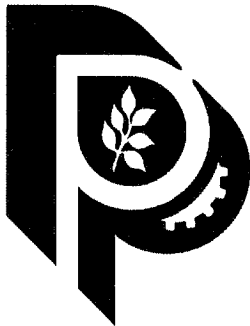


PLAN SYMBOLS

STATE LINE	
COUNTY LINE	
TOWNSHIP OR RANGE LINE	
SECTION LINE	
QUARTER LINE	
SIXTEENTH LINE	
RIGHT-OF-WAY LINE	
PRESENT RIGHT-OF-WAY LINE	
CONTROL OF ACCESS LINE	
PROPERTY LINE (Except Land Lines)	
VACATED PLATTED PROPERTY	
CORPORATE OR CITY LIMITS	
TRUNK HIGHWAY CENTER LINE	
RETAINING WALL	
RAILROAD	
RAILROAD RIGHT-OF-WAY LINE	
RIVER OR CREEK	
DRY RUN	
DRAINAGE DITCH	
DRAIN TILE	
CULVERT	
DROP INLET	
GUARD RAIL	
BARBED WIRE FENCE	
WOVEN WIRE FENCE	
CHAIN LINK FENCE	
RAILROAD SNOW FENCE	
STONE WALL OR FENCE	
HEDGE	
RAILROAD CROSSING SIGN	
RAILROAD CROSSING BELL	
ELECTRIC WARNING SIGN	
CROSSING GATE	
MEANDER CORNER	
SPRINGS	
MARSH	
TIMBER	
ORCHARD	
BRUSH	
NURSERY	
CATCH BASIN	
FIRE HYDRANT	
GATE VALVE	
SANITARY SEWER MANHOLE	
STORM SEWER MANHOLE	
OVERPASS (Highway Over)	
UNDERPASS (Highway Under)	
BRIDGE	
BUILDING (One Story Frame)	
F-FRAME	
C-CONCRETE	
S-STONE	
T-TILE	
B-BRICK	
ST-STUCCO	
IRON PIPE OR ROD	
MONUMENT (STONE, CONCRETE, OR METAL)	
WOODEN HUB	
GRAVEL PIT	
ROCK QUARRY	
MAILBOX	
SIGN	
UTILITY SYMBOLS	
POWER POLE LINE	
TELEPHONE OR TELEGRAPH	
POLE LINE	
JOINT TELEPHONE AND POWER	
ON POWER POLES	
ON TELEPHONE POLES	
POWER POLE	
ANCHOR	
STEEL TOWER	
STREET LIGHT	
PEDESTAL (TELEPHONE CABLE TERMINAL)	
GAS MAIN	
WATER MAIN	
CONDUIT	
TELEPHONE CABLE IN CONDUIT	
ELECTRIC CABLE IN CONDUIT	
TELEPHONE MANHOLE	
ELECTRIC MANHOLE	
BURIED TELEPHONE CABLE	
BURIED ELECTRIC CABLE	
BURIED TELEVISION CABLE	
BURIED FIBER OPTIC	
SEWER, (SANITARY)	
SEWER, (STORM)	
SEWER MANHOLE	



CITY OF PLYMOUTH

HENNEPIN COUNTY, MINNESOTA

CONSTRUCTION PLANS FOR :

UTILITY IMPROVEMENTS



DRAFT

FOUR SEASONS MALL WATER QUALITY IMPROVEMENT

CITY PROJECT NO. 11022



PROJECT AREA

GOVERNING SPECIFICATIONS:

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION THE MOST CURRENT, "STANDARD SPECIFICATIONS FOR CONSTRUCTION" THE MOST CURRENT CITY OF PLYMOUTH, "ENGINEERING GUIDELINES", AND THE CONTRACT DOCUMENTS, INCLUDING THE SPECIAL PROVISIONS, SHALL GOVERN. ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

NOTE:

THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, WATER, ETC. ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITIES BEFORE COMMENCING EXCAVATION.

SCALES :

PLAN	50'
(PLAN)	30'
PROFILE	HORIZ. 50'
(X PROFILE)	HORIZ. 30'
	VERT. 5'
X-SECTIONS	HORIZ. 10'
	VERT. 5'

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL QUALITY D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CIASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

GOPHER STATE ONE CALL: (651) 454-0002

Item 5A - online information only  
BCWMC 8-15-13

INDEX :

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUTS AND NOTES
3	STRUCTURE SCHEDULES
4	IRON ENHANCED SAND FILTER DETAIL
5-7	DETAILS
8	TREE REMOVALS
9	POND GRADING
10	PLAN & PROFILE - LEFT CHANNEL
11	PLAN & PROFILE - CENTER CHANNEL
12-14	PLAN & PROFILE - RIGHT CHANNEL
15	PLAN & PROFILE - WETLAND STORM SEWER
16-18	RESTORATION
CROSS SECTIONS	
19	LEFT CHANNEL
20-21	CENTER CHANNEL
22-26	RIGHT CHANNEL

THIS PLAN SET CONTAINS 26 SHEETS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGR. MICHAEL J. PAYNE, P.E., DESIGN MANAGER

Reg. No. Date



STATE AID  
PROJ. NO.

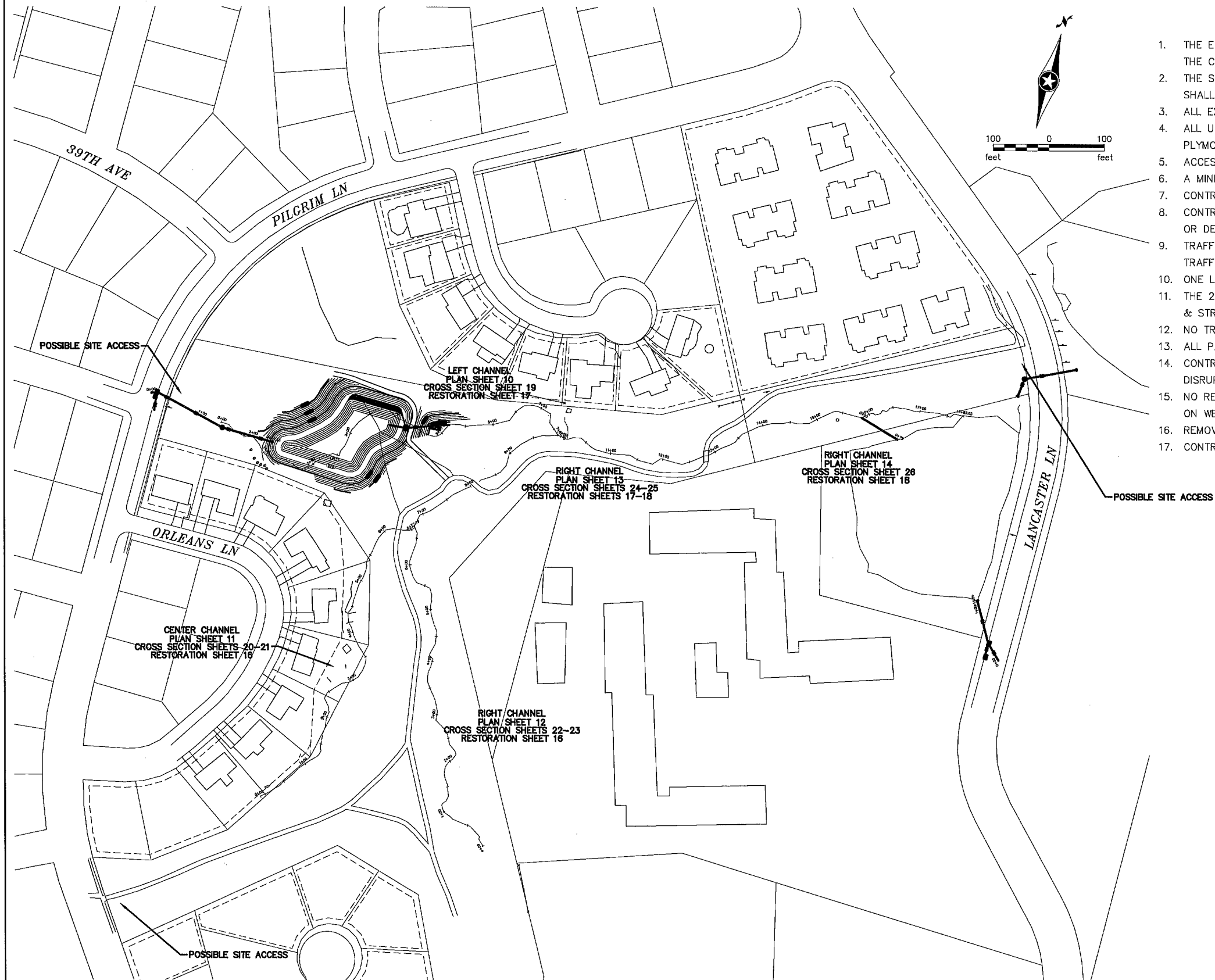
CITY PROJ. NO.

11022

1

26

MAINTAIN LOCAL ACCESS  
AT ALL TIMES



#### GENERAL NOTES

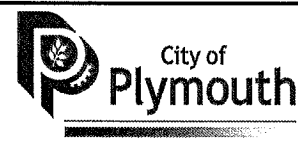
1. THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, WATER, ETC., ARE UNKNOWN AND THE CONTRACTOR SHALL CONTACT GOPHER ONE CALL BEFORE COMMENCING ANY EXCAVATION.
2. THE STRUCTURE LOCATIONS AND ELEVATIONS OF APPURTANCES SHOWN ON THE PLAN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED PRIOR TO COMMENCING ANY UTILITY INSTALLATION.
3. ALL EXCESS EXCAVATED MATERIAL IS THE PROPERTY OF THE CONTRACTOR.
4. ALL USEABLE SALVAGED CASTINGS, VALVES, SIGNS, HYDRANTS, ETC. SHALL BE DELIVERED TO THE CITY OF PLYMOUTH PUBLIC WORKS.
5. ACCESS TO LOCAL RESIDENTS MUST BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION.
6. A MINIMUM OF 48 HRS. NOTICE IS REQUIRED FOR ALL SURVEY STAKING REQUESTS.
7. CONTRACTOR MUST MAINTAIN EROSION CONTROL FOR ENTIRE PROJECT.
8. CONTRACTOR MUST SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL, ADDRESSING ANY TEMPORARY CLOSURES OR DETOURS. REVIEW IS REQUIRED BY THE CITY OF PLYMOUTH.
9. TRAFFIC CONTROL MUST BE PROPERLY MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS BOOKLET.
10. ONE LANE MUST BE OPEN TO TRAFFIC AT ALL TIMES.
11. THE 2013 CITY OF PLYMOUTH ENGINEERING STANDARD DETAIL SPECIFICATIONS FOR SEWER, WATER, STORM SEWER, & STREETS APPLY TO THIS PROJECT.
12. NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS MARKED BY THE CITY OF PLYMOUTH FOR REMOVAL.
13. ALL PAVEMENT, INCLUDING TRAILS, IS TO BE SAWCUT AT THE MATCH POINT.
14. CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO CITY + AFFECTED RESIDENTS WHEN WATER SERVICE WILL BE DISRUPTED.
15. NO RESIDENTS SHALL BE WITHOUT WATER SERVICE BEFORE 9AM OR AFTER 3PM WEEKDAYS AND NO DISRUPTION ON WEEKENDS.
16. REMOVE OR ABANDON EXISTING STORM SEWER PIPE AS DIRECTED BY ENGINEER.
17. CONTRACTOR SHALL INSTALL A ROCK ENTRANCE AT ALL SITE ACCESS LOCATIONS.

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE

Date: X/XX/13 License#: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

LAYOUT & NOTES

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME FOUR SEASONS	DESIGNED BY M. PAYNE	7-13
	CHECKED BY D. ASCHE	7-13
	REVIEWED BY J. RENNEBERG	7-13

EXISTING STRUCTURE SCHEDULE								
STRUCT.		LOCATION	ADJUST	REMOVE &	REMOVE	GROUT	GROUT INV.	
NO.	TYPE	STREET	(EACH)	REPLACE RINGS	(EACH)	DOGHOUSE	(EACH)	REMARKS:
1	STORM MH	PILGRIM LN		X				BULKHEAD EX. N. 42" RCP
2	CATCH BASIN	PILGRIM LN			X			
3	CATCH BASIN	PILGRIM LN						BULKHEAD EX. 12" CMP
4	CATCH BASIN	PILGRIM LN						NO WORK NEEDED
5	STORM MH	39TH AVE						NO WORK NEEDED
6	CATCH BASIN	39TH AVE						NO WORK NEEDED
7	STORM MH	39TH AVE						NO WORK NEEDED
8	CATCH BASIN	39TH AVE						NO WORK NEEDED
9	CATCH BASIN	PILGRIM LN						NO WORK NEEDED
10	SANITARY MH	PILGRIM LN						NO WORK NEEDED
11	STORM MH	LANCASTER LN			X			
12	CATCH BASIN	LANCASTER LN						NO WORK NEEDED
13	STORM MH	LANCASTER LN						NO WORK NEEDED
14	CATCH BASIN	LANCASTER LN						NO WORK NEEDED
15	STORM MH	LANCASTER LN						ABANDON MH
16	SANITARY MH	LANCASTER LN						NO WORK NEEDED
17	SANITARY MH	LANCASTER LN						NO WORK NEEDED
18	STORM MH	LANCASTER LN						ABANDON MH
19	SANITARY MH	LANCASTER LN						NO WORK NEEDED
20	STORM MH	LANCASTER LN						BULKHEAD EX. N 30" RCP
21	CATCH BASIN	LANCASTER LN						NO WORK NEEDED
22	SANITARY MH	LANCASTER LN						NO WORK NEEDED
23	CATCH BASIN	LANCASTER LN			X			

