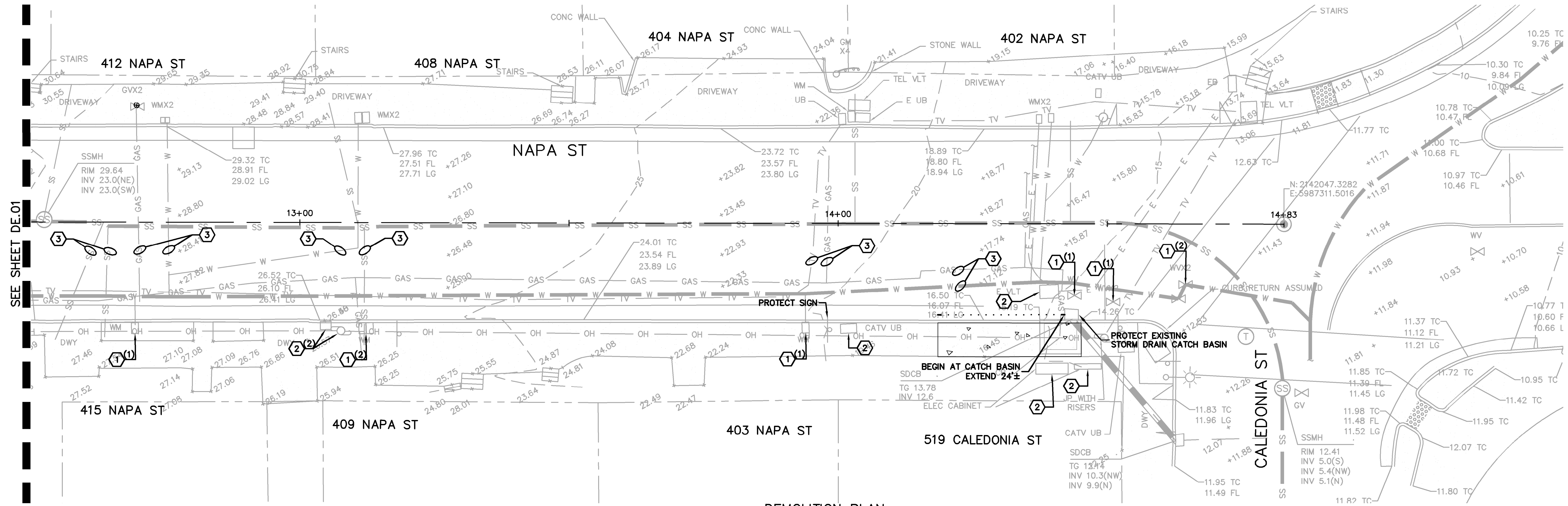
REVISIONS		DATE	APPRV
NO.	DESCRIPTION	BY	



711 GRAND AVENUE SUITE 240 SAN RAFAEL, CA 94901 415-883-7373 (FAX)	CHECKED: D. JOHNSON APPROVED: D. JOHNSON
BKF ENGINEERS / SURVEYORS / PLANNERS	DRAWN: C. LINDBERG DESIGNED: C. LINDBERG

NAPA STREET DRAINAGE IMPROVEMENT PROJECT		CALIFORNIA	
CITY OF SAUSALITO		MARIN COUNTY	
DEMOLITION PLAN		SAUSALITO	
DATE: DEC 2017	SCALE: AS SHOWN	BKF PROJECT NO: 20165244	
CLIENT: CITY OF SAUSALITO		SHEET NO: 04 OF 12	
DRAWING NO: DE01			

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DEMOLITION PLAN
 SCALE: 1"=10'

DEMOLITION PLAN LEGEND

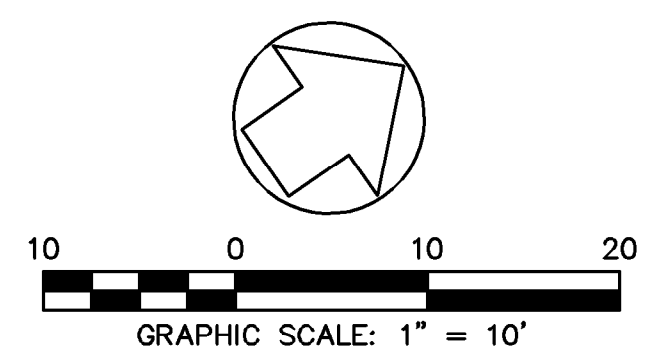
- PROTECT CONCRETE SIDEWALK, SEE NOTE 1
- REMOVE EXISTING CURB AND GUTTER FOR PROPOSED STORM DRAIN SEE STORM DRAIN PLAN FOR DETAILS
- REMOVE EXISTING CULVERT

DEMOLITION PLAN KEYNOTES

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DEMOLITION NOTES

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REVISIONS	
NO.	DESCRIPTION
BY	DATE
APPROVED	DATE

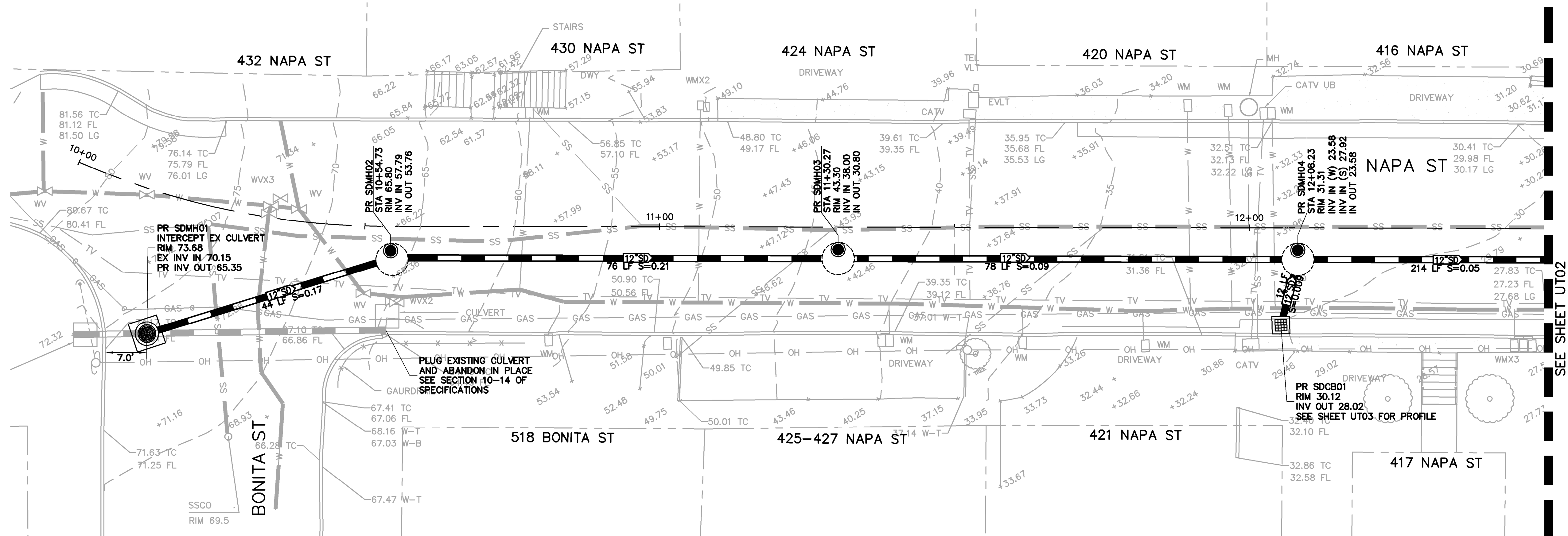
BKF	D. JOHNSON
ENGINEERS / SURVEYORS / PLANNERS	APPROVED
DRAWN: C. LINDBERG	CHECKED: D. JOHNSON
DESIGNED: C. LINDBERG	APPROVED: D. JOHNSON

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 DEMOLITION PLAN

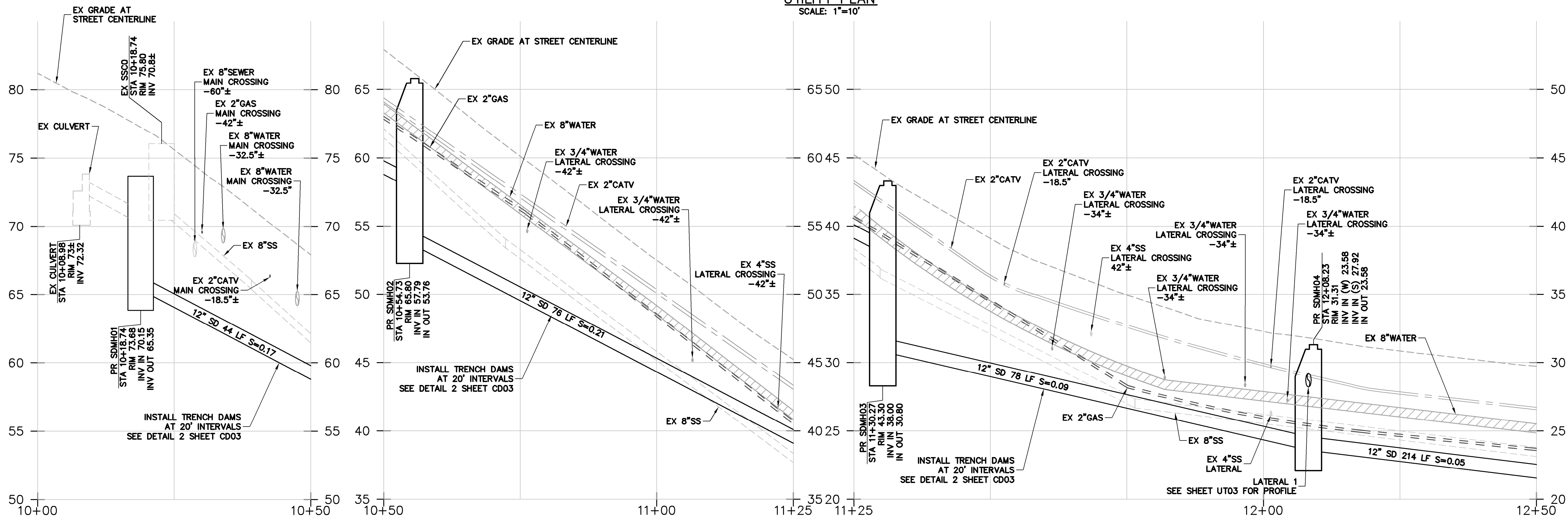
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CLIENT: CITY OF SAUSALITO	
SHEET NO: 05	OF 12
DRAWING NO: DE02	

SAUSALITO MARIN COUNTY CALIFORNIA

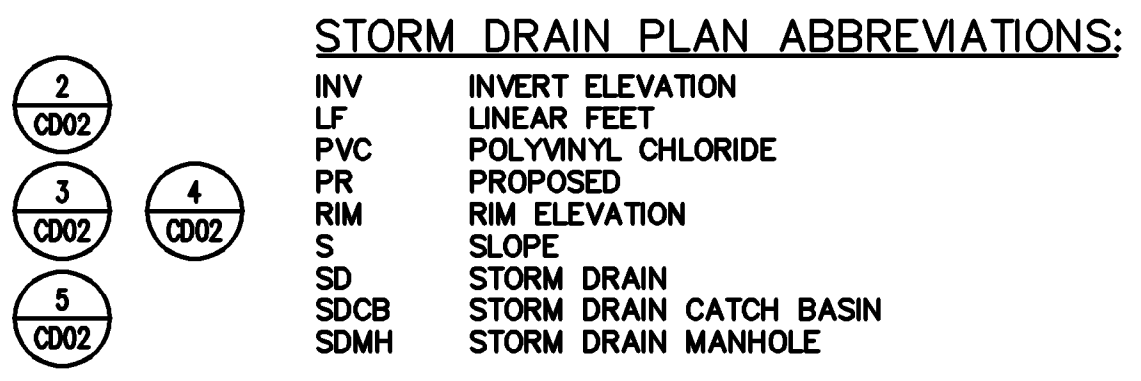
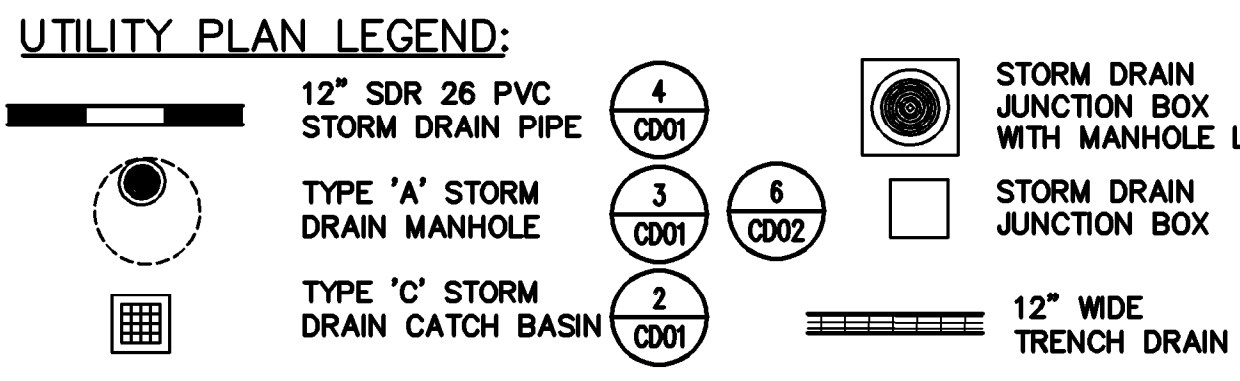
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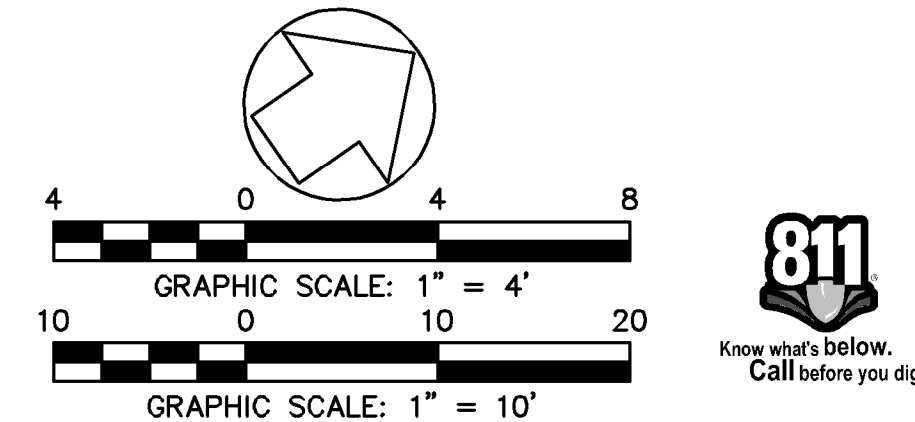
UTILITY PLAN
 SCALE: 1"=10'



UTILITY PROFILE
 SCALE: H: 1"=10'
 V: 1"=4'



- STORM DRAIN PLAN NOTES:**
- EXISTING UTILITIES SHALL BE PROTECTED IN PLACE.
 - ALL PROPOSED UTILITY STRUCTURES SHALL MATCH EXISTING GRADE.
 - DEPTH OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL POTHOLE PRIOR TO START OF EXCAVATION. SEE SECTIONS 10-8 AND 10-9 OF THE SPECIFICATIONS.