PROPOSED STORM SEWER STRUCTURE SCHEDULE										
STRUCT.		LOCATION		DESIGN			CASTING	TOP OF		
NO.	STREET	STATION	R/L	MH	CB	DEPTH	TYPE	CASTING	INVERT	NOTES:
APR 1	PILGRIM LN	2+37.63		APRON	ST-3	N/A	N/A	N/A	923.50	
STMH 2	PILGRIM LN	1+43.07		ST-6 (72")		6.30	R-1642	930.75	924.45	
CB 3	PILGRIM LN	0+11.49			ST-6 (72")	6.98	R-3067	932.75	925.77	
CB 4	PILGRIM LN		R		ST-2	2.94	R-3067	932.75	929.81	
APR 5	POND			APRON	ST-3	N/A	N/A	N/A	914.88	
STMH 6	POND				ST-15 (108")	7.26	GRATE	922.50	915.24	WEIR ELEV = 921.00
APR 7	LANCASTER LN	1+14.84		APRON	ST-3	N/A	N/A	N/A	891.43	
CB 8	LANCASTER LN	0+35.60			ST-6 (72")	7.14	R-3067	898.96	891.82	
CB 9	LANCASTER LN		L		ST-2	3.50	R-3067	899.16	895.66	
APR 10	LANCASTER LN		R	APRON	ST-3	N/A	N/A	N/A	888.22	
STMH 11	LANCASTER LN		L		ST-6 (72")	5.84	R-4342	895.00	889.17	
APR 12	LANCASTER LN		L	APRON	ST-3	N/A	N/A	N/A	889.50	

CROSS VANE LOCATIONS			
NO.	CHANNEL	STATION	NOTES
1	LEFT	7+00	
2	CENTER	1+02.31	
3	CENTER	2+12.31	
4	CENTER	2+88.98	
5	CENTER	3+65.65	
6	CENTER	4+61.25	
7	CENTER	4+96.25	
8	CENTER	5+31.25	
9	RIGHT	0+54.93	
10	RIGHT	1+91.51	
11	RIGHT	3+40	
12	RIGHT	4+50	
13	RIGHT	4+93.33	
14	RIGHT	5+36.67	
15	RIGHT	5+80	
16	RIGHT	6+23.33	
17	RIGHT	8+67.97	
18	RIGHT	9+52.93	
19	RIGHT	12+50	
20	PROPOSED	0+25	

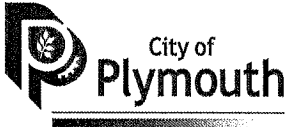
ESTIMATED GRADING QUANTITIES			
ITEM	CUT (CY)	FILL (CY)	NET CUT (CY)
RIGHT CHANNEL	1,452	122	1,330
PROPOSED CHANNEL	31	0	31
CENTER CHANNEL	384	18	366
LEFT CHANNEL	82	14	68
POND	7,524	304	7,220

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: \_\_\_\_\_  
MICHAEL J. PAYNE

Date:   X/XX/13   License#:   50484  



PLYMOUTH, MINNESOTA

FOUR SEASONS MALL

WATER QUALITY IMPROVEMENT

CITY PROJECT NO. 11022

STRUCTURE SCHEDULES

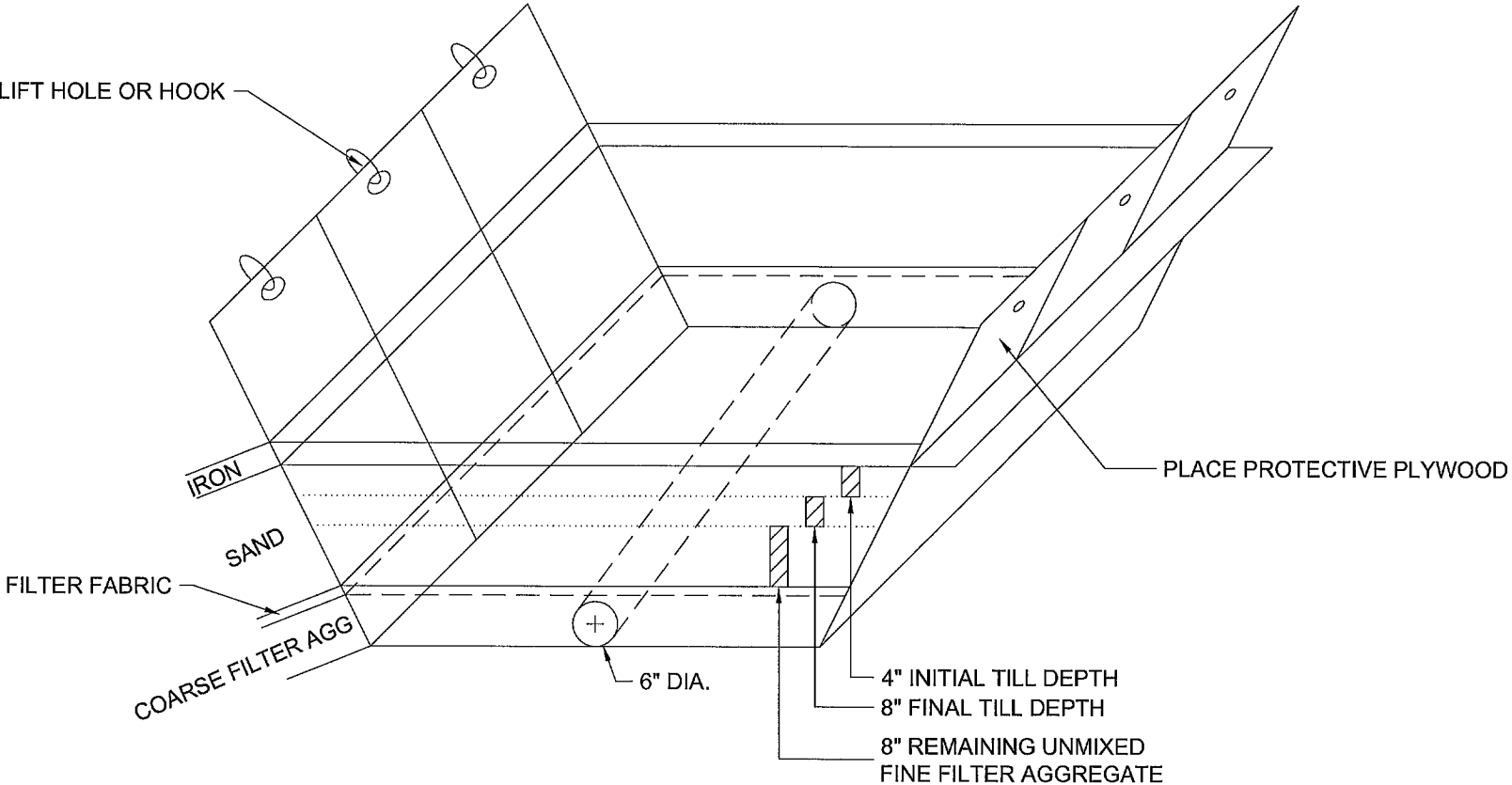
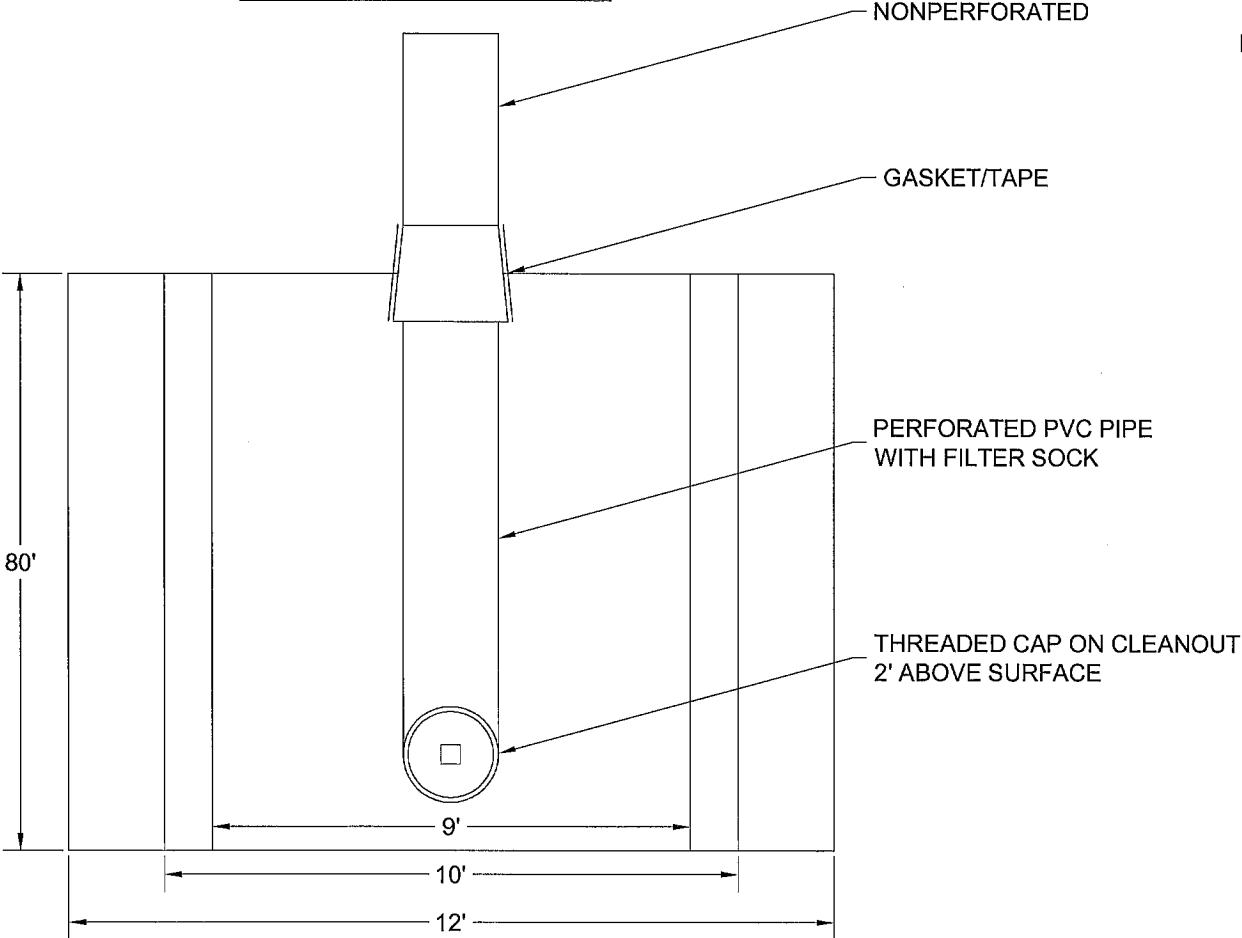
STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME	DESIGNED BY M. PAYNE	7-13
FOUR SEASONS	CHECKED BY D. ASCHE	7-13
	REVIEWED BY J. RENNEBERG	7-13

3

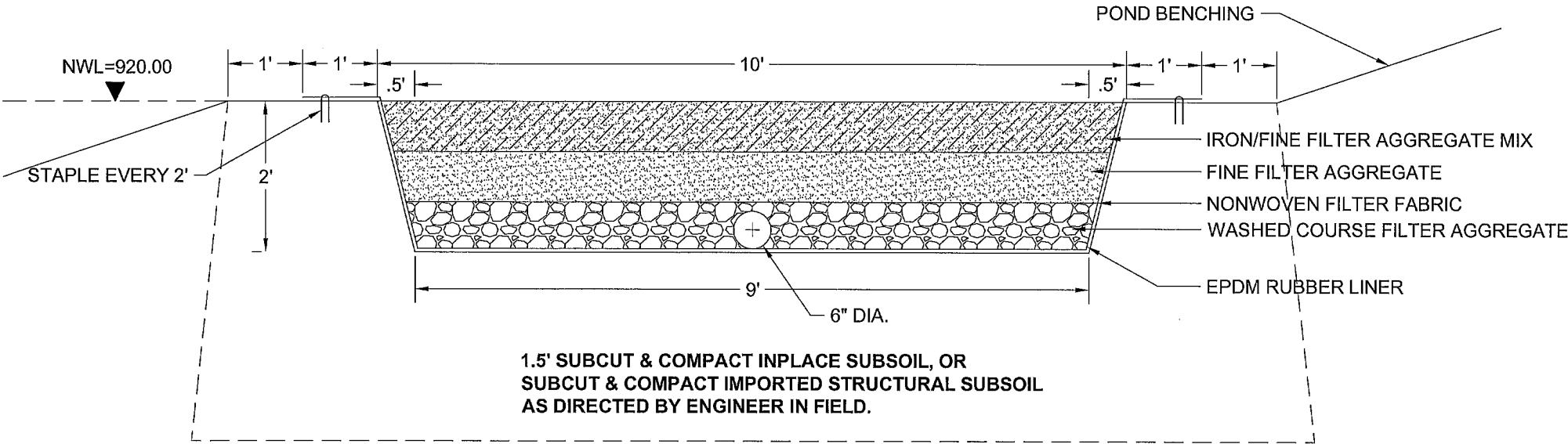
26

SAND/IRON MIXING

CROSS SECTION VIEW



CROSS SECTION VIEW



SAND/IRON CONSTRUCTION SEQUENCING

1. IMPORT STRUCTURAL SUBSOIL (COMMON BORROW (CY)) IF NEEDED
2. SUBCUT & COMPACT SUBSOIL, TO 1.5' BELOW IESF BOTTOM TO 95% STANDARD PROCTOR (COMMON EX. CY) (IF NEEDED)
3. GRADE IN 14' BENCH
4. EXCAVATE 10' WIDE X 2' DEPTH BENCH
5. ROLL OUT 45 MILL EPDM LINER (EPDM LINER (SF))
6. PLACE COARSE FILTER AGGREGATE ON BOTTOM 8" (COURSE FILTER AGGREGATE 3149.2H (CY))
7. LAY FILTER FABRIC OVER TOP COARSE FILTER AGGREGATE AND PIPE (NONWOVEN FILTER FABRIC (SY))
8. PUT TEMPORARY PROTECTIVE PLYWOOD IN PLACE (OR OTHER METHOD APPROVED BY ENGINEER TO PREVENT PUNCTURE OF EPDM)
9. PLACE FINE FILTER AGGREGATE TO TOP OF BENCH (FINE FILTER AGGREGATE 3149.2J (CY))
10. PLACE 5.2 LBS/SF (FOR 8" DEPTH) IRON FILINGS ON TOP OF SAND (ETI-CC-1004(-8+50) CONNELLY GPM, INC. OR APPROVED EQUAL (TONS))
11. TILL IN IRON FILINGS TO 4" DEPTH USING SMALL GARDEN STYLE TILLER
12. HAND MIX SIDES NEAR 2.67'X4' PROTECTIVE PLYWOOD
13. SET TILLER DEPTH TO 8" AND MIX AGAIN WITH SAME PROCESS
14. REMOVE PROTECTIVE PLYWOOD & RAKE SURFACE FLAT
15. STALE LINER DOWN EVERY 2'

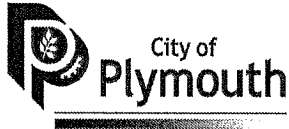
NOTE: ALL ITEMS LISTED WITHOUT A PAY ITEM ARE CONSIDERED INCIDENTAL INCLUDING: PLACING PLYWOOD, STAPLING LINER, TILLING, PIPE CLEANOUTS, RAKING SURFACE, ETC.

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE

Date: X/XX/13 License#: 50484



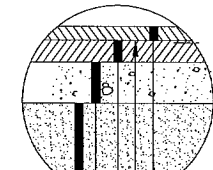
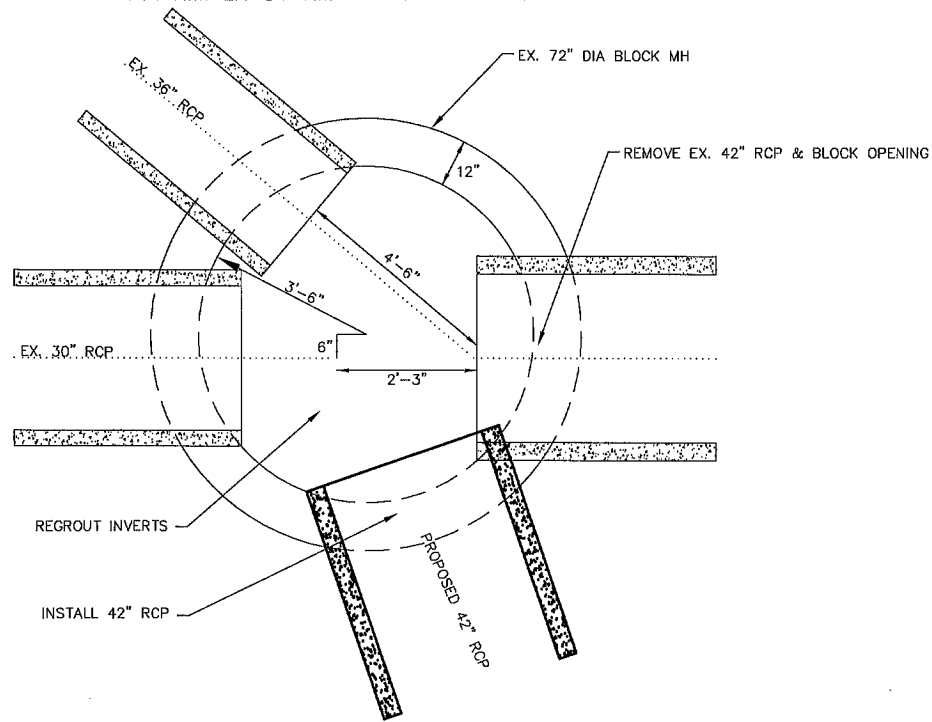
PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

IRON ENHANCED SAND FILTER DETAIL

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME	DESIGNED BY M. PAYNE	DATE 7-13
FOUR SEASONS	CHECKED BY D. ASCHKE	DATE 7-13
	REVIEWED BY J. RENNEBERG	DATE 7-13

### DETAIL A

PILGRIM LN STORM SEWER CONNECTION

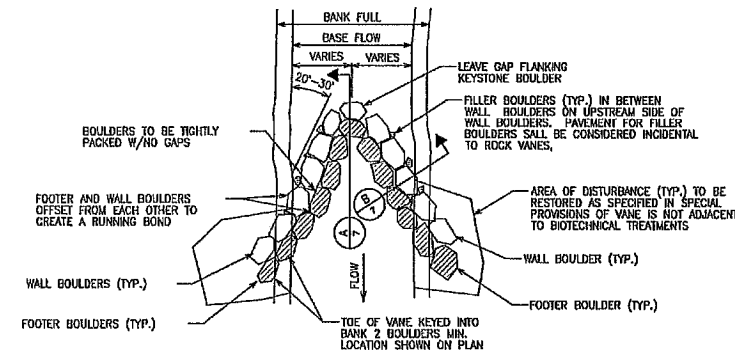


- 1-1/2" BITUMINOUS WEARING COURSE  
MN/DOT SPEC. 2360, TYPE SPWEA240C
- 2357 TACK COAT
- 2-1/2" BITUMINOUS BASE COURSE  
MN/DOT SPEC. 2360, TYPE SPNWB230C
- 8" AGG. BASE CLASS 7  
MN/DOT SPEC. 3138 A2(a)
- 12" SELECT GRANULAR BORROW SPEC. 3149.2B
- GEOTEXTILE FILTER FABRIC TYPE V  
(AS DIRECTED BY ENGINEER)

### ROADWAY PATCH DETAIL

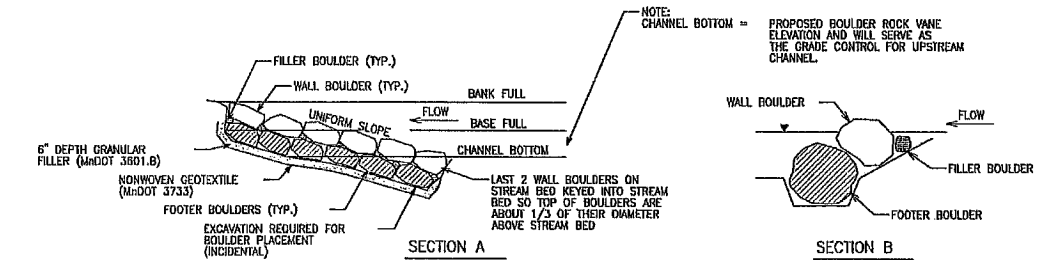
### DETAIL C

CROSS VANE DETAIL



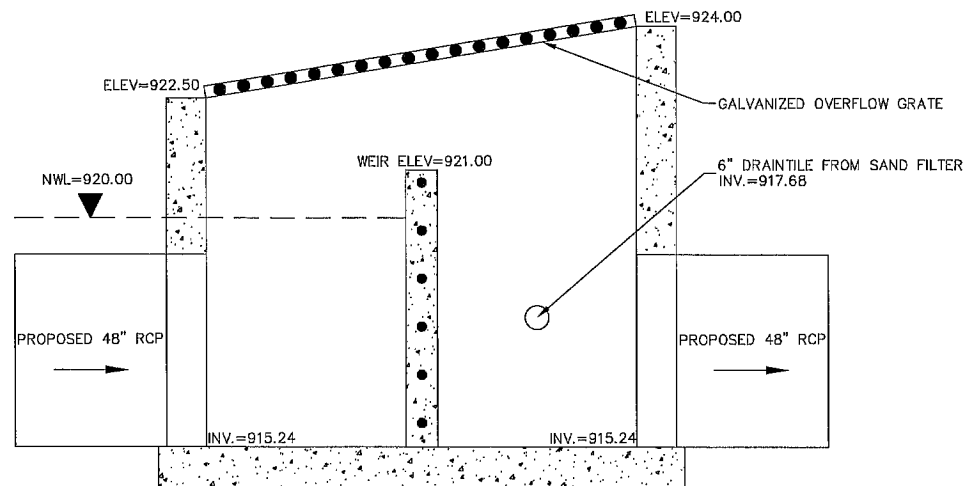
- LEGEND
- SUBMERGED OR FOOTER 18" TO 24" FIELDSTONE BOULDER MEETING MN/DOT 3501.2A. AT LEAST 20% OF THE BOULDERS SHALL HAVE A DIAMETER OF 24" OR LARGER.
  - PROTRUDING OR WALL 24" TO 30" BOULDERS MEETING MN/DOT 3501.2A. AT LEAST 20% OF THE BOULDERS SHALL HAVE A DIAMETER OF 30" OR LARGER.
  - FILLER BOULDER 6" TO 12" DIA.
- NOTES:
- FIELD STONE BOULDERS SHALL HAVE NO CUT, BLAZE, OR SHEAR MARKS.
  - FINAL PLACEMENT OF ROCK VANE AND BOULDERS TO BE FIELD VERIFIED BY ENGINEER.
  - ALL VANES EXTEND UPSTREAM INTO FLOW OF CREEK.

### CROSS VANE - PLAN VIEW

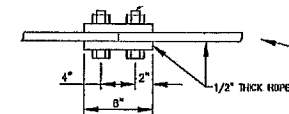
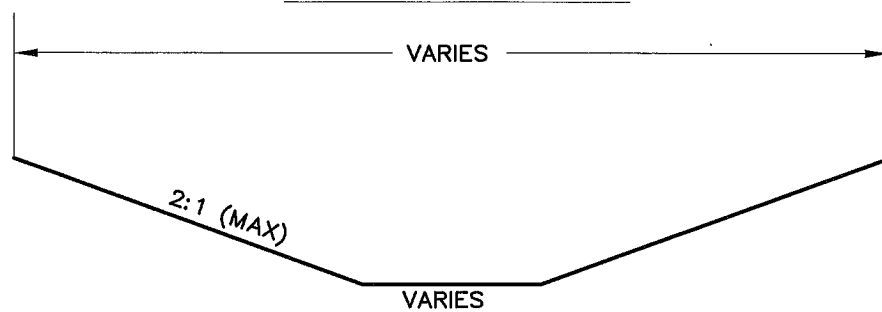


### DETAIL B

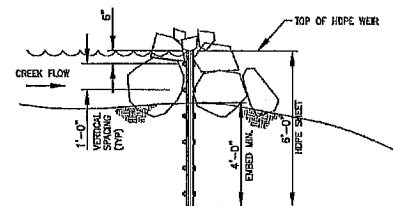
108" DIA. POND OUTLET STRUCTURE



### TYPICAL CHANNEL



### WALL CONNECTION DETAIL

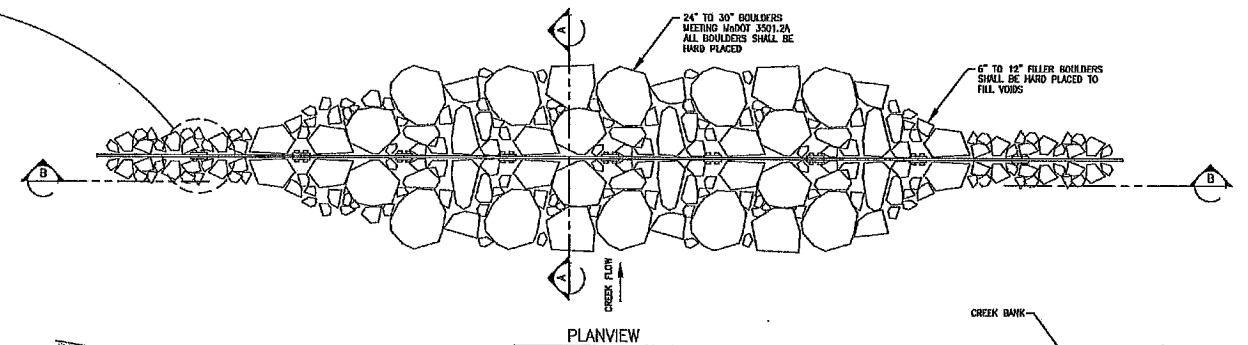


### SECTION

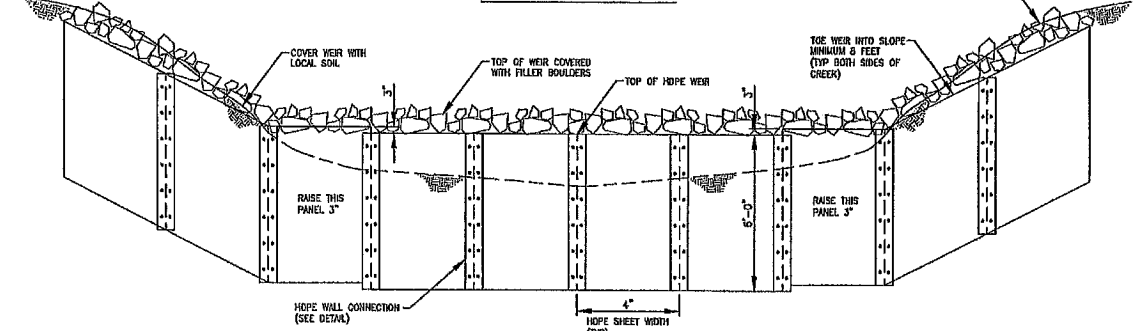
A

### DETAIL D

ROCK WEIR DETAIL  
TOP OF WEIR ELEVATION=921.00



### PLANVIEW



### SECTION

(LARGE BOULDERS NOT SHOWN)

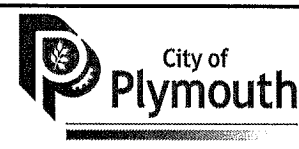
B

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE

Date: X/XX/13 License #: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

DETAILS

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME FOUR SEASONS	DESIGNED BY M. PAYNE	7-13
	CHECKED BY D. ASCHE	7-13
	REVIEWED BY J. RENNEBERG	7-13

5

26



# CITY OF PLYMOUTH [6"]

IMPROVEMENT PROJECT: [3"]  
(PROJECT NAME) [3"]  
(PROJECT NO.) [2-1/2"]

## PROCEED WITH CAUTION [6"]


FOR INFORMATION CALL: [2-1/2"]  
PROJECT HOTLINE NO. (763) 509-55XX [WHERE APPLICABLE]  
PROJECT WEBSITE WWW.PLYMOUTH.MN.US [WHERE APPLICABLE]

(NAME OF CONSULTING ENGINEER) CITY ENGINEERING DIVISION:  
(NAME OF PROJECT MANAGER) [2-1/2"] (CITY REPRESENTATIVE)  
(PHONE NO.) PHONE NO. (763) 509-5500

(CONTRACTOR'S NAME) SCHEDULED COMPLETION DATE:  
(ADDRESS) [2-1/2"] (DATE)  
(LOCAL PHONE NO.)