REVISIONS

NO.	DESCRIPTION	BY	DATE	APPVD



BKF
 ENGINEERS / SURVEYORS / PLANNERS

711 GRAND AVENUE
 SUITE 240
 SAN RAFAEL, CA 94901
 415-882-7880 (TEL)
 415-882-7979 (FAX)

DESIGNED: C. LINDBERG
 CHECKED: D. JOHNSON
 APPROVED: D. JOHNSON

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 UTILITY PLAN AND PROFILE

SAUSALITO MARIN COUNTY CALIFORNIA

DATE: DEC 2017
 SCALE: AS SHOWN

BKF PROJECT NO.: 20165244

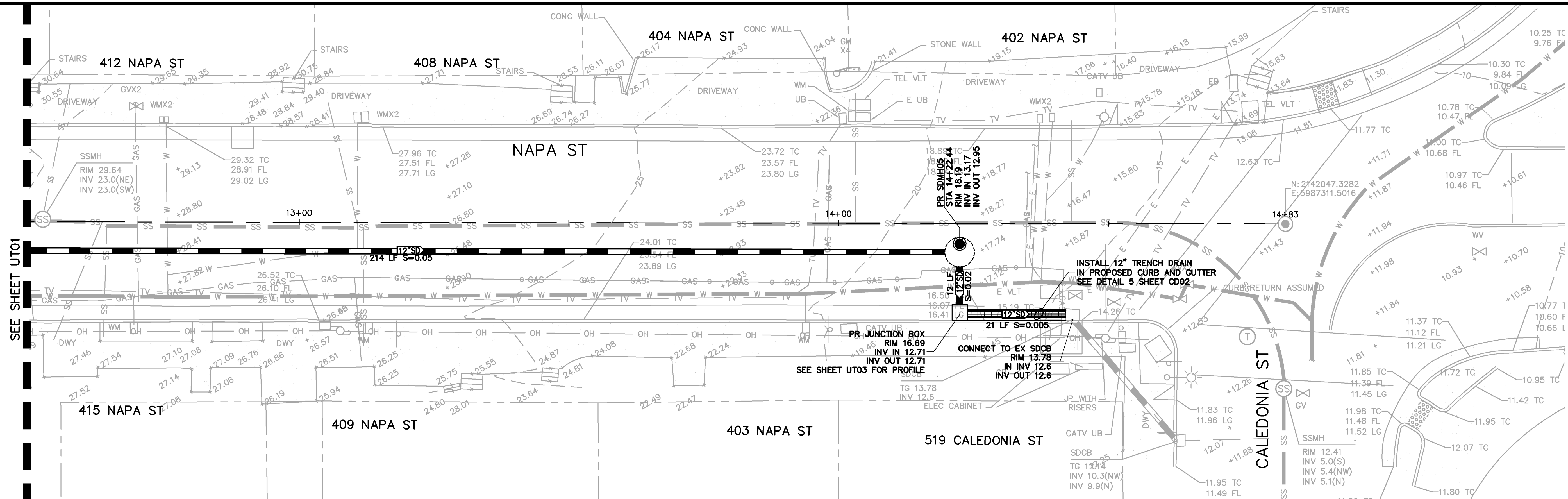
CITY OF SAUSALITO

SHEET NO.: **06** OF **12**

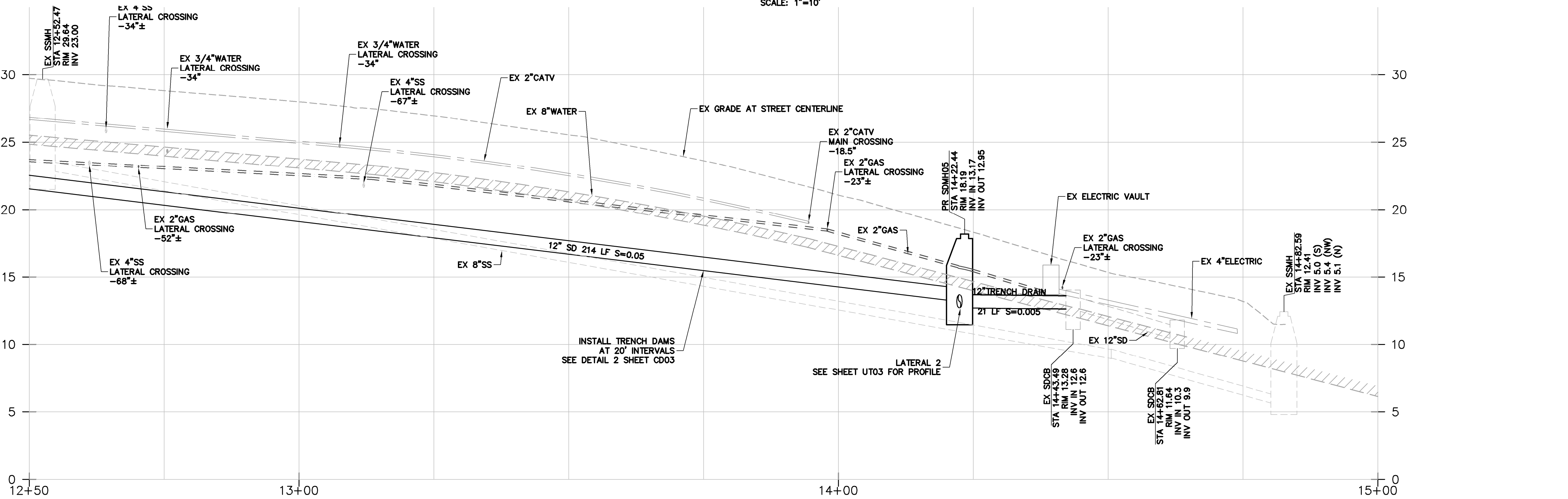
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811 Know what's below. Call before you dig.

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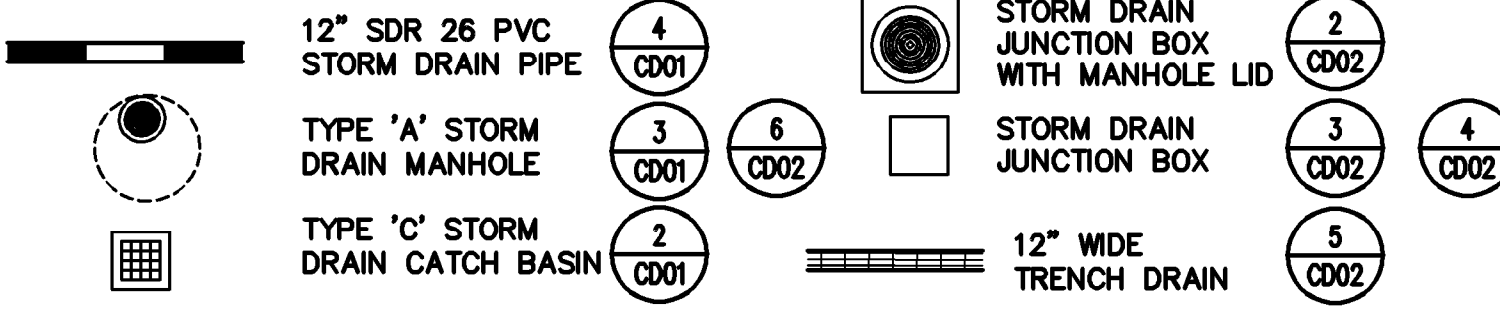


UTILITY PLAN
 SCALE: 1"=10'



UTILITY PROFILE
 SCALE: H: 1"=10'
 V: 1"=4'

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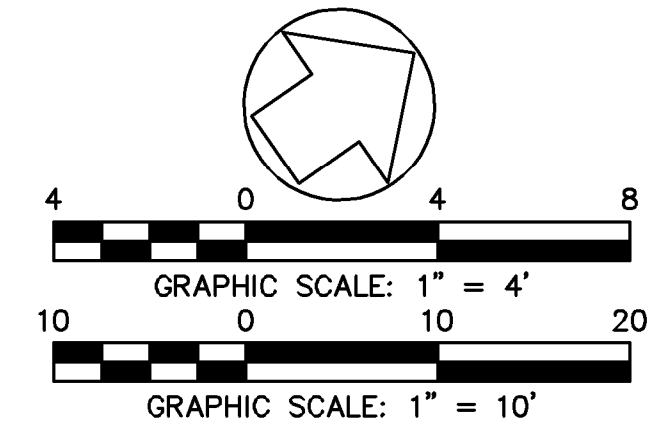


STORM DRAIN PLAN ABBREVIATIONS:

- INV INVERT ELEVATION
- LF LINEAR FEET
- PVC POLYVINYL CHLORIDE
- PR PROPOSED
- RIM RIM ELEVATION
- S SLOPE
- SD STORM DRAIN
- SDCB STORM DRAIN CATCH BASIN
- SDMH STORM DRAIN MANHOLE

STORM DRAIN PLAN NOTES:

1. EXISTING UTILITIES SHALL BE PROTECTED IN PLACE.
2. ALL PROPOSED UTILITY STRUCTURES SHALL MATCH EXISTING GRADE.
3. DEPTH OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL POTHOLE PRIOR TO START OF EXCAVATION. SEE SECTIONS 10-8 AND 10-9 OF THE SPECIFICATIONS.



NO.	DESCRIPTION	BY	DATE	APPROV



BKF
 ENGINEERS / SURVEYORS / PLANNERS

711 GRAND AVENUE
 SUITE 200
 SAN RAFAEL, CA 94801
 415-882-7880 (TEL)
 415-882-7979 (FAX)

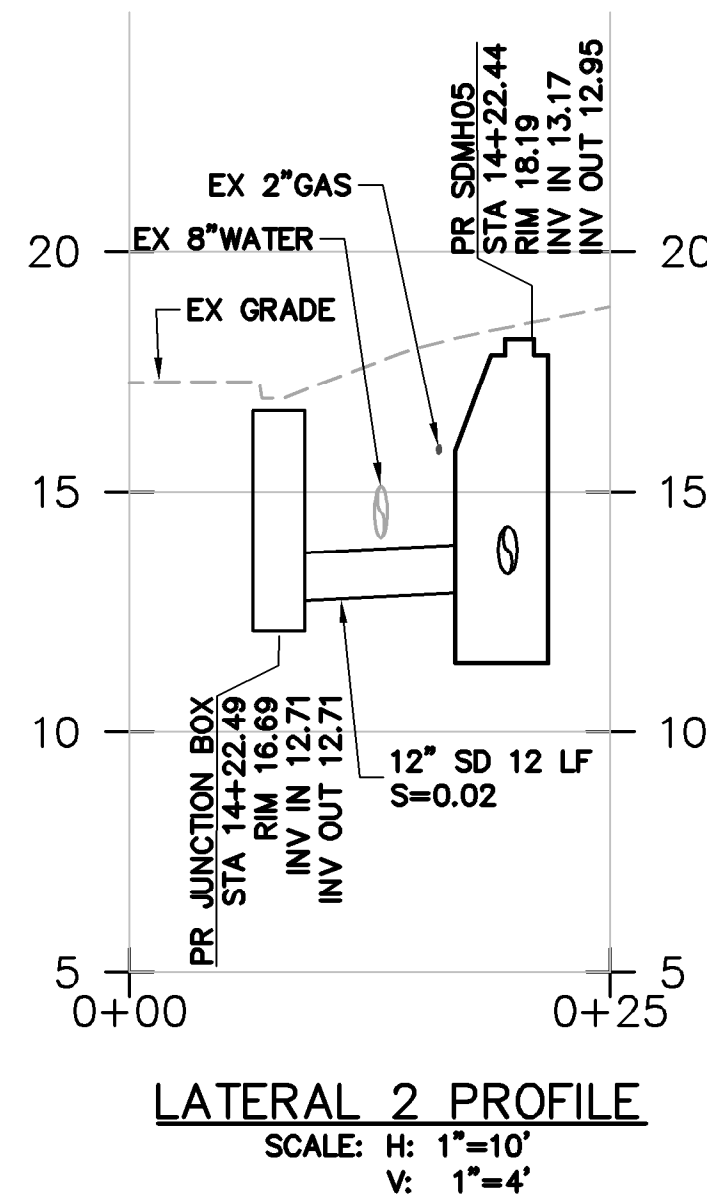
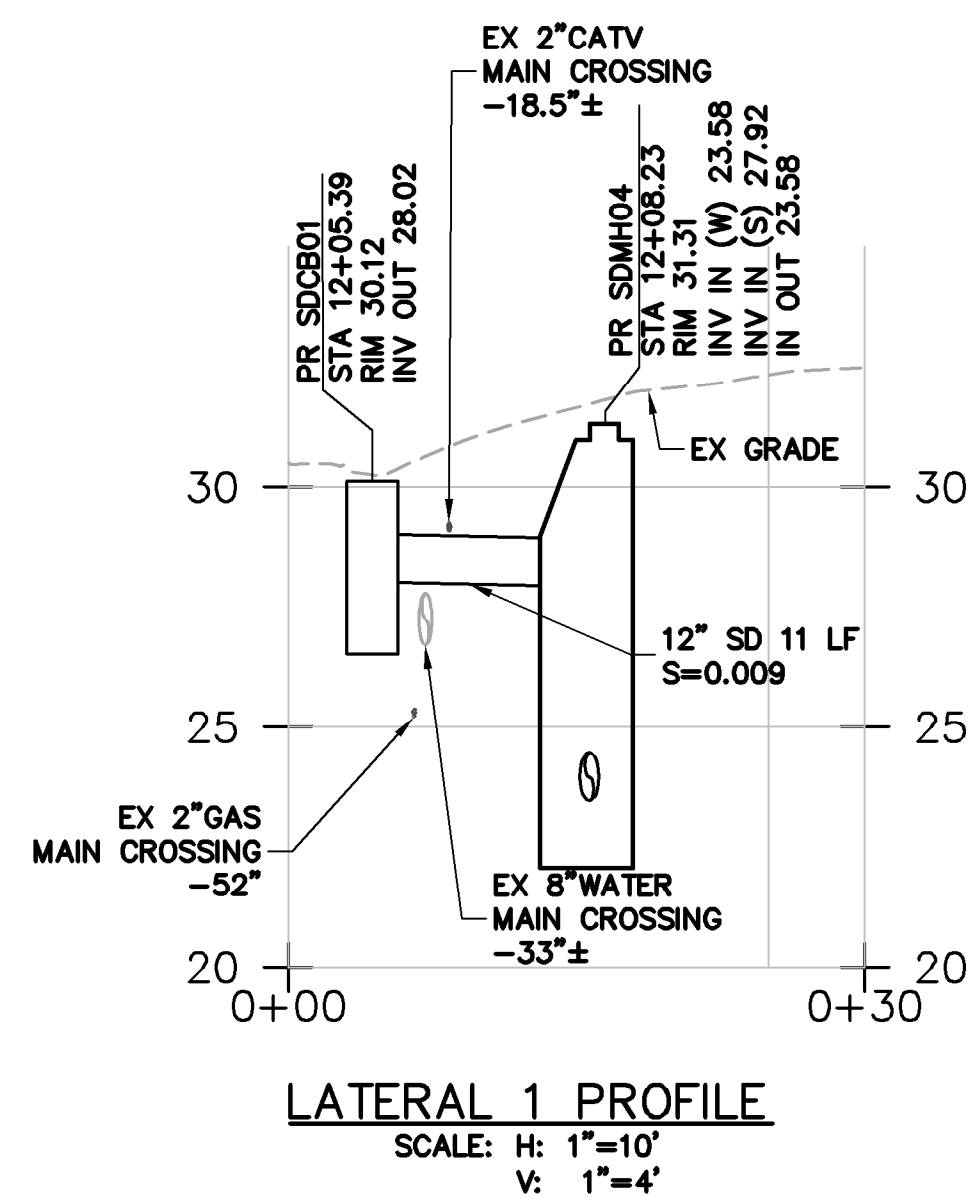
DESIGNED: C. LINDBERG
 CHECKED: D. JOHNSON
 APPROVED: D. JOHNSON

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 UTILITY PLAN AND PROFILE

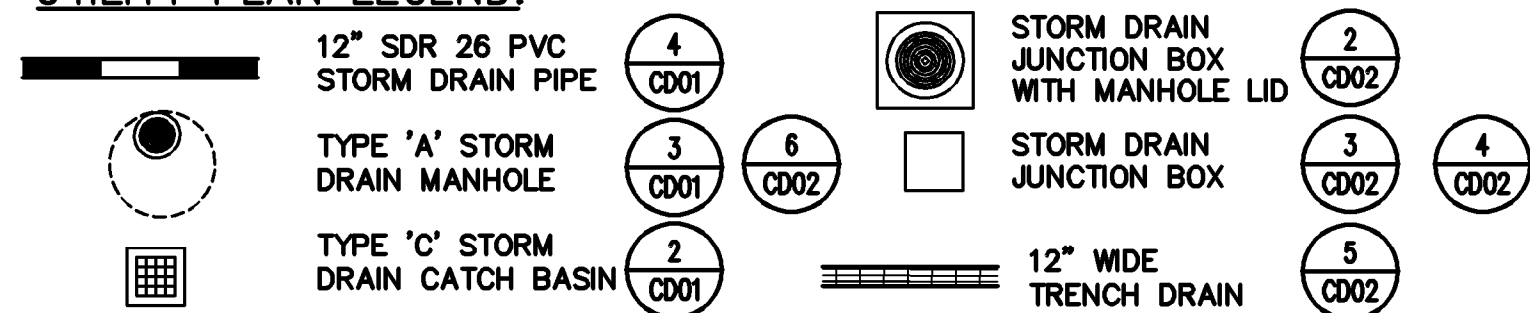
SAUSALITO MARIN COUNTY CALIFORNIA

DATE: DEC 2017 SCALE: AS SHOWN
 BKF PROJECT NO.: 20165244
 CLIENT: CITY OF SAUSALITO
 SHEET NO.: **07** OF **12**
 DRAWING NO.: **UT02**

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 Know what's below.
 Call before you dig.

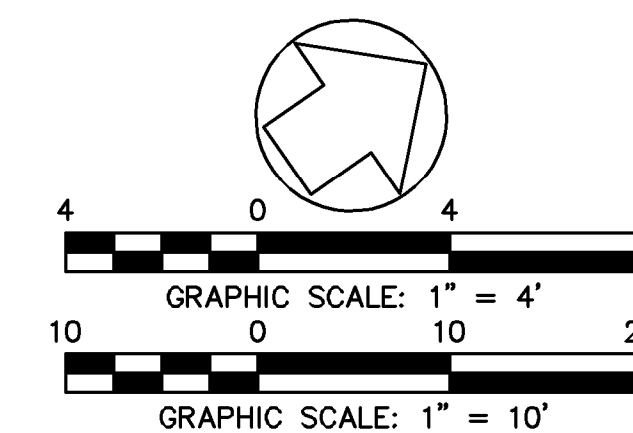


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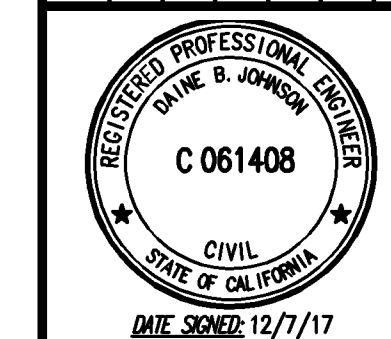


STORM DRAIN PLAN NOTES:

- EXISTING UTILITIES SHALL BE PROTECTED IN PLACE.
- ALL PROPOSED UTILITY STRUCTURES SHALL MATCH EXISTING GRADE.
- DEPTH OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL POTHOLE PRIOR TO START OF EXCAVATION. SEE SECTIONS 10-8 AND 10-9 OF THE SPECIFICATIONS.



NO.	DESCRIPTION	BY	DATE	APPVD

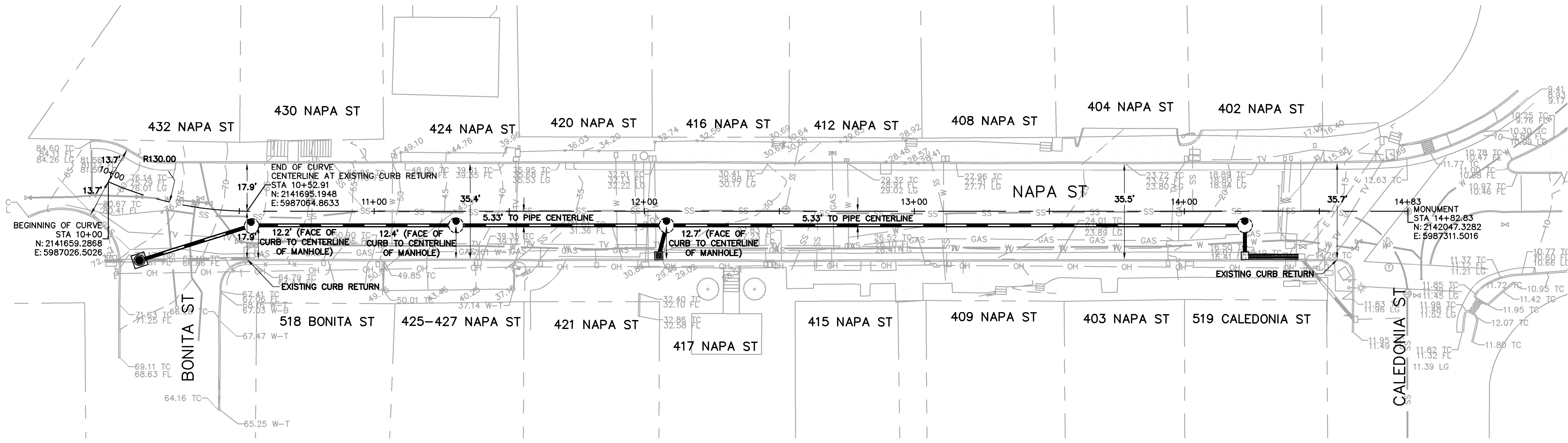


711 GRAND AVENUE SUITE 240 SAN RAFAEL, CA 94801 415-832-7800 (TEL) 415-832-7979 (FAX)	CHECKED: D. JOHNSON	APPROVED: D. JOHNSON
BKF ENGINEERS / SURVEYORS / PLANNERS	DRAWN: C. LINDBERG	DESIGNED: C. LINDBERG

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 STORM DRAIN LATERAL PROFILES
 SAUSALITO MARIN COUNTY CALIFORNIA

DATE DEC 2017	SCALE AS SHOWN
BKF PROJECT NO. 20165244	
CLIENT CITY OF SAUSALITO	
SHEET NO. 08 OF 12	
DRAWING NO. UT03	

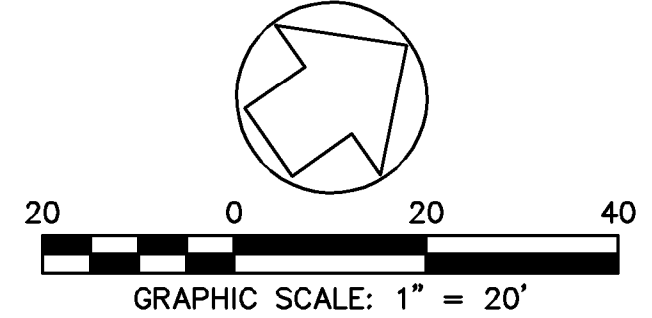
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 PLOT SCALE: 1" = 1'



HORIZONTAL CONTROL PLAN
 SCALE: 1"=20'

HORIZONTAL CONTROL ABBREVIATIONS:
 E EASTING
 N NORTHING
 R RADIUS
 STA STATION

HORIZONTAL CONTROL NOTES:
 1. MANHOLE OFFSETS ARE FROM FACE OF CURB TO CENTERLINE OF MANHOLE AT BASE. ENGINEER SHALL APPROVE IN FIELD PRIOR TO CONSTRUCTION.



NO.	DESCRIPTION	BY	DATE	APPVD



711 GRAND AVENUE SUITE 240 SAN RAFAEL, CA 94801 415-832-7880 (TEL) 415-832-7979 (FAX)	CHECKED: D. JOHNSON	APPROVED: D. JOHNSON
BKF ENGINEERS / SURVEYORS / PLANNERS	DESIGNED: C. LINDBERG	DESIGNED: C. LINDBERG

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 HORIZONTAL CONTROL PLAN
 SAUSALITO MARIN COUNTY CALIFORNIA

DATE DEC 2017	SCALE AS SHOWN
BKF PROJECT NO. 20165244	
CLIENT CITY OF SAUSALITO	
SHEET NO. 09 OF 12	
DRAWING NO. HZ01	

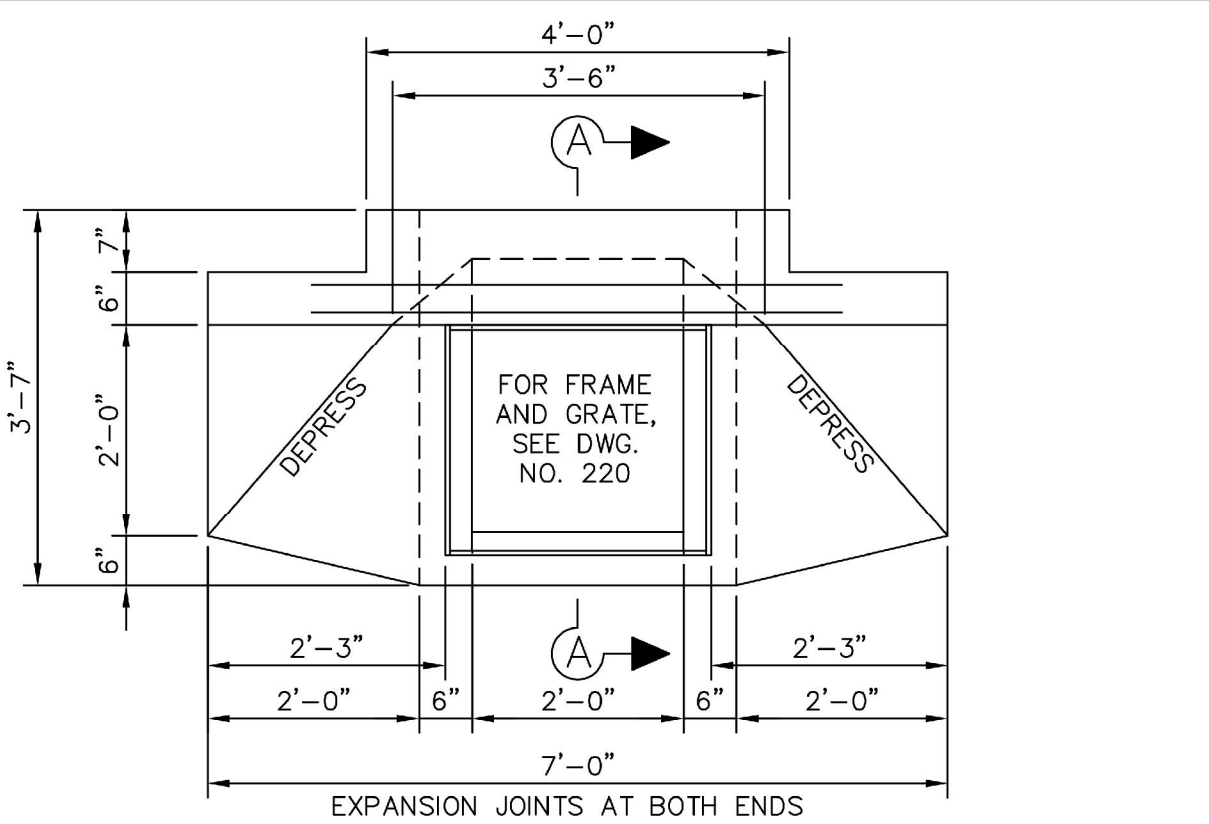
CATCH BASIN, TURNING STRUCTURE, MANHOLE AND DROP INLET NOTES

- CONCRETE SHALL BE CLASS "A" (6 SACK MIX) UNLESS OTHERWISE NOTED. STRUCTURE TOPS CAST WITH ADJACENT CURB/SIDEWALK MAY BE CLASS "B" CONCRETE.
- BASE SHALL BE PLACED AGAINST UNDISTURBED EARTH, SIDES MAY BE FORMED OR PLACED AGAINST UNDISTURBED EARTH.
- WHERE CONDUITS ARE ENCOUNTERED THAT ARE LARGER IN DIAMETER THAN THE WIDTH OF THE WALL THROUGH WHICH THEY PASS, THE INSIDE DIMENSION OF THE WALLS PERPENDICULAR TO THE DIRECTION OF THE PIPE SHALL BE INCREASED TO 12" WIDER THAN THE OUTSIDE DIAMETER OF THE PIPE.
- EXPANSION JOINTS SHALL BE PLACED THROUGH CURB AND SIDEWALK AT BOTH SIDES OF CATCH BASINS AND SHALL BE LIMIT OF PAYMENT FOR CURB AND GUTTER. UNIT PRICES FOR DRAINAGE STRUCTURES SHALL INCLUDE CURB, GUTTER AND SIDEWALK POURED WITH DRAINAGE STRUCTURE.
- NO CONCRETE SHALL BE PLACED PRIOR TO FORM AND STEEL APPROVAL BY THE AGENCY ENGINEER.
- SEE DRAWING NO. 215 FOR STEP (AS REQUIRED BY AGENCY ENGINEER) AND MANHOLE CASTING DETAIL.
- SEE DRAWING NO. 220 FOR CATCH BASIN GRATE DETAIL.
- WALL THICKNESS, REINFORCING, AND STEP (AS REQUIRED BY AGENCY ENGINEER) REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE TABLE BELOW, UNLESS OTHERWISE INDICATED BY THE PROJECT PLANS OR DIRECTED BY THE AGENCY ENGINEER.
- PLACE 2" WEEPHOLES AS REQUIRED BY THE AGENCY ENGINEER.
- EQUIVALENT PRECAST STRUCTURES MAY BE SUBSTITUTED AS APPROVED BY THE AGENCY ENGINEER.
- WALL THICKNESS SHALL NOT EXCEED 10" ON ANY STRUCTURE.
- PRECAST INLETS AND MANHOLES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS AND BE DESIGNED TO WITHSTAND H-20 LOADING.