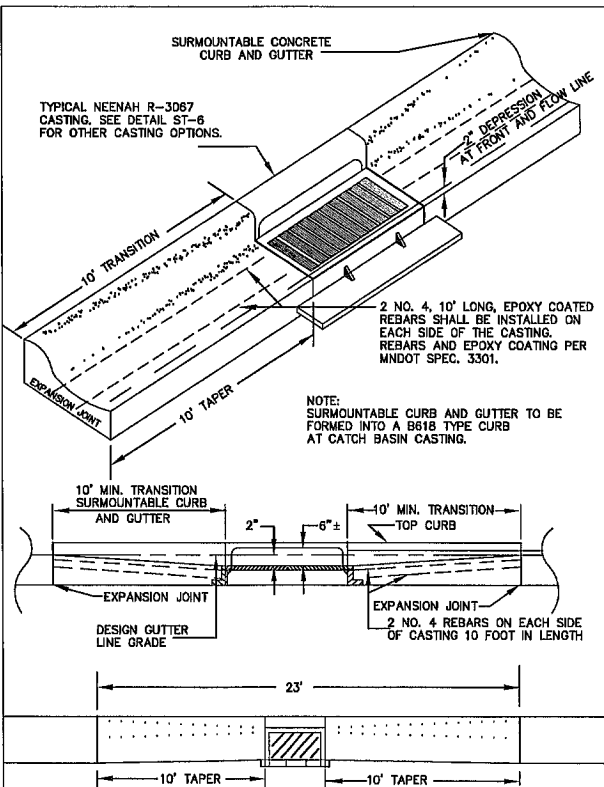
NOTE:  
Sign shall be 4' x 6' with a white background with black letters, (no hand lettering) and of proper height to be readily visible from an automobile, and located as directed by engineer. Sign shall be mounted on 4' x 4' posts

( ) Project Specific Information



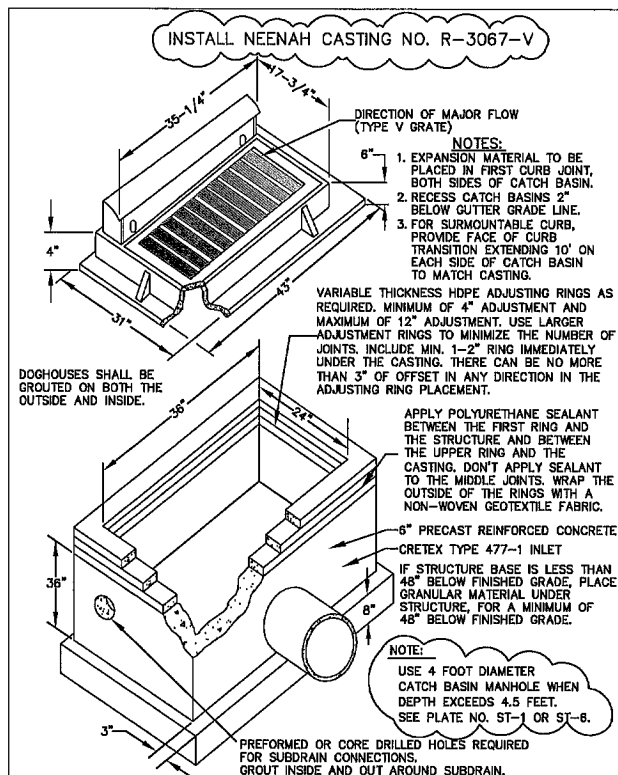
STANDARD DETAILS  
STANDARD CITY PROJECT SIGN  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
DWG-1  
REVISED 3-11



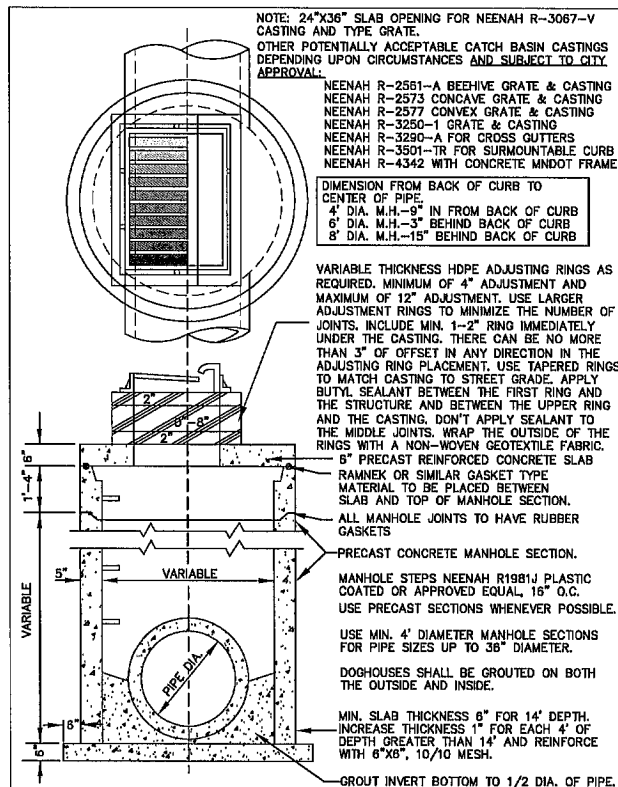
STANDARD DETAILS  
CATCH BASIN CASTING INSTALLATION DETAIL  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
ST-5  
REVISED 3-13



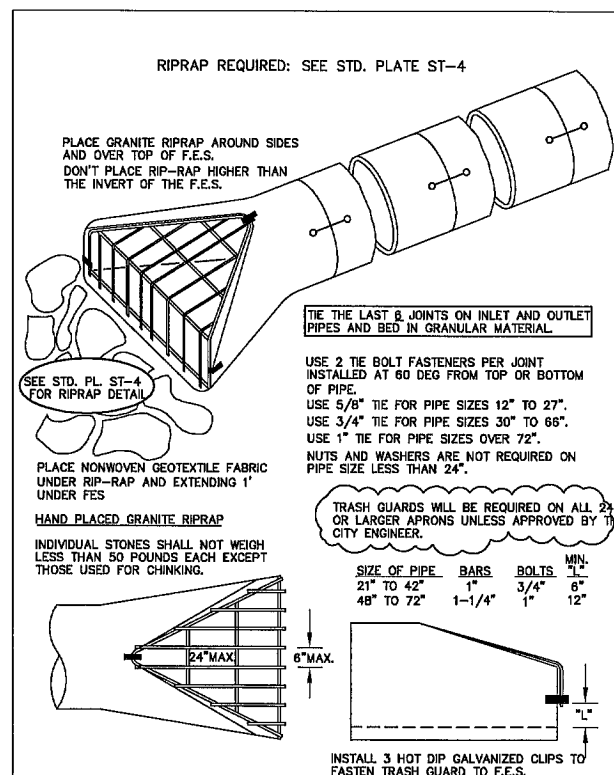
STANDARD DETAILS  
CATCH BASIN (MAX. DEPTH 4.5')  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
ST-2  
REVISED 3-13



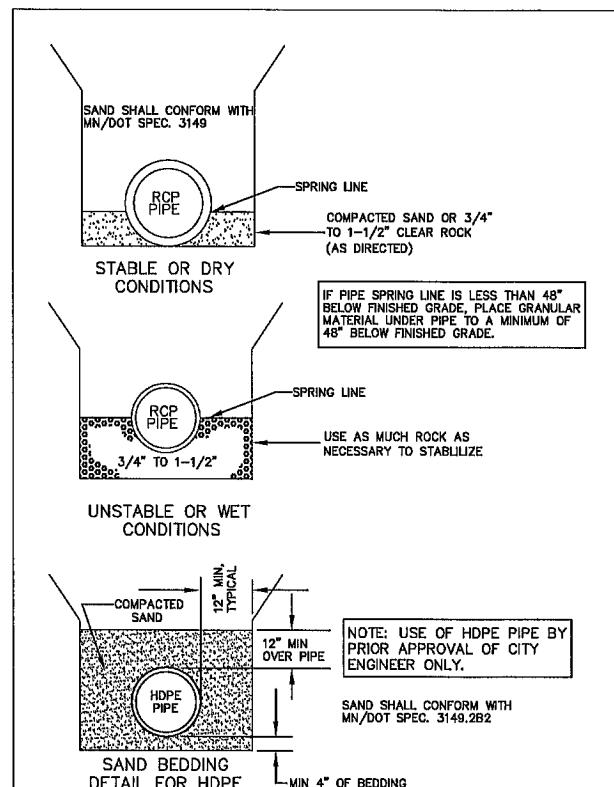
STANDARD DETAILS  
PRECAST STORM SEWER CATCH BASIN MANHOLE  
WITH REINFORCED CONCRETE TOP SLAB  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
ST-6  
REVISED 3-11



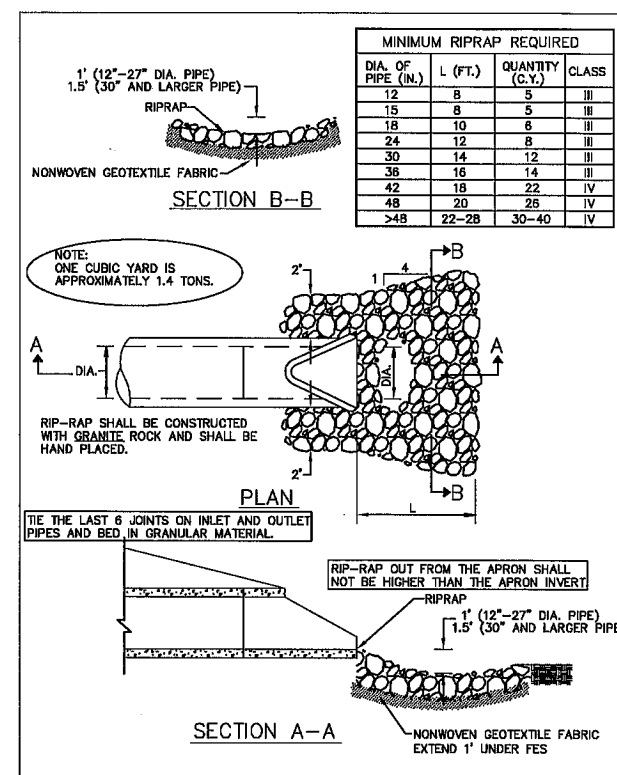
STANDARD DETAILS  
INLET & OUTLET F.E.S. WITH TRASH GUARD  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
ST-3  
REVISED 3-13



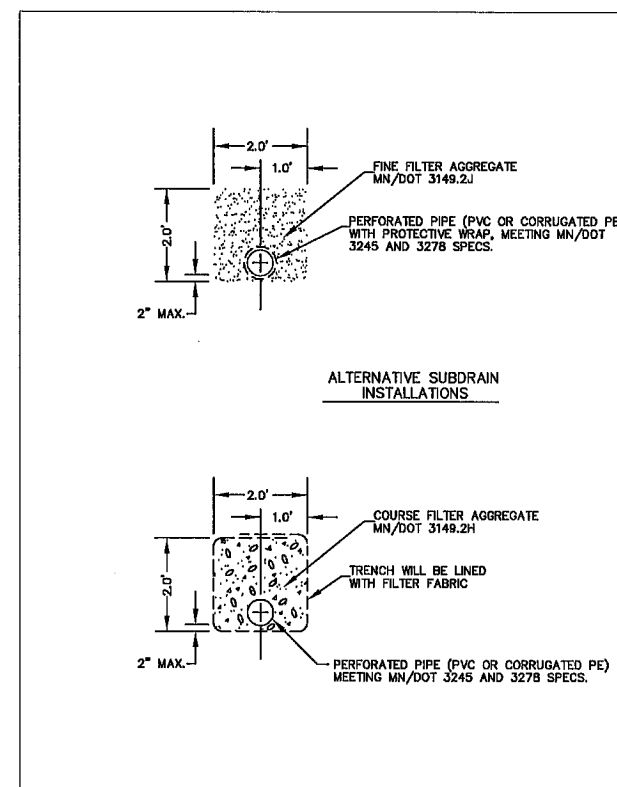
STANDARD DETAILS  
STORM SEWER BEDDING  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
ST-8  
REVISED 3-12



STANDARD DETAILS  
RIPRAP DETAIL FOR FLARED END SECTIONS  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
ST-4  
REVISED 3-12



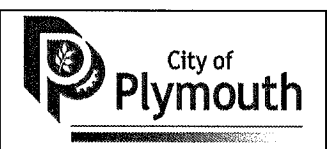
STANDARD DETAILS  
PERFORATED DRAIN TILE PIPE  
CITY OF PLYMOUTH

PUBLISHED  
3-13  
CITY PL. NO.  
ST-10  
REVISED 3-11

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE  
Date: X License #: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