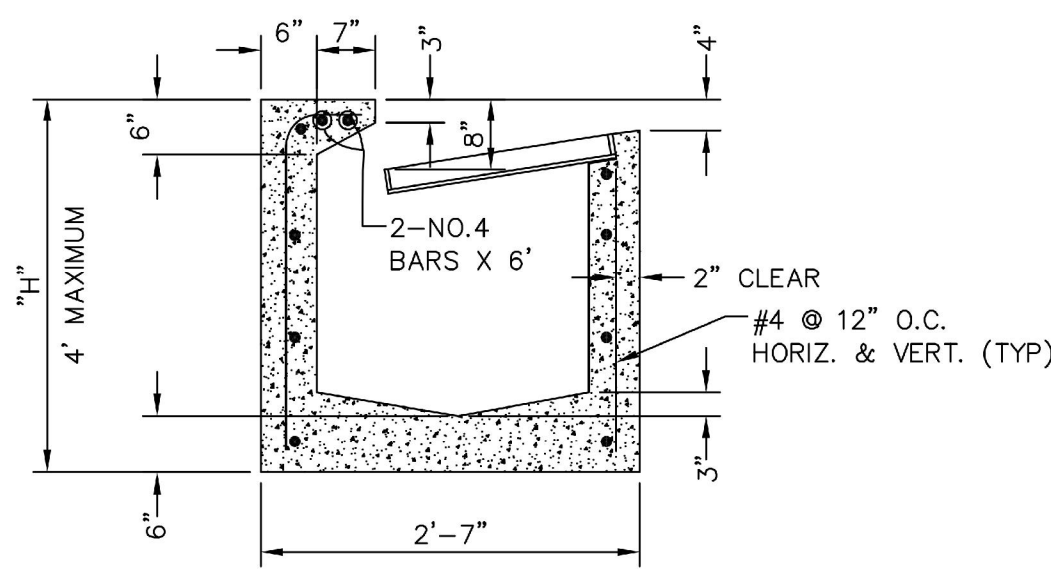
DEPTH	WALL THICKNESS (SEE NOTE #11)	WALL REINFORCEMENT	STEPS REQUIRED
LESS THAN 3'	6"	NO. 4 AT 12" BOTH WAYS	NO
LESS THAN 3'	8"	NONE OUTSIDE ROADWAY, NO. 4 AT 12" BOTH WAYS WITHIN OR ADJACENT TO ROAD.	NO
3' TO 8'	6"	NO. 4 AT 12" BOTH WAYS	AS REQUIRED BY THE AGENCY ENGINEER
OVER 8'	8"	NO. 4 AT 12" BOTH WAYS	AS REQUIRED BY THE AGENCY ENGINEER

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	NOTES FOR CATCH BASIN, MANHOLE, DROP INLET & TURNING STRUCTURE	REV.	DATE	BY	MAY 2008 DWG. NO. 200
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1 COUNTY OF MARIN STORM DRAIN UTILITY NOTES
NO SCALE



PLAN

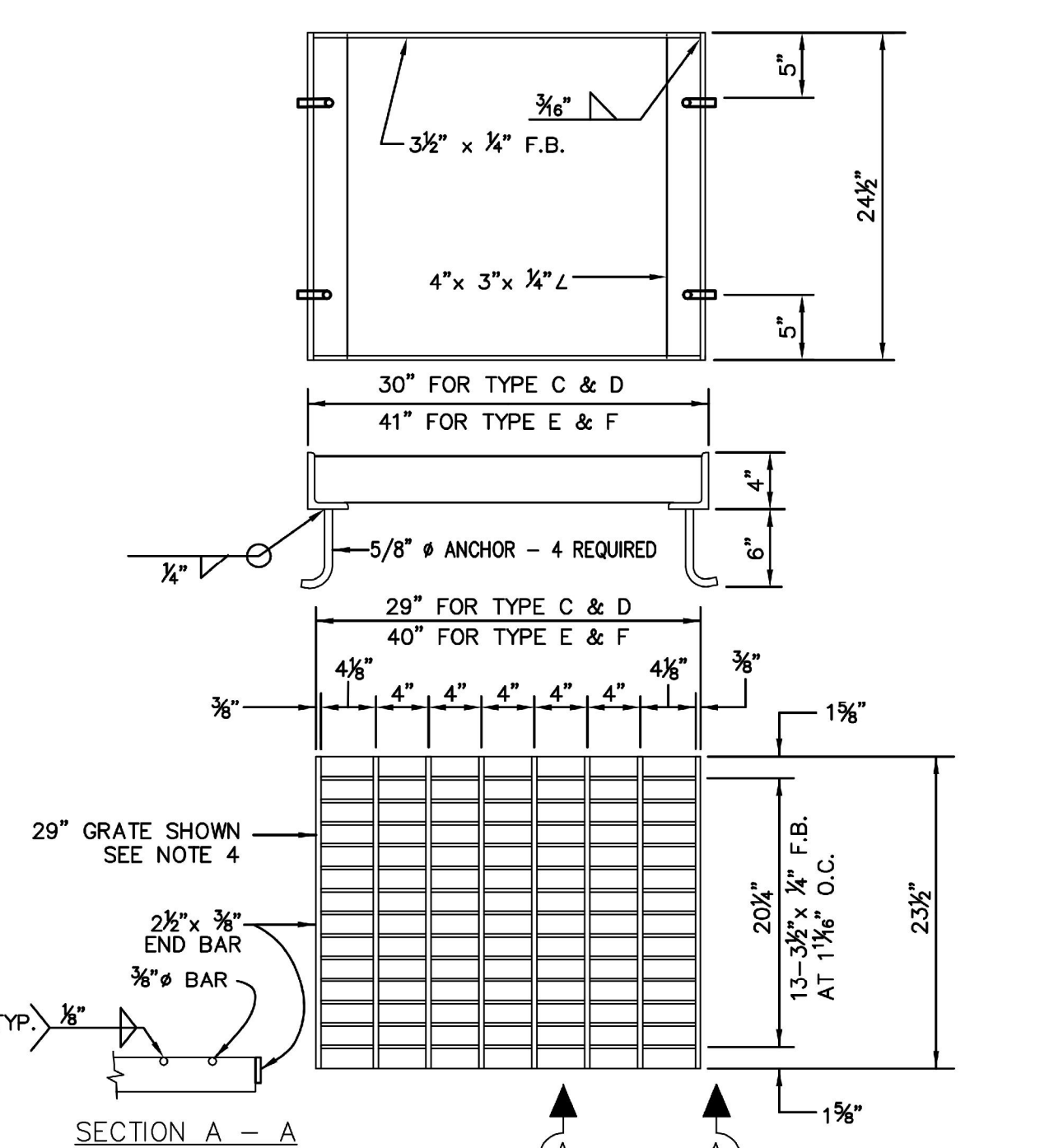


SECTION A - A

NOTE: SEE DRAWING NO. 200 FOR GENERAL NOTES

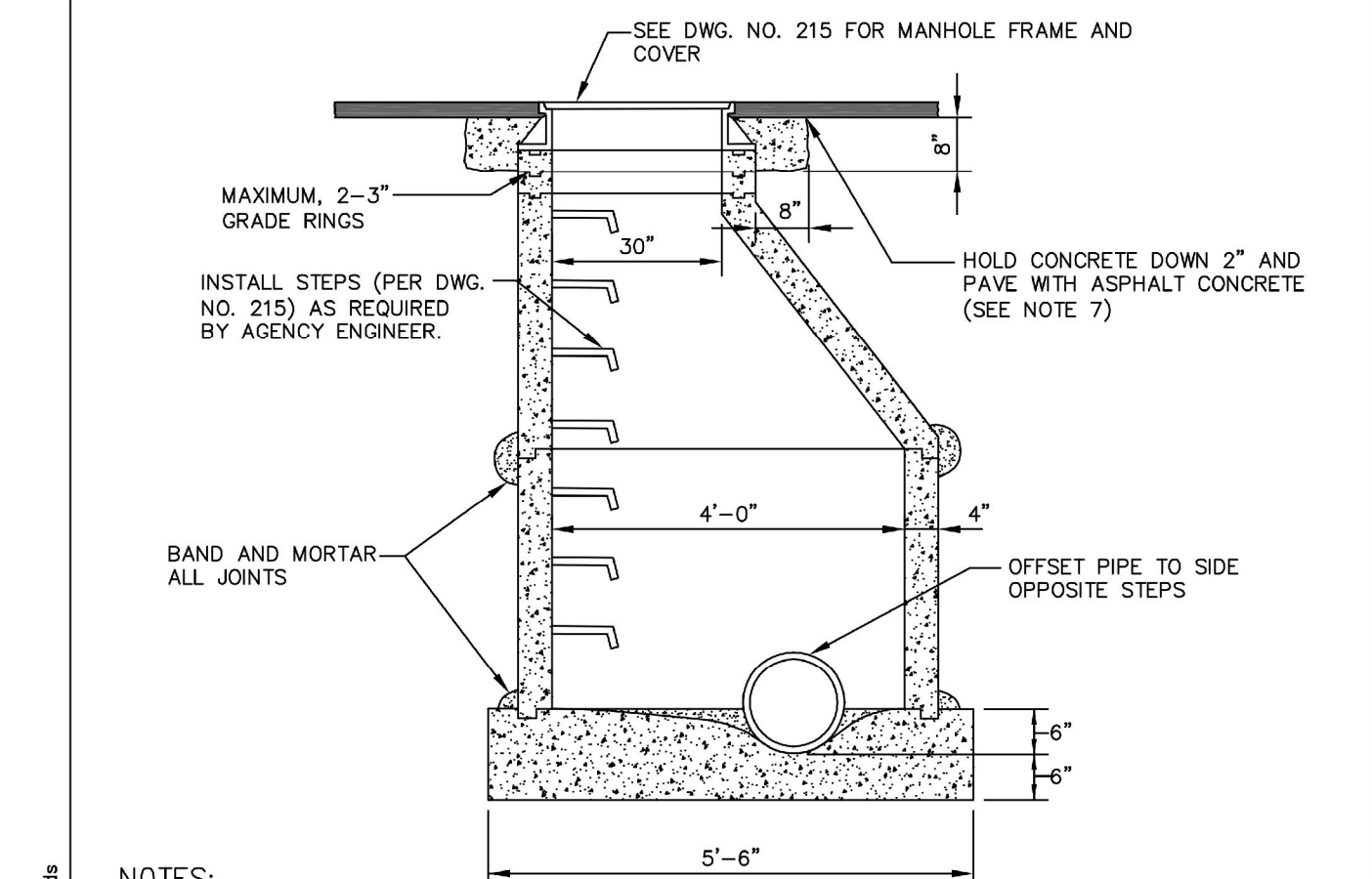
UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	TYPE "C" CATCH BASIN	REV.	DATE	BY	MAY 2008 DWG. NO. 235
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2 TYPE 'C' CATCH BASIN
NO SCALE



- NOTES:
- ALL STEEL SHALL BE STRUCTURAL GRADE.
 - ALL STEEL SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
 - TOP AND BOTTOM SURFACES OF GRATE SHALL BE GROUND FLUSH AFTER WELDING.
 - FOR 40" GRATE USE STATE STD. GRATE TYPE 24-9 OR 24-12.
 - FOR GRATES IN A PEDESTRIAN PATH OF TRAVEL, GRATE OPENINGS SHALL BE 1/2" PERPENDICULAR TO THE WALKING DIRECTION.

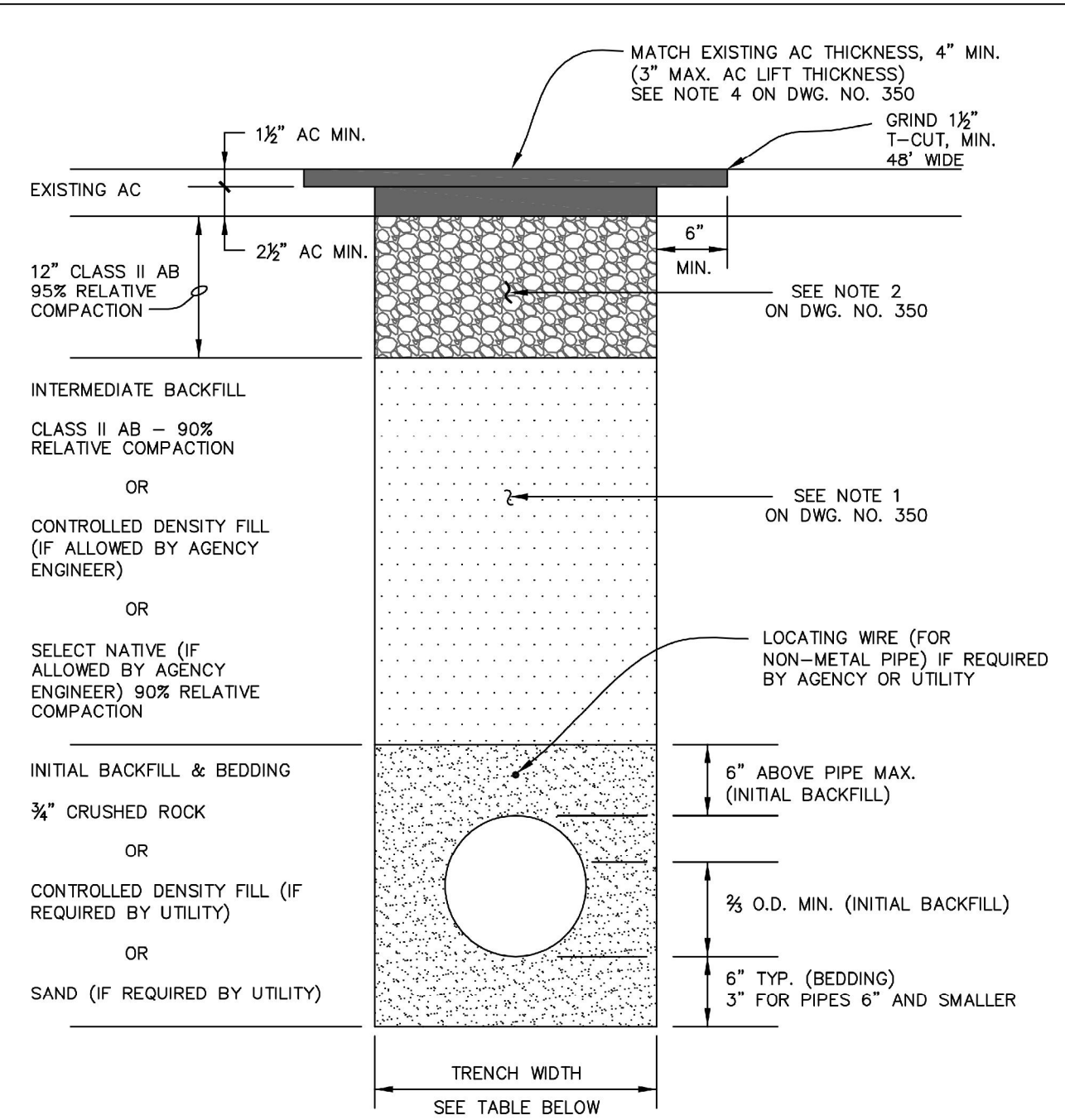
UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	CATCH BASIN GRATE DETAIL	REV.	DATE	BY	MAY 2008 DWG. NO. 220
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- NOTES:
- BASE SHALL BE CLASS "B" (5 SACK) CONCRETE PLACED AGAINST UNDISTURBED EARTH.
 - CONDUIT SHALL BE LAID THROUGH MANHOLE WHENEVER POSSIBLE.
 - CONCRETE CHANNELS SHALL BE BRUSH FINISHED.
 - PRECAST BARREL AND ECCENTRIC CONE SHALL CONFORM TO ASTM SPECIFICATION C-478 EXCEPT THAT TYPE II CEMENT SHALL BE USED.
 - MORTAR JOINTS SHALL BE 2 PARTS SAND TO 1 PART CEMENT.
 - MANHOLE FRAME MAY BE ADJUSTED EITHER BEFORE OR AFTER PAVING, BUT THE FINAL GRADE OF THE FRAME MUST MATCH THAT OF THE PAVING WITHIN 1/4".
 - WHERE FRAME IS SET AFTER PAVING, EXPOSED CONCRETE SURFACES WILL NOT BE ALLOWED EXCEPT AS PERMITTED BY AGENCY ENGINEER IN WRITING.
 - COLLAR SHALL BE CLASS "B" (5 SACK) CONCRETE.
 - NO CONCRETE SHALL BE PLACED PRIOR TO FORM INSPECTION BY THE AGENCY ENGINEER.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	TYPE "A" MANHOLE (6" THROUGH 18" DIA. PIPE)	REV.	DATE	BY	MAY 2008 DWG. NO. 205
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3 TYPE 'A' STORM DRAIN MANHOLE
NO SCALE

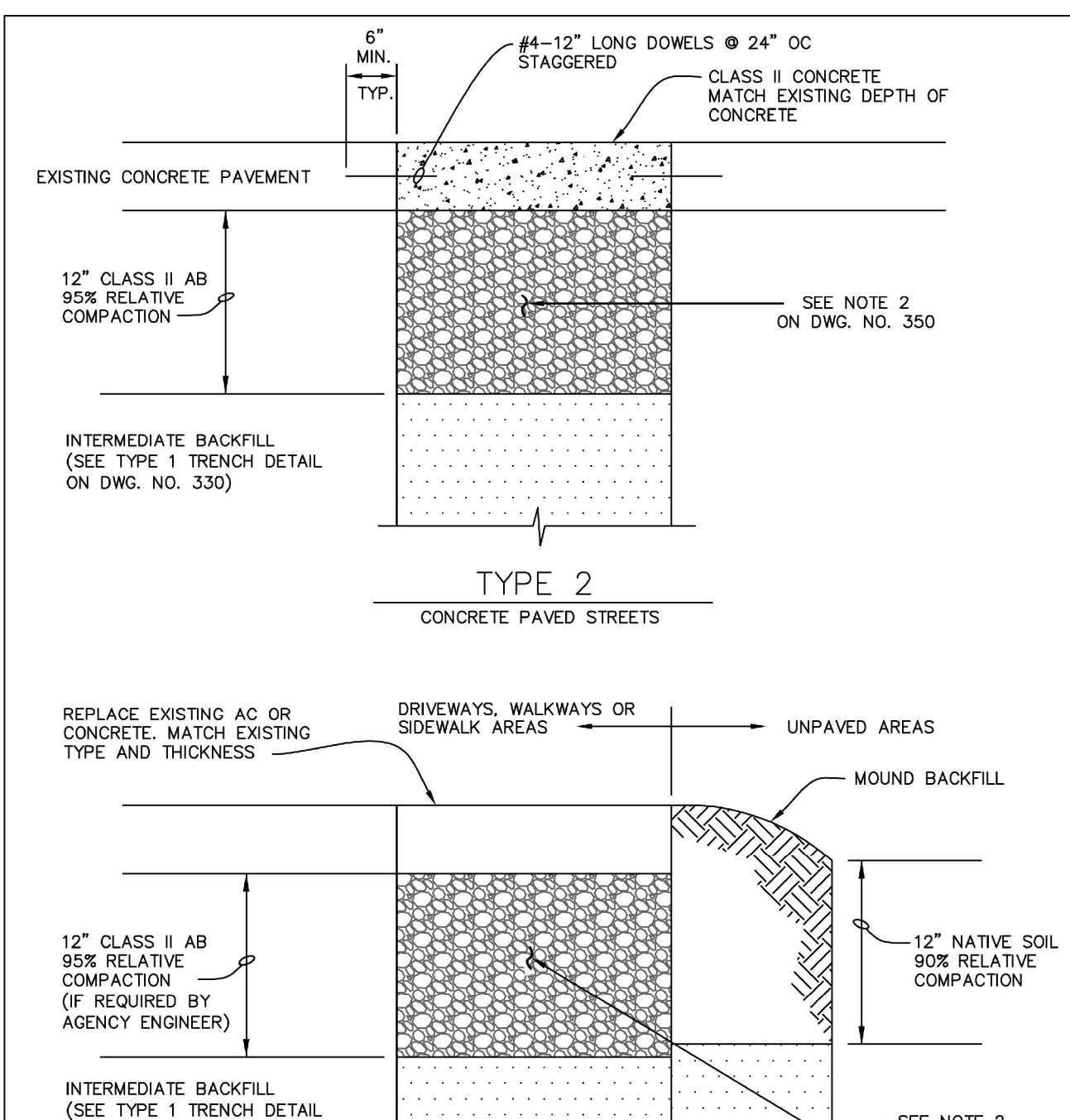


NOTE: WHERE ROADWAY HAS EXISTING AC OVER CONCRETE, CONTRACTOR SHALL MATCH EXISTING SECTION

CONDUIT SIZE	LESS THAN 6"	6" TO 24"	OVER 24" TO 60"	OVER 60"
TRENCH WIDTH	O.D. + 12"	O.D. + 24"	O.D. + 24"	O.D. + 24"

FOR PIPES WITH MORE THAN 36" OF COVER, THE AGENCY ENGINEER MAY ALLOW A REDUCED TRENCH WIDTH INCLUDING A CHANGE TO A SELF-COMPACTING ENGINEERED TYPE OF INITIAL BACKFILL MATERIAL.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	TRENCH DETAILS SHEET 1 OF 3	REV.	DATE	BY	MAY 2008 DWG. NO. 330
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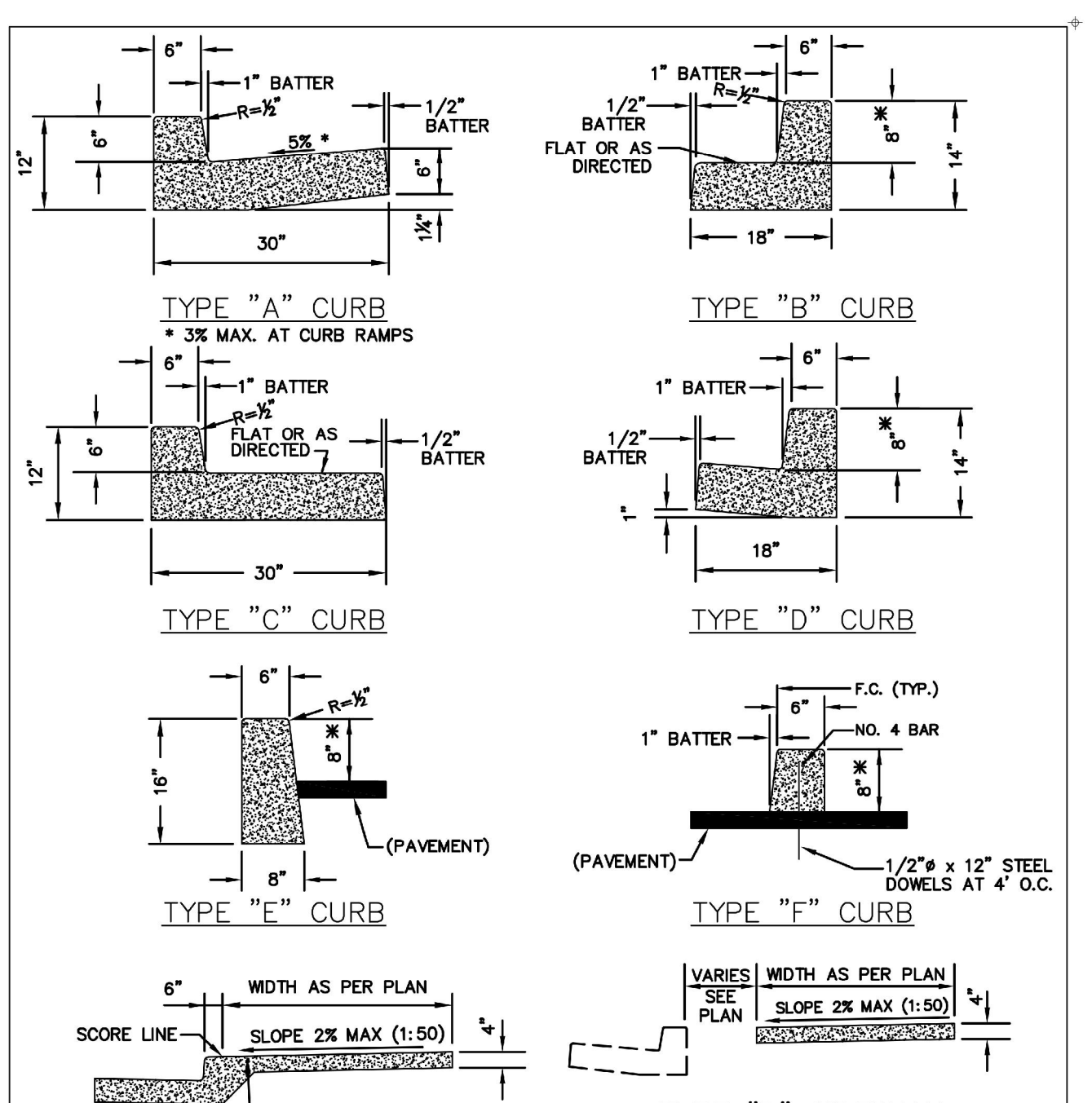
NOTE: FOR TRENCHES IN UNPAVED SHOULDERS, TOP 12" SHALL BE CLASS II AB 95% RELATIVE COMPACTION.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	STANDARD TRENCH BACKFILL & RESURFACING SHEET 2 OF 3	REV.	DATE	BY	MAY 2008 DWG. NO. 340
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4 TYPICAL TRENCH SECTION
NO SCALE

- MATERIAL AND COMPACTION REQUIREMENT FOR TRENCH BACKFILL
- INTERMEDIATE BACKFILL SHALL BE CLASS II AGGREGATE BASE. SUITABLE NATIVE OR IMPORTED GRANULAR MATERIAL MAY BE USED IF ALLOWED BY AGENCY ENGINEER. RELATIVE COMPACTION SHALL BE AT LEAST 90%.
 - CLASS II AGGREGATE BASE SHALL CONFORM TO THE STATE STANDARD SPECIFICATIONS. MINIMUM RELATIVE COMPACTION SHALL BE 95%. IF PAVEMENT HAVING A STRUCTURAL SECTION GREATER THAN 15" IS CUT, ADDITIONAL BASE MATERIAL MAY BE REQUIRED BY THE AGENCY ENGINEER. BASE SHALL BE PLACED AND COMPACTED PRIOR TO PLACING OF TEMPORARY PAVING.
 - TESTING OF MATERIALS AND PERFORMANCE SHALL BE IN CONFORMANCE WITH THE METHODS STATED IN THE LATEST EDITION OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, EXCEPT THAT RELATIVE COMPACTION MAY BE TESTED BY AASHTO METHOD T180, ASTM D-1557, OR TEST METHOD CALIF. 231 (NUCLEAR DENSITOMETER).
 - PLACE AC IN 3" MAX. LIFTS, EXCEPT FINAL LIFT SHALL BE 2 1/2" MAX. ADDITIONAL THICKNESS AND LIFTS OF ASPHALT CONCRETE MAY BE REQUIRED TO MATCH EXISTING STRUCTURAL SECTION ON MAJOR ROADS, OR PER LOCAL JURISDICTION REQUIREMENTS.
 - "JETTING" OF BACKFILL MATERIAL IS NOT PERMITTED.
 - THE USE OF PEA GRAVEL (OR SIMILAR ROUNDED AGGREGATE), IS NOT PERMITTED.
 - THE USE OF CONTROLLED DENSITY FILL (CDF) SHALL BE APPROVED BY THE AGENCY ENGINEER PRIOR TO PLACEMENT.
 - TRENCH EDGES SHALL BE TRIMMED TO A NEAT LINE AS REQUIRED BY THE AGENCY ENGINEER. TRIMMING SHALL BE BY SAWCUT OR ROTARY GRINDER.
 - THE SURFACE COURSE OF TRENCH RESTORATION SHALL EXTEND TO THE LIP OF GUTTER IF THE EDGE OF TRENCH IS WITHIN 4" OF THE LIP OF GUTTER, AND TO THE EDGE OF PAVEMENT IF THE EDGE OF TRENCH IS WITHIN 4" OF AN UNPAVED SHOULDER.
 - CONTRACTOR MUST SHORE ALL TRENCHES IN CONFORMANCE WITH OSHA AND STATE SAFETY STANDARDS.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	TRENCH NOTES SHEET 3 OF 3	REV.	DATE	BY	MAY 2008 DWG. NO. 350
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NOTE: 1. SEE DRAWING NO. 100 FOR GENERAL REQUIREMENTS.
2. * 8" CURB HEIGHT UNLESS 6" HEIGHT APPROVED BY AGENCY ENGINEER.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	CURB, GUTTER AND SIDEWALK DETAILS	REV.	DATE	BY	MAY 2008 DWG. NO. 105
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5 CURB AND GUTTER
NO SCALE