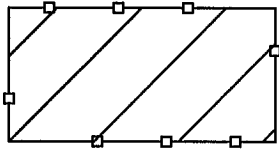
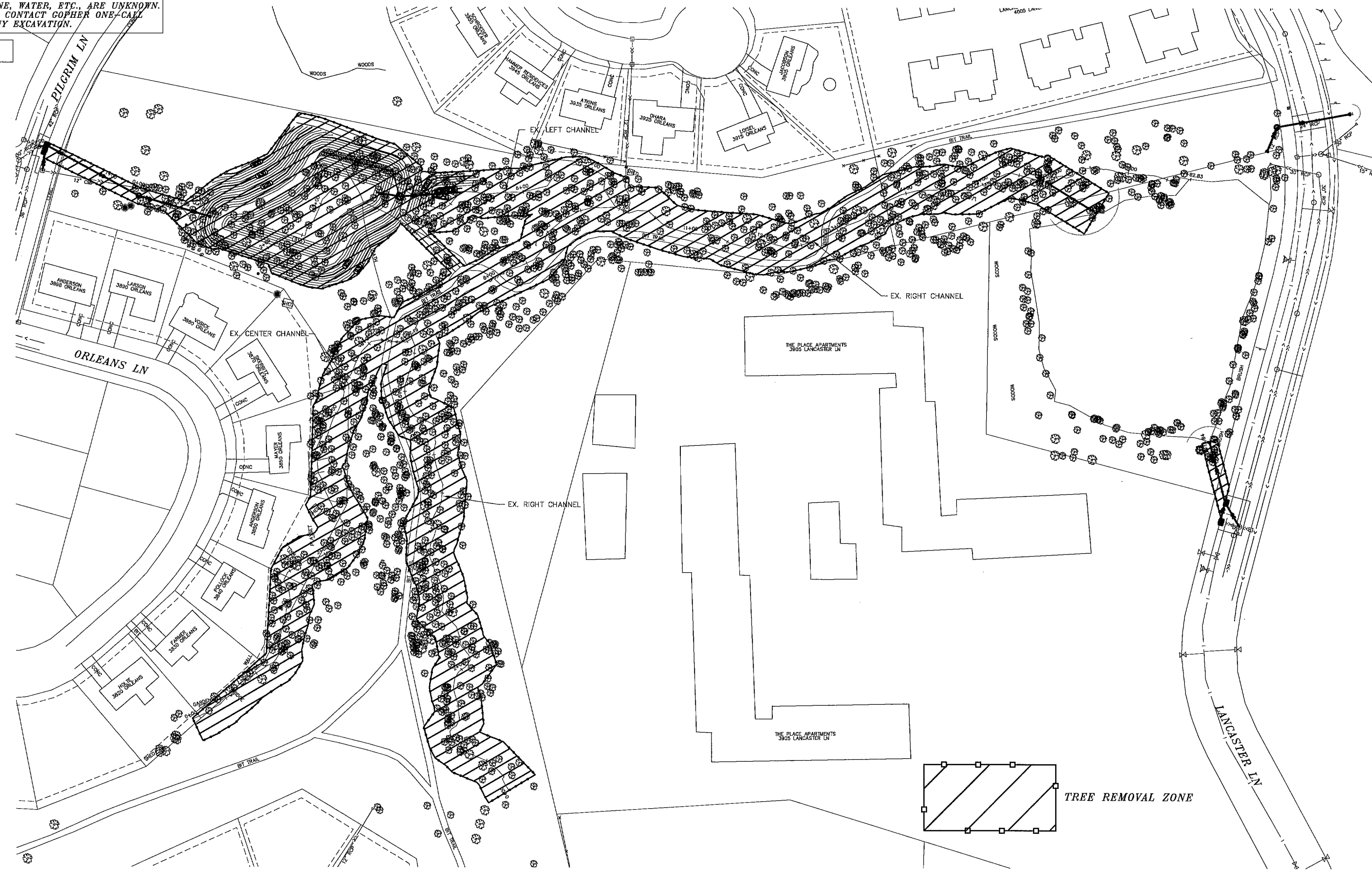
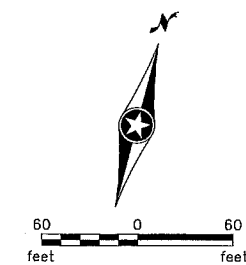
DETAILS

STATE AID PROJ. NO.	DRAWN BY DATE M. PAYNE 7-13
DWG NAME	DESIGNED BY DATE M. PAYNE 7-13
FOUR SEASONS	CHECKED BY DATE D. ASCH 7-13
	REVIEWED BY DATE J. RENNEBERG 7-13



NOTE:  
THE EXACT LOCATION OF UNDERGROUND UTILITIES  
SUCH AS GAS, TELEPHONE, WATER, ETC., ARE UNKNOWN.  
THE CONTRACTOR SHALL CONTACT Gopher One-Call  
BEFORE COMMENCING ANY EXCAVATION.

MAINTAIN LOCAL ACCESS  
AT ALL TIMES



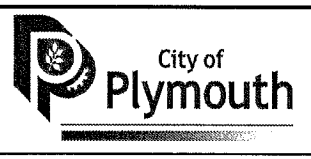
TREE REMOVAL ZONE

NO	DATE	BY	CKD	APPR	REVISION

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Signature: MICHAEL J. PAYNE

Date: X/XX/13 License #: 50494

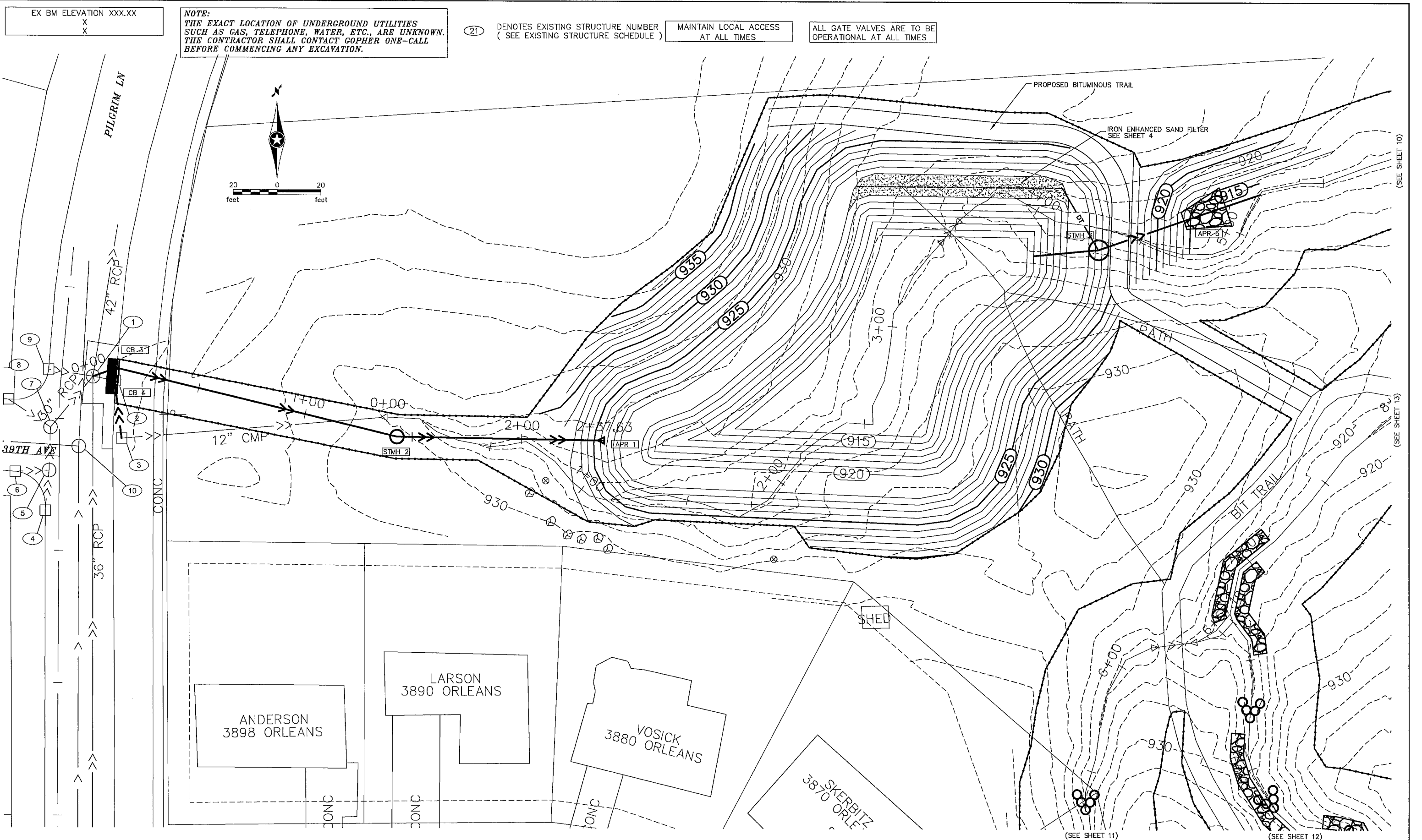


PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

TREE REMOVALS

STATE AID PROJ. NO.	DRAWN BY <u>M. PAYNE</u>	DATE <u>7-13</u>
DWG NAME <u>FOUR SEASONS</u>	DESIGNED BY <u>M. PAYNE</u>	7-13
	CHECKED BY <u>D. ASCHE</u>	7-13
	REVIEWED BY <u>J. RENNEBERG</u>	7-13





EX BM ELEVATION XXX.XX  
X  
X

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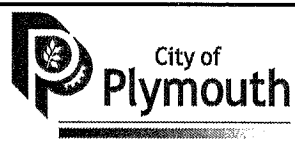
(21) DENOTES EXISTING STRUCTURE NUMBER  
( SEE EXISTING STRUCTURE SCHEDULE )

MAINTAIN LOCAL ACCESS  
AT ALL TIMES

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OPERATIONAL AT ALL TIMES

NO	DATE	BY	CKD	APPR	REVISION

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State of Minnesota.  
Signature: MICHAEL J. PAYNE  
Date: X/XX/13 License#: 50484



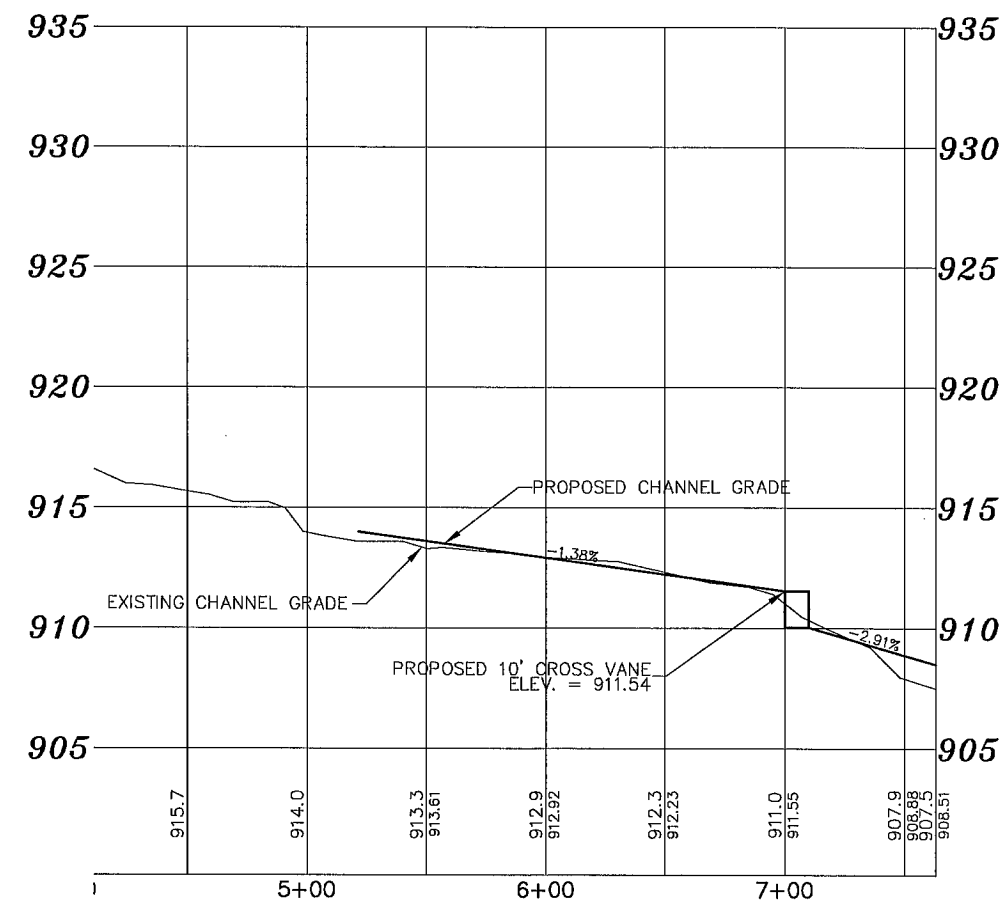
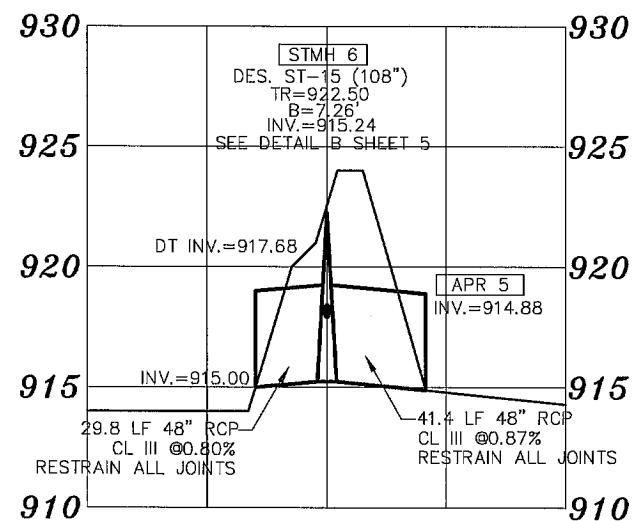
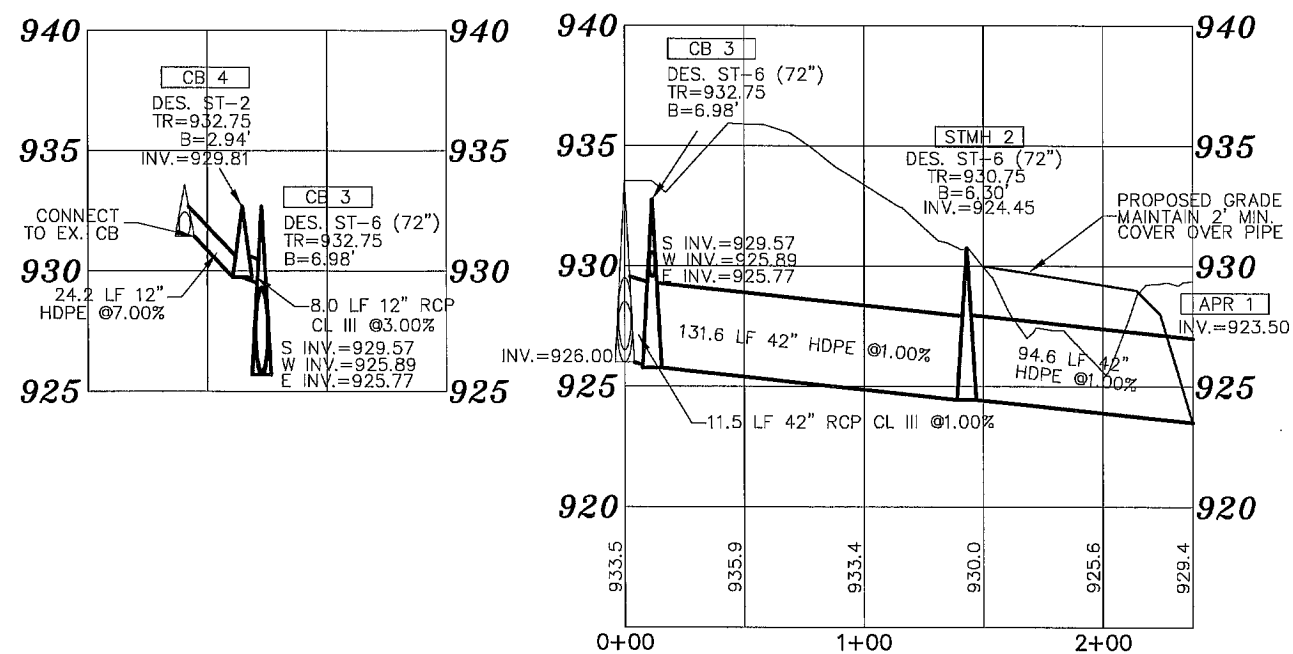
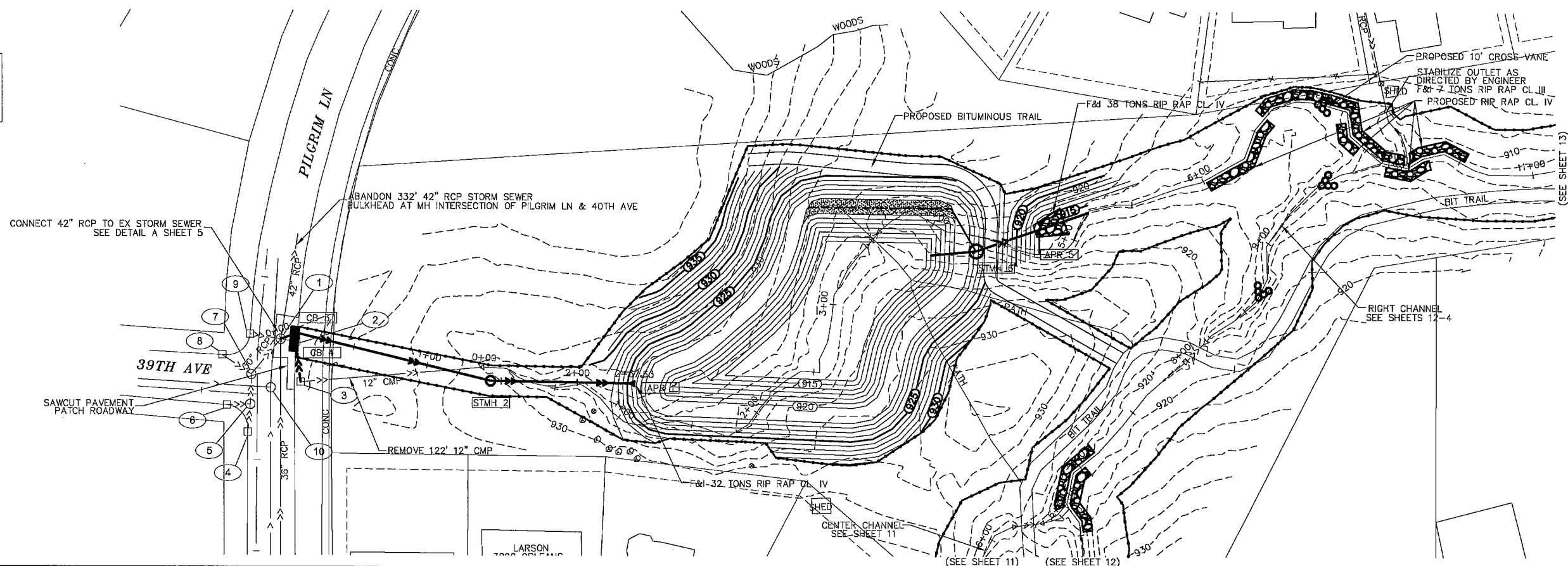
PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