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PLOT SCALE: 1 = 1
VIEWPORT ROTATION: XX

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPROV

REGISTERED PROFESSIONAL ENGINEER
DAVE B. JOHNSON
CIVIL
STATE OF CALIFORNIA
C 061408
DATE SIGNED: 12/7/17

711 GRAND AVENUE
SUITE 200
SAN RAFAEL, CA 94901
415-882-7880 (TEL)
415-882-7979 (FAX)

ENGINEERS / SURVEYORS / PLANNERS
CHECKED: C. LINDBERG
APPROVED: D. JOHNSON
DRAWN: C. LINDBERG
DESIGNED: D. JOHNSON

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
CITY OF SAUSALITO
CONSTRUCTION DETAILS

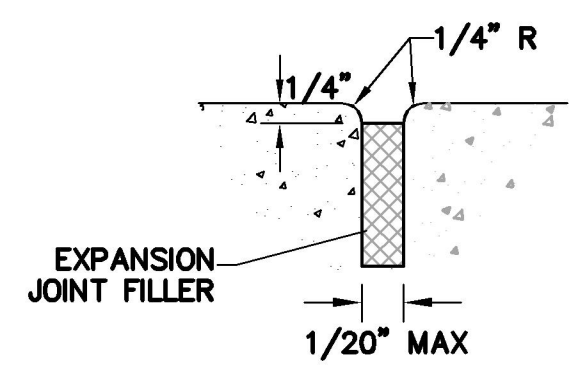
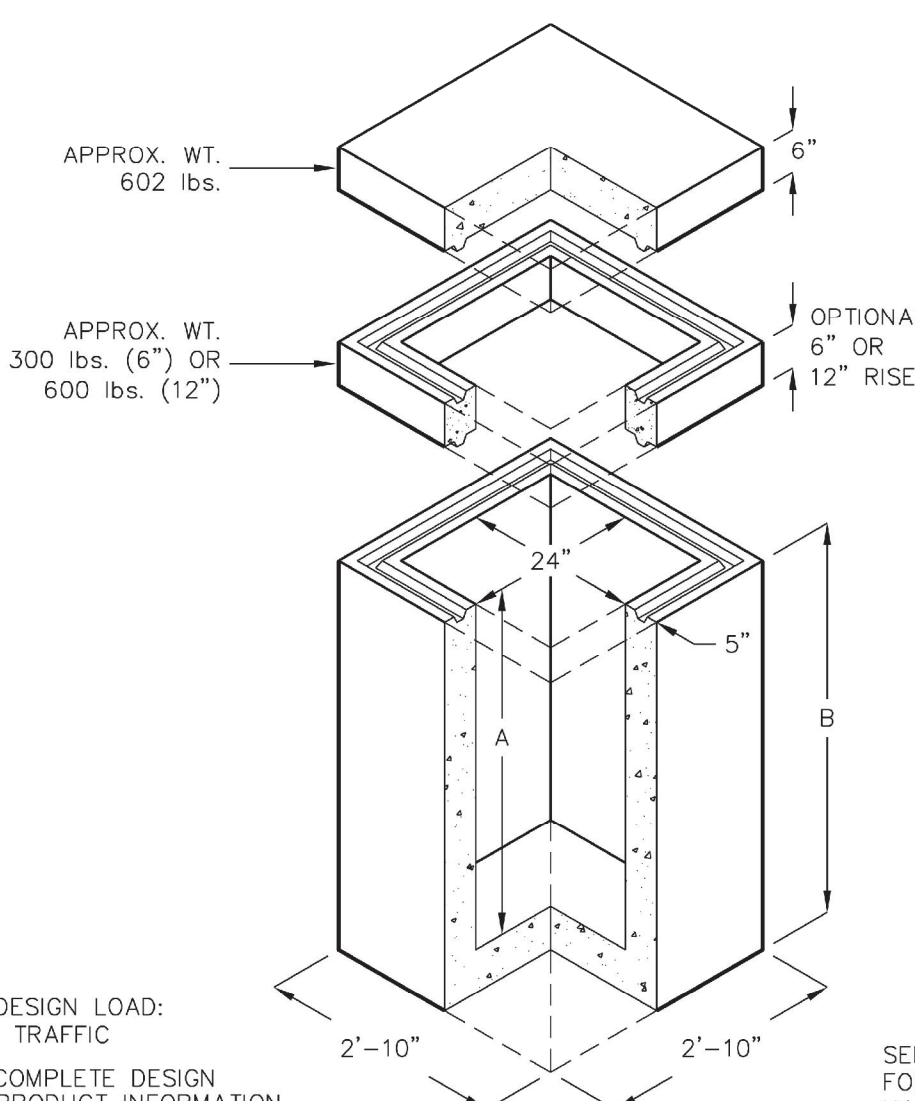
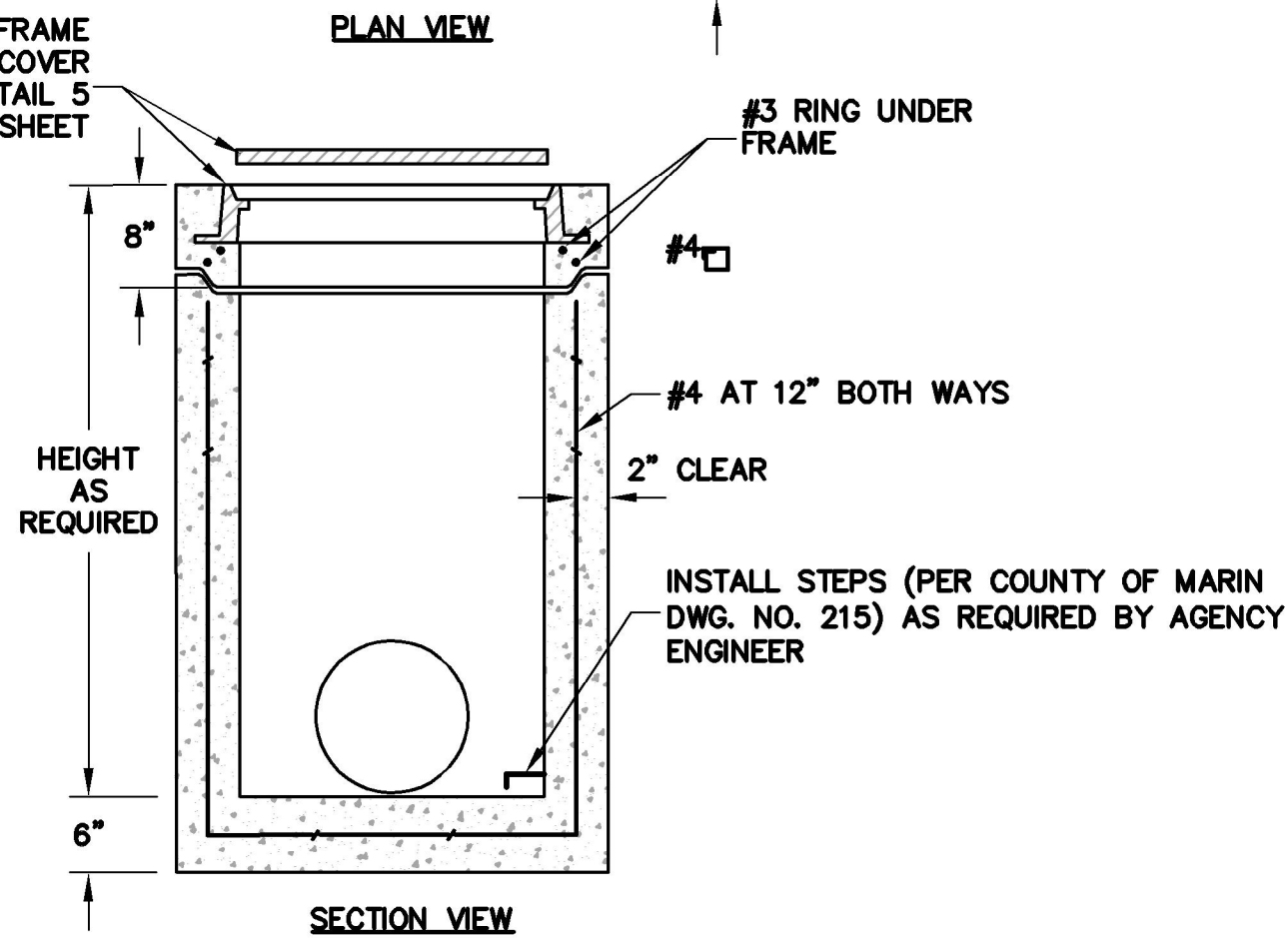
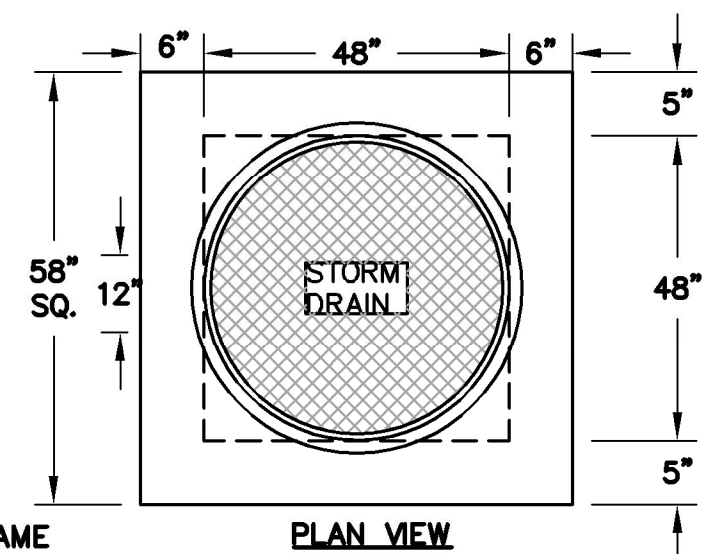
SAUSALITO
MARIN COUNTY
CALIFORNIA

DATE	DEC 2017	SCALE	AS SHOWN
BKF PROJECT NO.	20165244		
CLIENT	CITY OF SAUSALITO		
SHEET NO.	10	OF	12
DRAWING NO.	CD01		

K:\2016\165244_Sausalito_Napa\ENCS\Drawings\CD01.dwg 12-07-17 12:07:12 PM john
 PLOT SCALE: 1 = 1'

MODEL 2424-U

24" INSIDE WIDTH X 24" INSIDE LENGTH



NOTES:
 1. CONTRACTOR SHALL INSTALL EXPANSION JOINT AT STORM DRAIN JUNCTION BOX

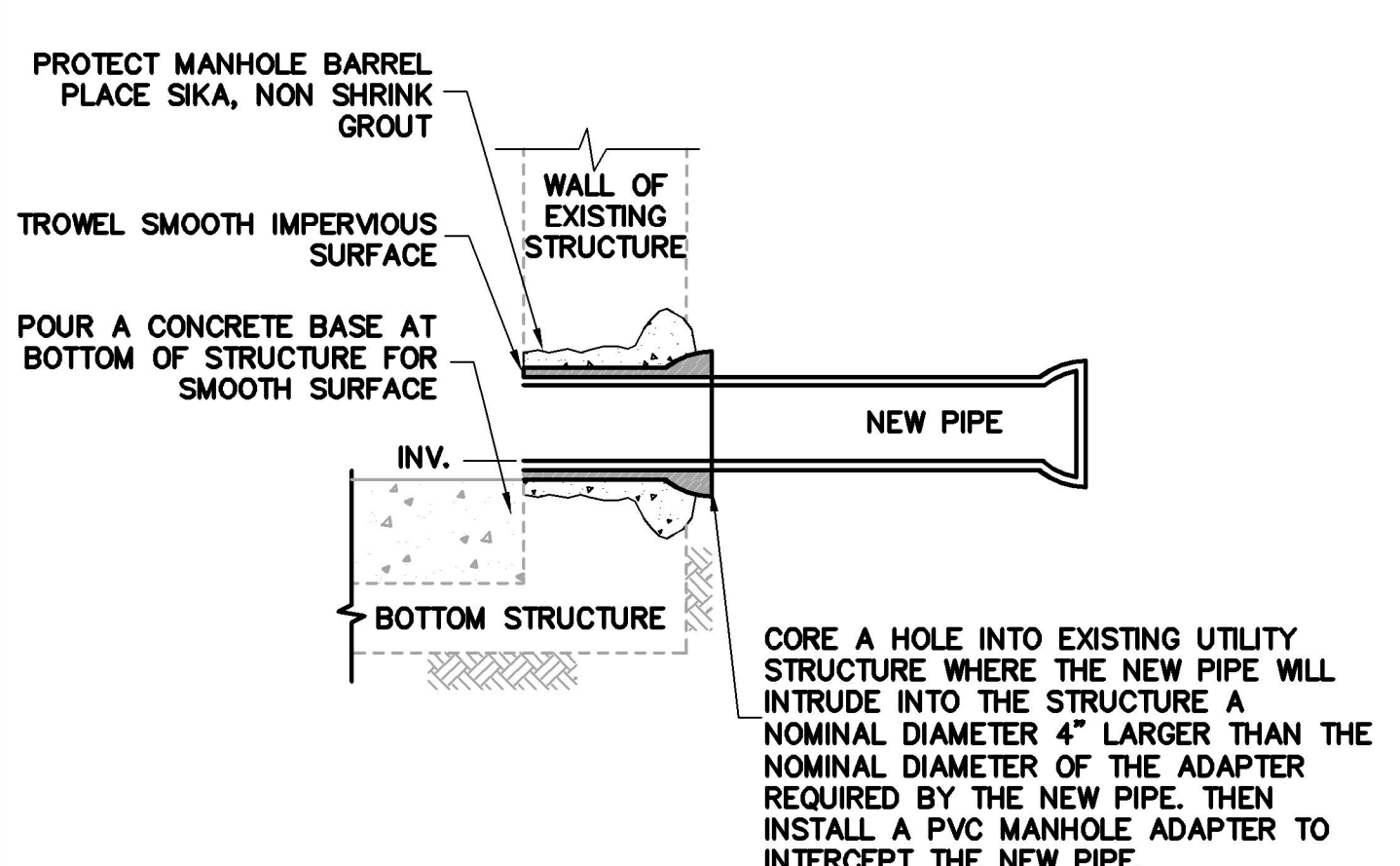
4 EXPANSION JOINT
 NO SCALE

MODEL	A	B	INSIDE VOLUME	APPROX. WT.
2424U-36	3'-0"	3'-6"	12 CU. FT.	89 GAL. 2415 LBS.
2424U-48	4'-0"	4'-6"	16 CU. FT.	133 GAL. 3019 LBS.