STATE AID  
PROJ. NO.  
DWG NAME  
FOUR SEASONS

DRAWN BY  
DESIGNED BY  
CHECKED BY  
REVIEWED BY  
M. PAYNE  
M. PAYNE  
D. ASCHE  
J. RENNEBERG  
DATE  
7-13  
7-13  
7-13  
7-13

**NOTE:**  
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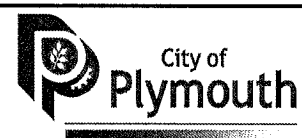
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[illegible]

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Signature: \_\_\_\_\_  
MICHAEL J. PAYNE

Date: X/XX/13 License #: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

LEFT CHANNEL  
PLAN & PROFILE

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
	DESIGNED BY M. PAYNE	7-13
DWG NAME	CHECKED BY D. ASCHE	7-13
FOUR SEASONS	REVIEWED BY J. RENNERBERG	7-13

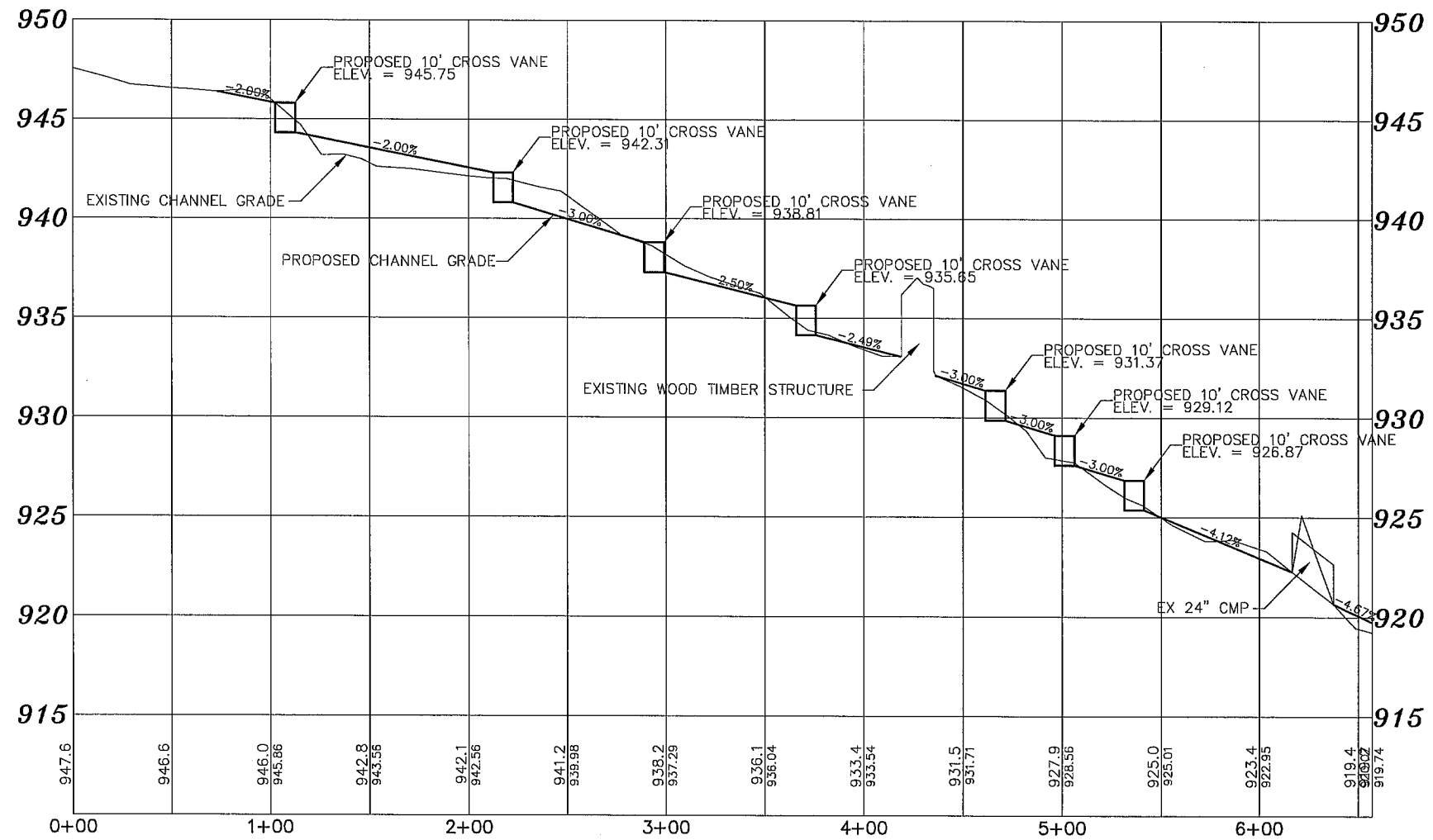
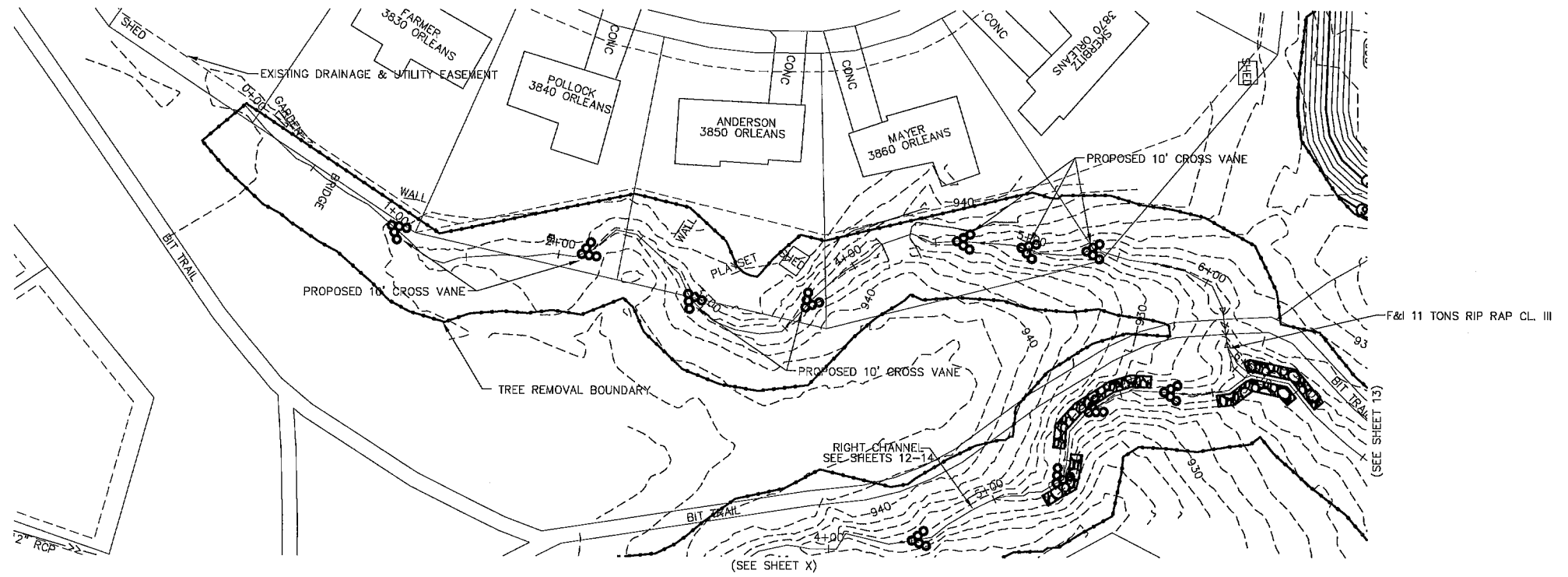
EX BM ELEVATION XXX.XX  
X  
X

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(21) DENOTES EXISTING STRUCTURE NUMBER  
(SEE EXISTING STRUCTURE SCHEDULE)

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NO	DATE	BY	CKD	APPR	REVISION

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Signature: MICHAEL J. PAYNE

Date: X/XX/13 License#: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CENTER CHANNEL  
PLAN & PROFILE

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME FOUR SEASONS	DESIGNED BY M. PAYNE	7-13
	CHECKED BY D. ASCHE	7-13
	REVIEWED BY J. RENNEBERG	7-13