1/17/03
 2424_U.dwg
 © 2003 Jensen Precast

JENSEN PRECAST

3 STORM DRAIN JUNCTION BOX (AT TRENCH DRAIN)
 NO SCALE

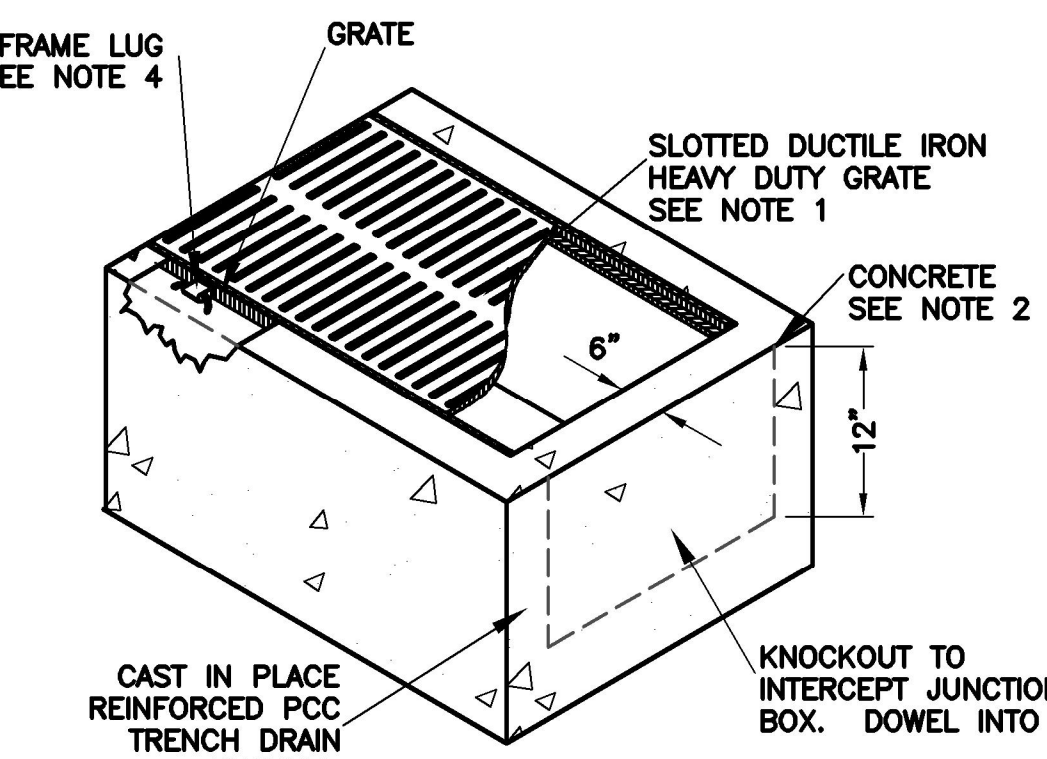
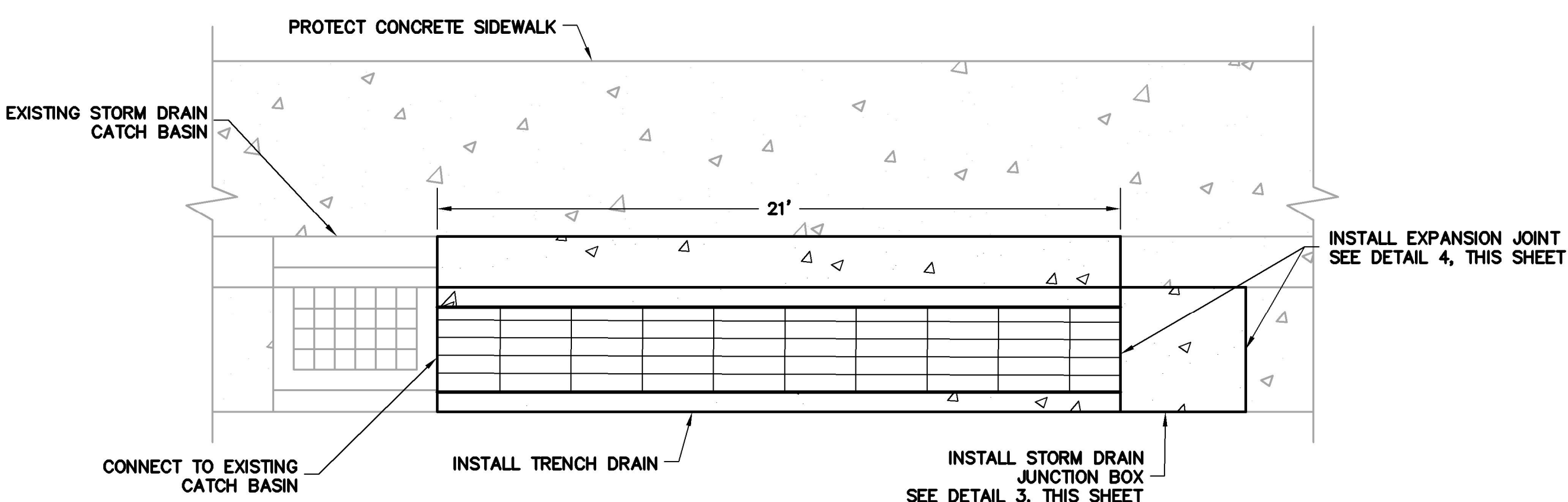


NOTES:
 1. PRECAST UNIT DESIGNED TO BEAR FULL TRAFFIC LOADING.
 2. DIMENSIONS BASED ON COUNTY OF MARIN DRAWING 260; 'DROP INLET AND TURNING STRUCTURE'
 3. LENGTHS AND WIDTHS WILL VARY AS NECESSARY TO ACCOMMODATE SIZE AND ANGLES OF CONNECTING PIPES
 4. SEE SHEET CD01 DETAIL 1 FOR WALL THICKNESS (T), REINFORCING AND STEP REQUIREMENTS.

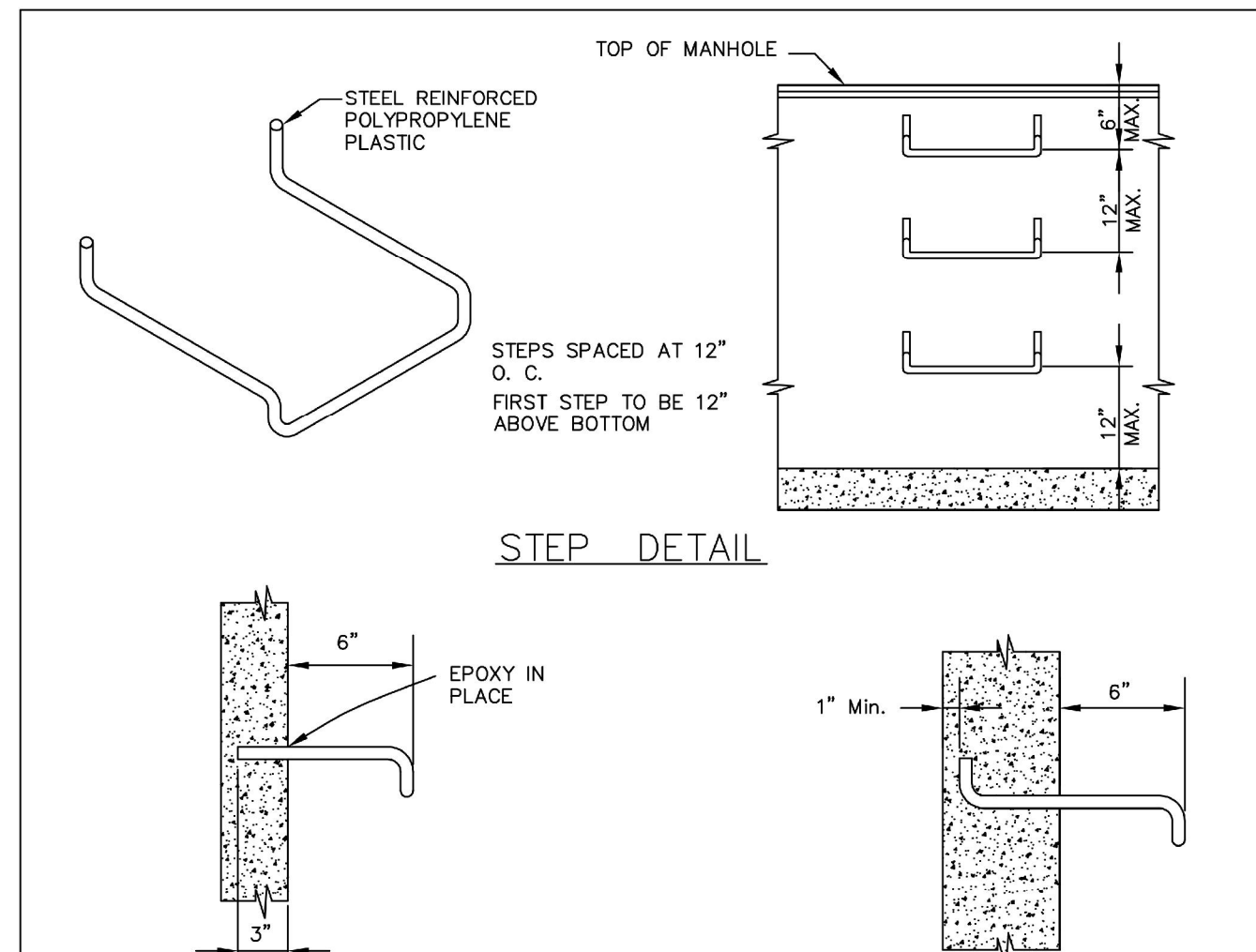
NOTES:
 1. CONTRACTOR SHALL CHIP OUT STRUCTURE AS NECESSARY TO FIT PIPE

1 CONNECTION TO EXISTING STRUCTURE
 NO SCALE

2 STORM DRAIN JUNCTION BOX WITH MANHOLE LID (AT CULVERT)
 NO SCALE



NOTES:
 1. ALL FRAMES AND GRATES SHALL BE H20 TRAFFIC LOADING RATED AND BICYCLE COMPLIANT. ALL GRATES SHALL HAVE LOCKING DEVICE.
 2. CONCRETE SHALL BE MINIMUM 3000 PSI.
 3. REBAR MUST HAVE 2 1/2" MINIMUM CLEAR FROM EXTERIOR.
 4. TRENCH DRAIN FRAMES MUST HAVE LUGS SPACED AT 12" ON CENTER. LUG TYPE MAY VARY BY MANUFACTURER. LUGS SHALL BE PROVIDED WITH A HOLE THROUGH WHICH A #3 REBAR MAY BE PLACED PRIOR TO POURING THE TRENCH WALLS.
 5. GRATES SHALL BE SOLIDLY ATTACHED TO THE TRENCH DRAIN FRAMES BY MEANS OF STAINLESS STEEL BOLTS (3/8"-16 X 2 3/4") AND FLAT WASHERS AT EACH CORNER OF THE GRATE.
 6. THE GENERAL INSTALLATION PROCEDURE FOR CAST-IN-PLACE TRENCH DRAINS SHALL BE AS FOLLOWS:
 A. SET REINFORCING STEEL.
 B. FORM AND POUR TRENCH DRAIN BASE.
 C. SET FORMS FOR TRENCH DRAIN WALLS.
 D. SET TRENCH GRATES AND FRAMES INTO PLACE ON THE FORMS. GRATES MUST BE BOLTED TO THE FRAMES. INSERT SHORT SECTIONS OF #3 REBAR AS NEEDED INTO THE FRAME LUGS.
 E. POUR TRENCH DRAIN WALLS.