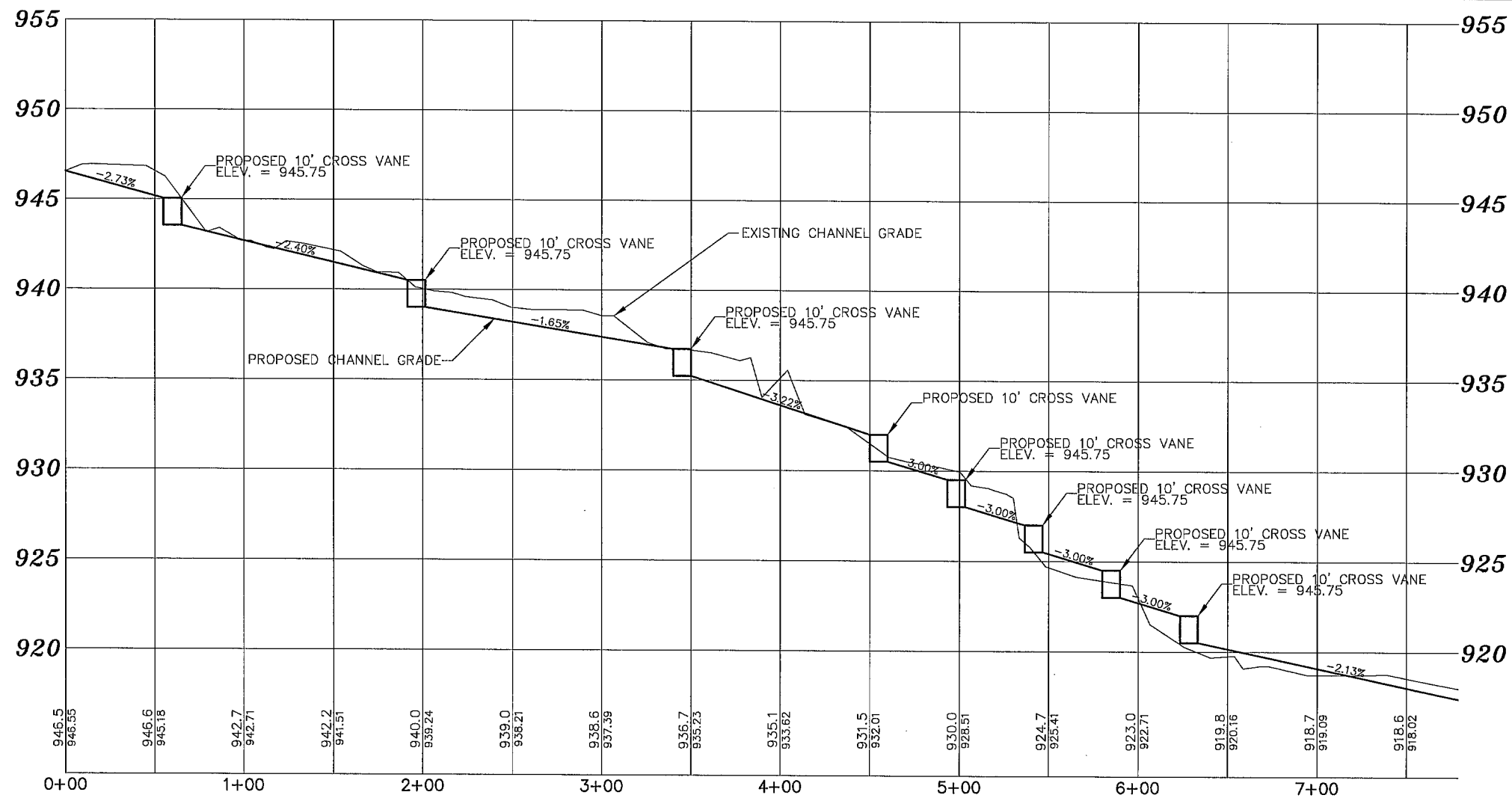
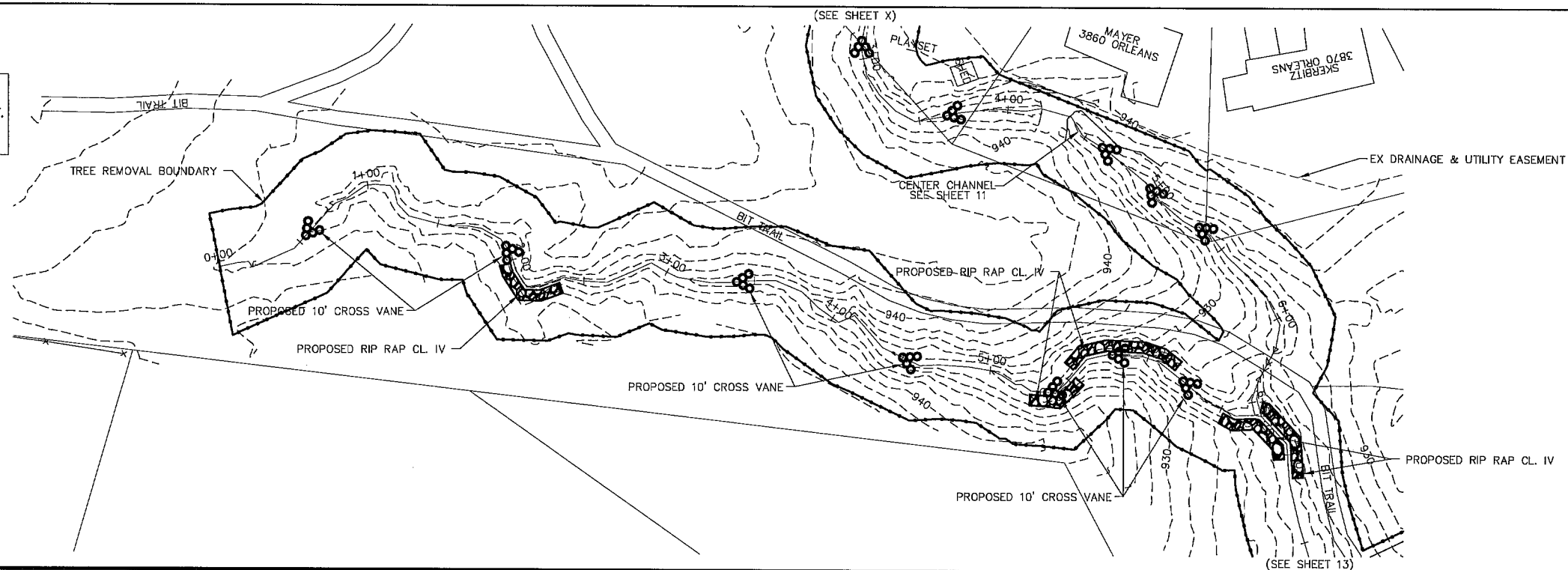
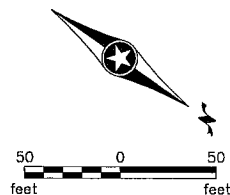
EX BM ELEVATION 898.34  
TNH EAST SIDE OF W MEDICINE LAKE  
DR. 425' NORTH OF HWY 55

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(SEE EXISTING STRUCTURE SCHEDULE)

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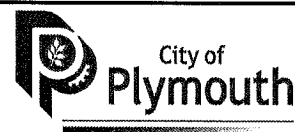


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Date: X/XX/13 License#: 50484



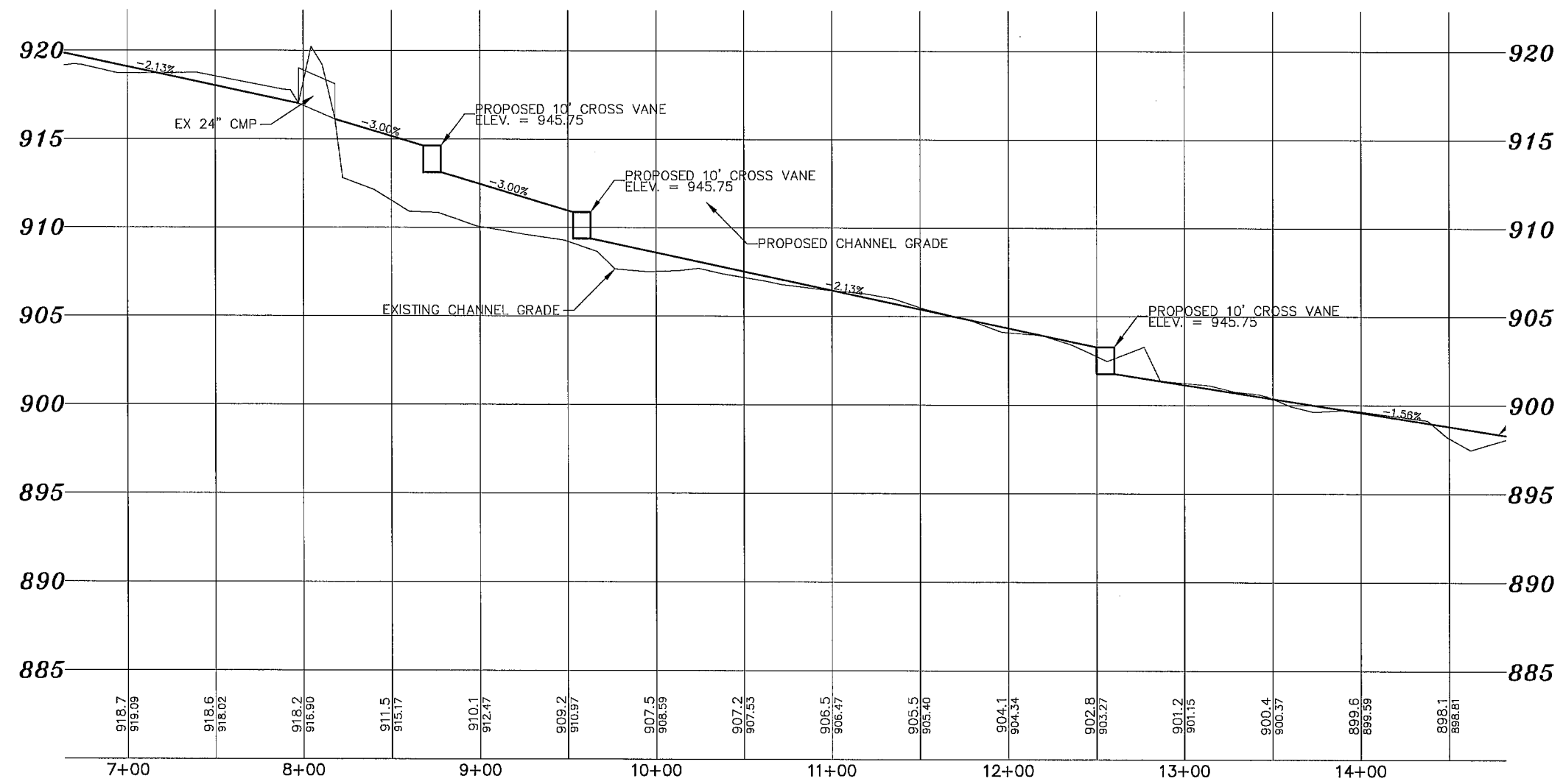
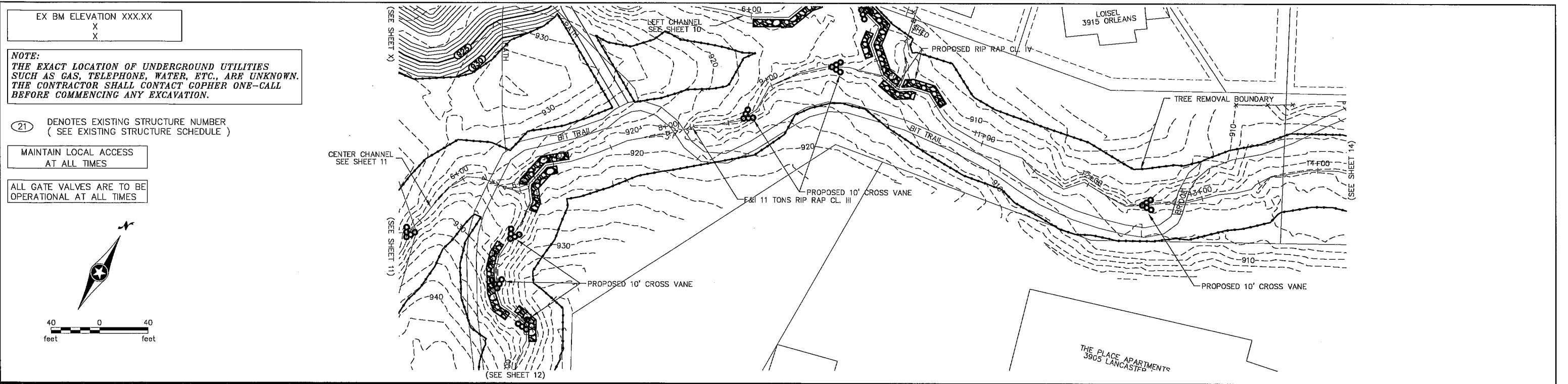
PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

RIGHT CHANNEL  
PLAN & PROFILE

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME	DESIGNED BY M. PAYNE	7-13
FOUR SEASONS	CHECKED BY D. ASCHE	7-13
	REVIEWED BY J. RENNEBERG	7-13