PRECAST WALL
 STEPS SHALL BE CAST INTO WALL AT FACTORY

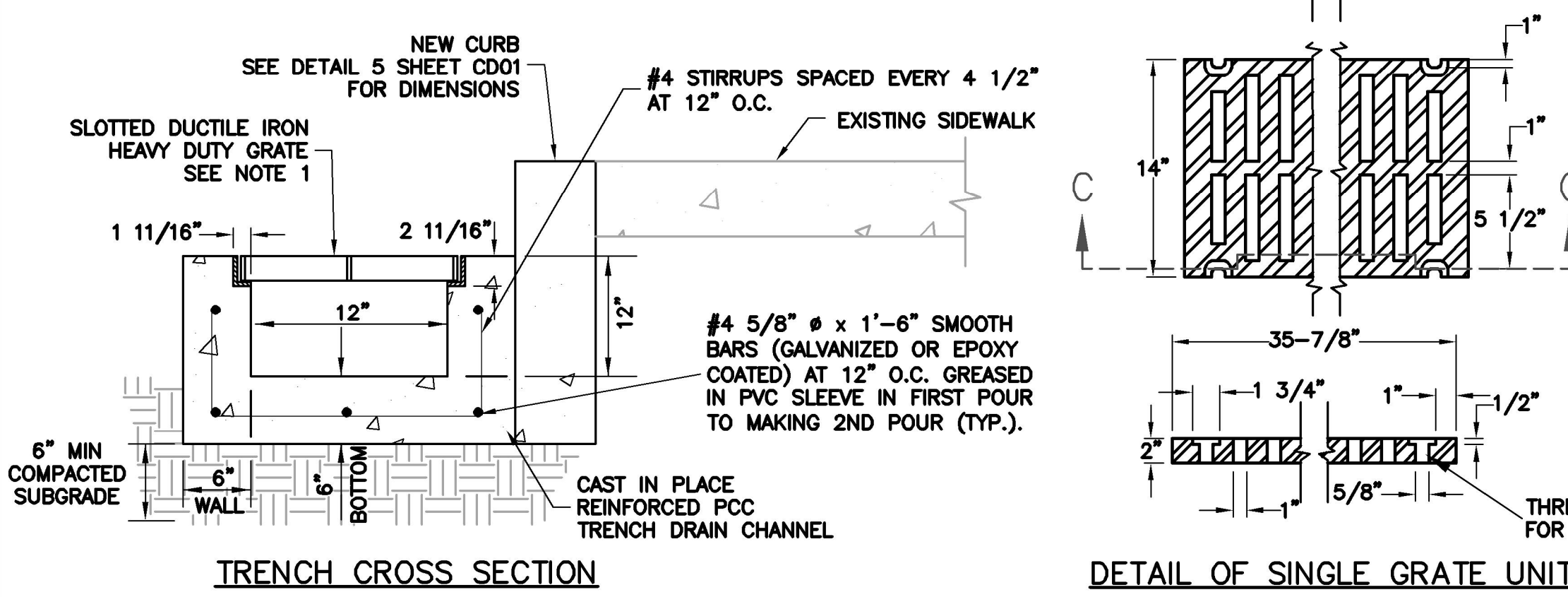
MANHOLE FRAME AND COVER
 INSTALLED IN SIDEWALK PHOENIX P-1067
 SOUTH BAY FOUNDRY SBF-1967 OR APPROVED EQUAL

NON-SIDEWALK INSTALLATIONS
 PHOENIX P-1067; P-1090; P-1005
 SOUTH BAY FOUNDRY SBF-1900-REG; SBF-1905 OR APPROVED EQUAL

NOTE:
 INSTALLATION OF STEPS SHALL BE AS REQUIRED BY AGENCY ENGINEER. WHERE INSTALLED, STEPS SHALL BE STEEL REINFORCED POLYPROPYLENE PLASTIC. CENTRAL PRECAST CONCRETE CO. DWG. NO. PS2-PF OR EQUIVALENT. STEPS TO BE CAST IN PLACE OR PRESS FITTED INTO PROVIDED HOLES AS PER MANUFACTURER. INSTALL STEPS WITH LOWEST RUNG 1'-0" ABOVE THE FLOOR AND HIGHEST RUNG NOT MORE THAN 6" BELOW TOP OF MANHOLE. THE SPACING BETWEEN STEPS SHALL NOT EXCEED 1'-0" AND SHALL BE UNIFORM THROUGHOUT THE LENGTH OF THE WALL. PLACE STEPS IN THE WALL WITHOUT A PIPE OPENING. NO STEPS REQUIRED WHERE HEIGHT FROM BOTTOM TO TOP OF MANHOLE IS LESS THAN 30".

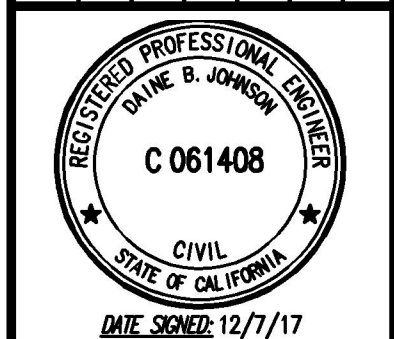
UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	STEP & MANHOLE CASTING DETAIL (WHERE REQUIRED BY AGENCY ENGINEER)	REV.	DATE	BY	MAY 2008 DWG. NO. 215
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6 STEP & MANHOLE CASTING DETAIL
 NO SCALE



5 12" TRENCH DRAIN WITH VERTICAL CURB
 NO SCALE

NO.	DESCRIPTION	BY	DATE	APPROVED



711 GRAND AVENUE
 SUITE 240
 SAN RAFAEL, CA 94901
 415-882-7880 (TEL)
 415-882-7979 (FAX)

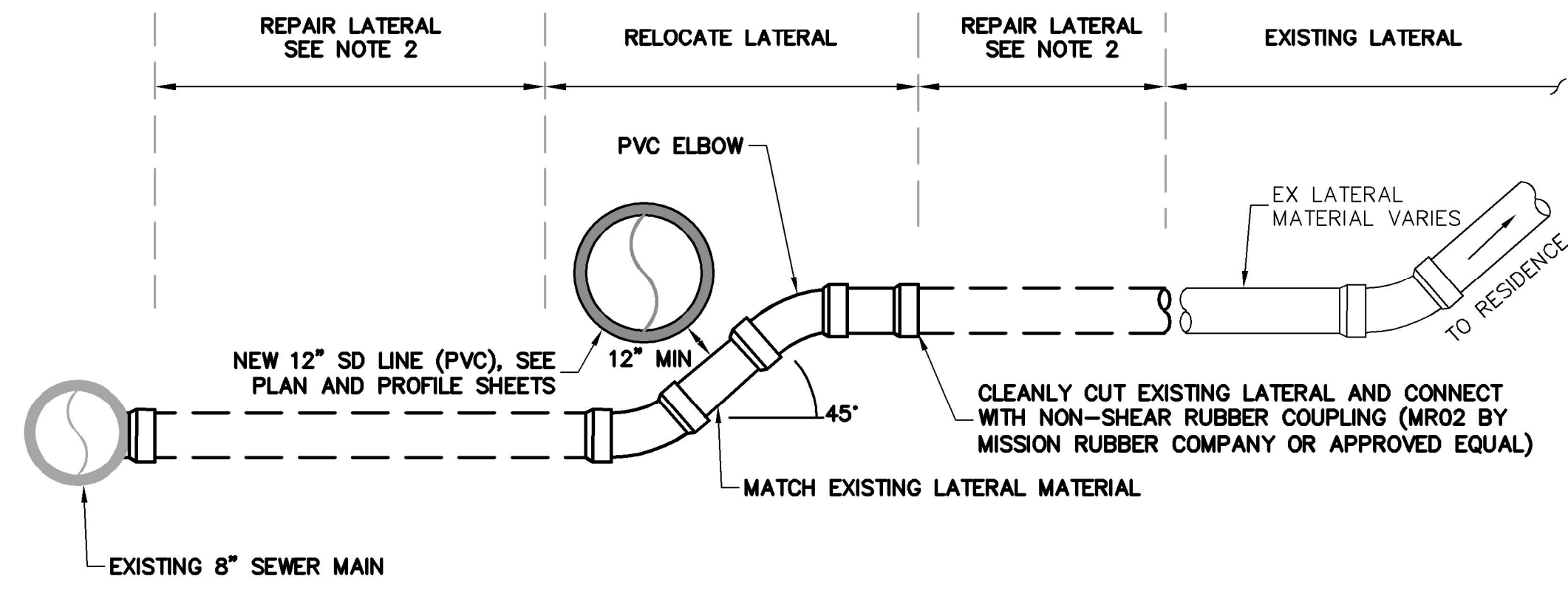
BKF
 ENGINEERS / SURVEYORS / PLANNERS

CHECKED: D. JOHNSON
 APPROVED: D. JOHNSON
 DRAWN: C. LINDBERG
 DESIGNED: C. LINDBERG

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
 CITY OF SAUSALITO
 CONSTRUCTION DETAILS

MARIN COUNTY
 CALIFORNIA
 SAUSALITO

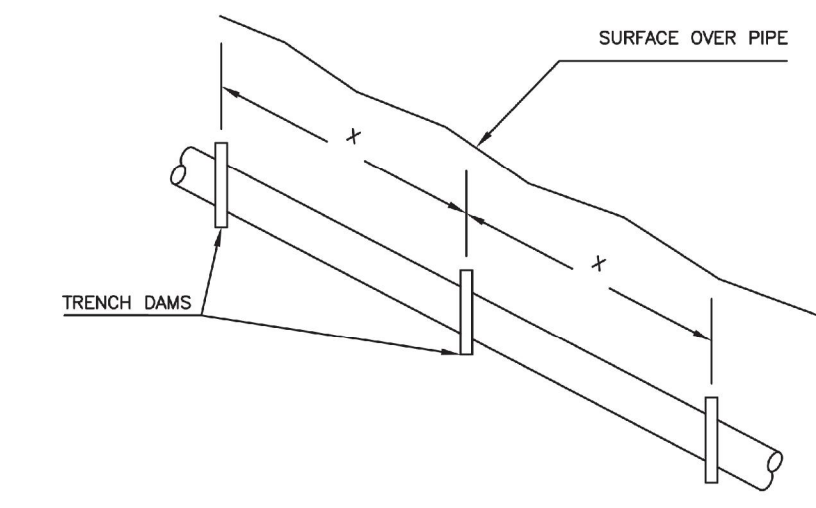
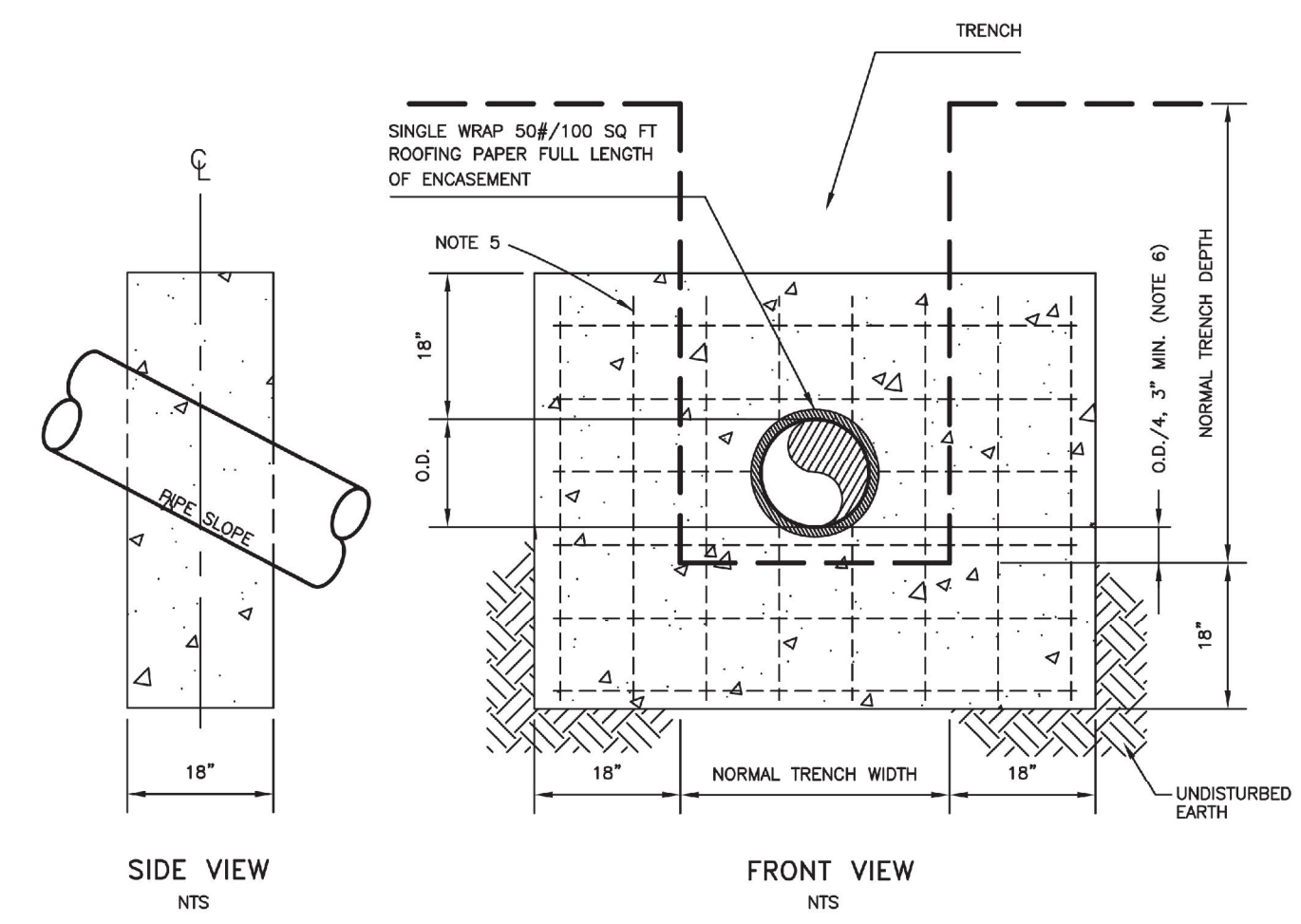
DATE DEC 2017	SCALE AS SHOWN
BKF PROJECT NO. 20165244	CITY OF SAUSALITO
CITY OF SAUSALITO	11 OF 12
CITY OF SAUSALITO	CD02



NOTES

1. AT THE DISCRETION OF THE ENGINEER, THE CONTRACTOR SHALL REPAIR THE EXISTING MAIN AND/OR LATERAL TO NEAREST COMPETENT PIPE, MEASURED IN A UNIT OF LINEAR FEET.
2. THE LATERAL RELOCATION SHALL EXTEND TO THE SEWER MAIN. SEE THE PROJECT SPECIFICATIONS SECTION 10-24 FOR ADDITIONAL INFORMATION.

1 SEWER LATERAL RELOCATION (REVOCABLE)
NO SCALE

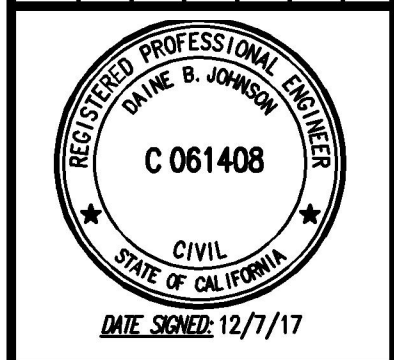


NOTES

1. TRENCH DAMS SHALL BE INSTALLED AT 20 FOOT INTERVALS ON CENTER FROM MANHOLE 1 TO MANHOLE 3
2. TRENCH DAM MATERIAL SHALL BE CLASS B CONCRETE.
3. BEARING AREA OF TRENCH DAM SHALL BE RESTING ON UNDISTURBED EARTH
4. NO FITTINGS OR BELL SHALL BE LOCATED WITHIN 5' OF TRENCH DAM.
5. TRENCH DAM SHALL HAVE #4 REBAR MAT PLACED 1' ON CENTER.

2 TRENCH DAM
NO SCALE

NO.	DESCRIPTION	BY	DATE	APPVD



BKF ENGINEERS / SURVEYORS / PLANNERS 711 GRAND AVENUE SUITE 240 SAN RAFAEL, CA 94801 415-832-7800 (TEL) 415-832-7979 (FAX)	CHECKED: D. JOHNSON
	APPROVED: D. JOHNSON
DRAWN: C. LINDBERG	DESIGNED: C. LINDBERG

NAPA STREET DRAINAGE IMPROVEMENT PROJECT
CITY OF SAUSALITO
CONSTRUCTION DETAILS
SAUSALITO MARIN COUNTY CALIFORNIA

DATE DEC 2017	SCALE AS SHOWN
BKF PROJECT NO. 20165244	
CLIENT CITY OF SAUSALITO	
SHEET NO. 12 OF 12	
DRAWING NO. CD03	