12

26

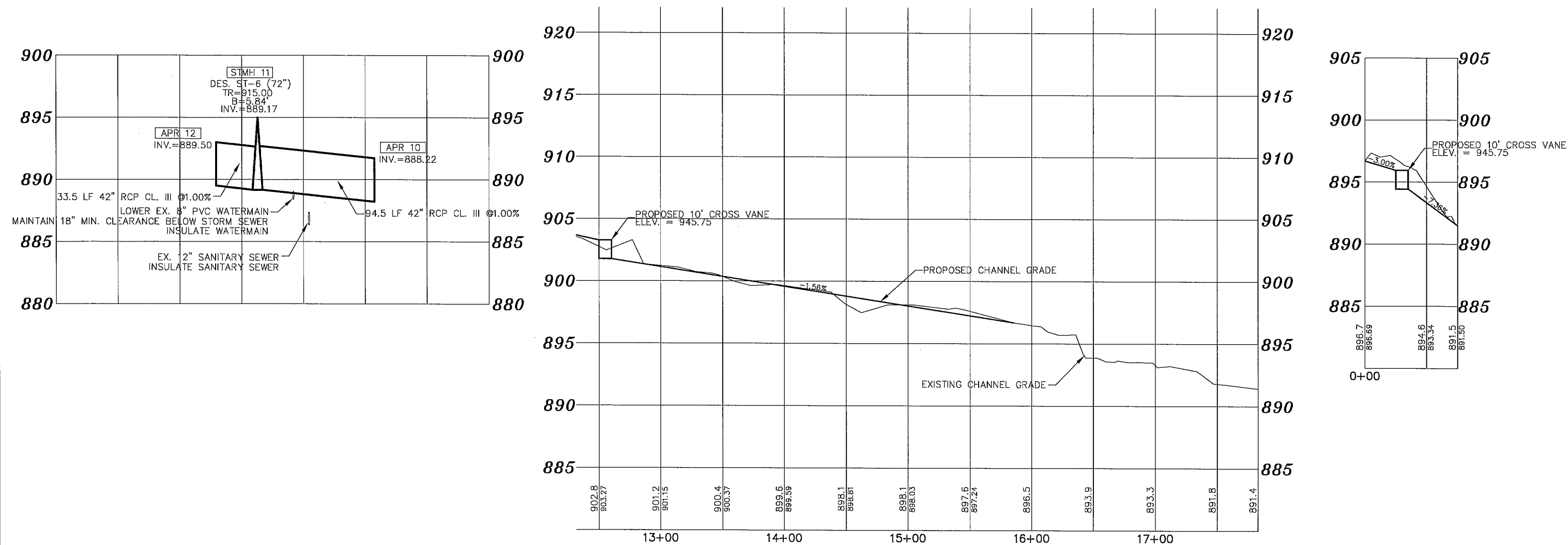
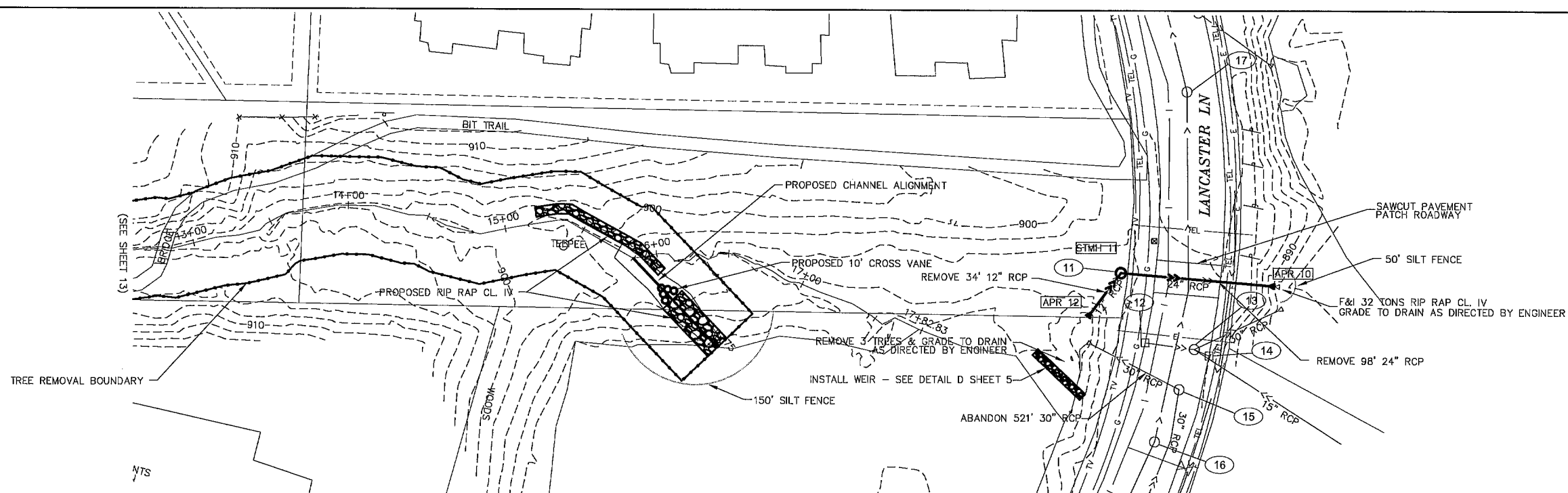
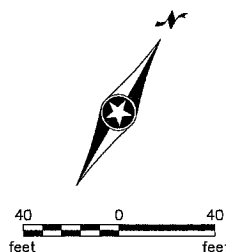




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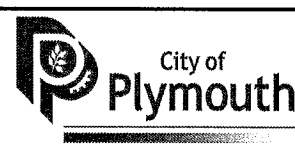


NO	DATE	BY	CKD	APPR	REVISION

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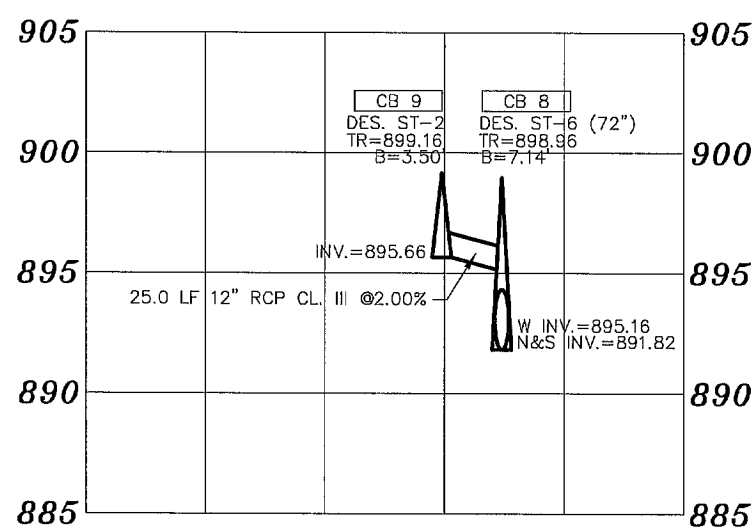
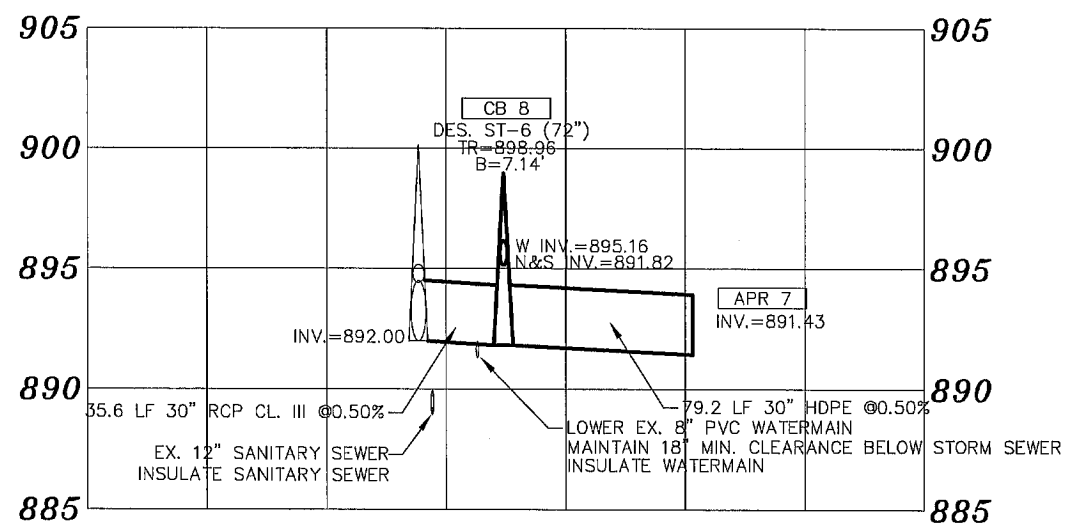
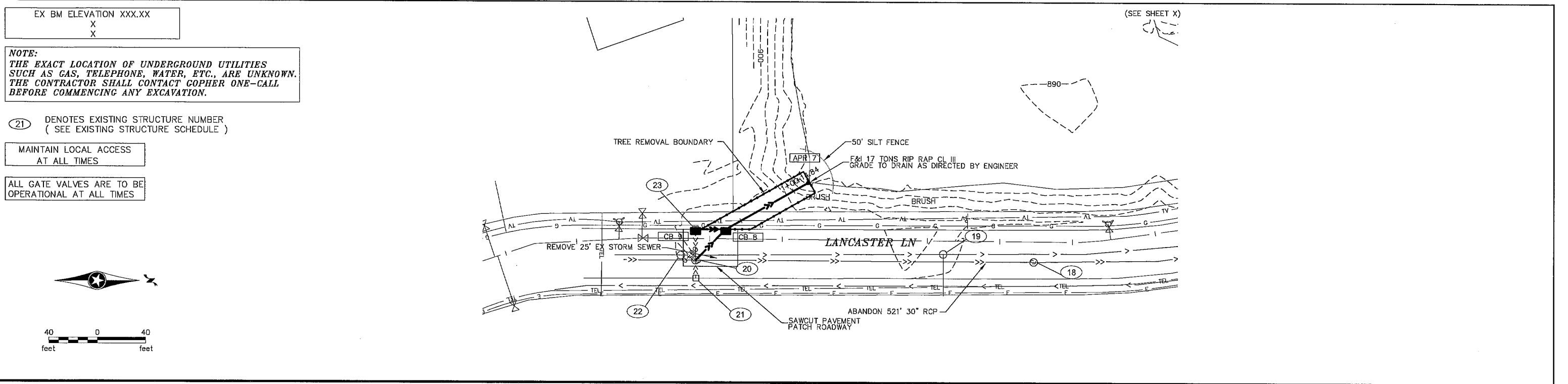
PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

RIGHT CHANNEL  
PLAN & PROFILE

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
	DESIGNED BY M. PAYNE	7-13
DWG NAME	CHECKED BY D. ASCHE	7-13
FOUR SEASONS	REVIEWED BY J. RENNEBERG	7-13

14

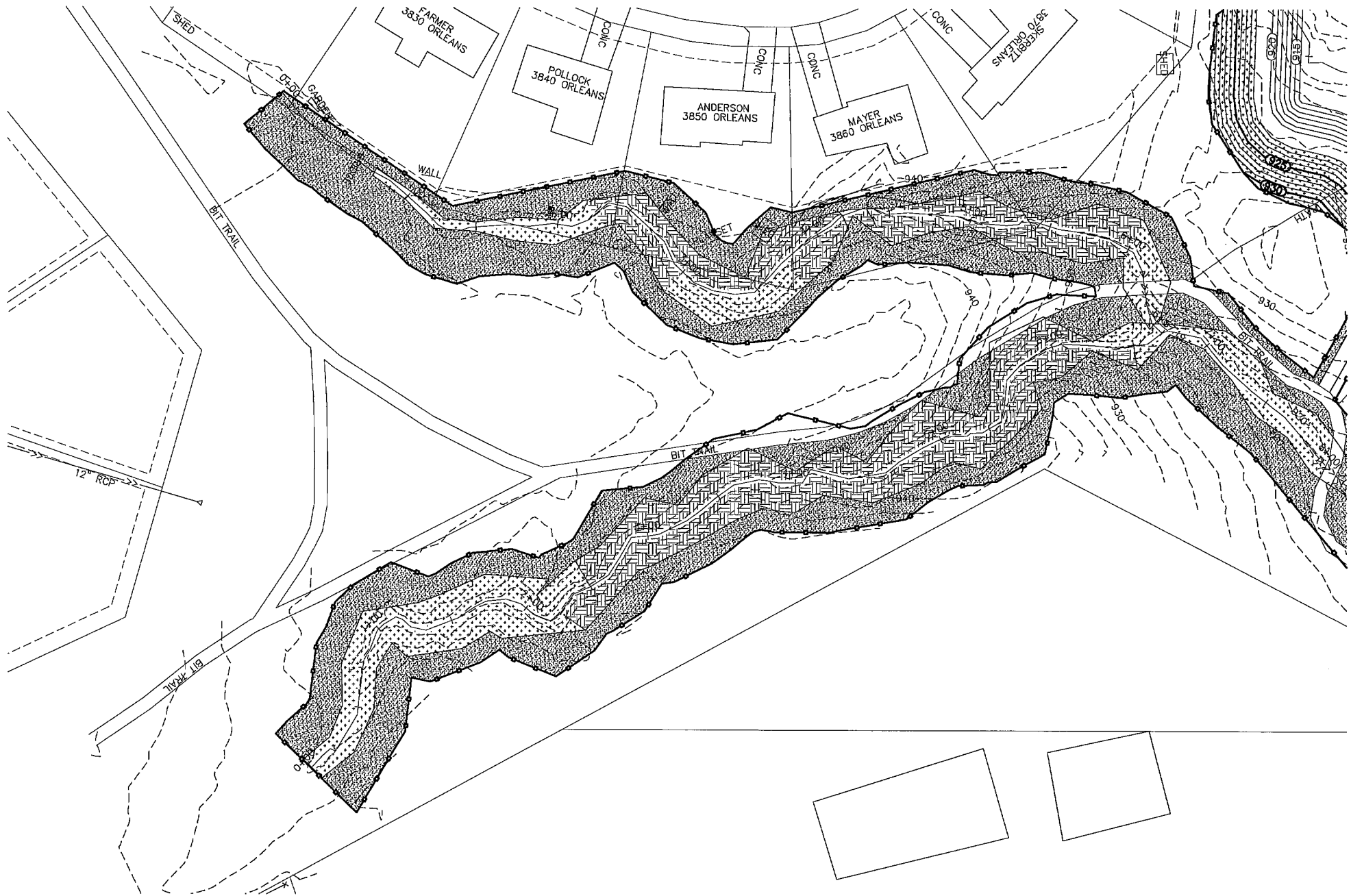
26



MAINTAIN LOCAL ACCESS  
AT ALL TIMES



- MnDOT TYPE II COMPOST (3" THICKNESS) WITH SEED
- MnDOT TYPE II COMPOST (3" THICKNESS) WITH SEED & EROSION CONTROL BLANKET (TYPE ?)
- WOODY VEGETATION (SHRUBS?) 3' OC & MnDOT TYPE II COMPOST (3" THICKNESS) WITH SEED & EROSION CONTROL BLANKET (TYPE ?)

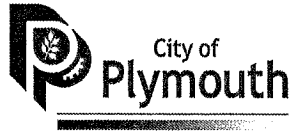


NO	DATE	BY	CKD	APPR	REVISION

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Date: X/XX/13 License#: 60484

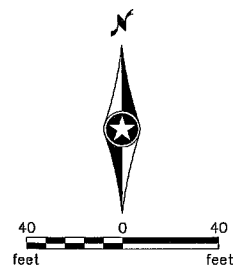


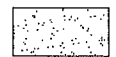
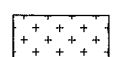

PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

RESTORATION

STATE AID PROJ. NO.	DRAWN BY <u>M. PAYNE</u>	DATE <u>7-13</u>
	DESIGNED BY <u>M. PAYNE</u>	<u>7-13</u>
DWG NAME	CHECKED BY <u>D. ASCHE</u>	<u>7-13</u>
FOUR SEASONS	REVIEWED BY <u>J. RENNEBERG</u>	<u>7-13</u>

MAINTAIN LOCAL ACCESS  
AT ALL TIMES



-  MnDOT TYPE II COMPOST (3" THICKNESS) WITH SEED
-  MnDOT TYPE II COMPOST (3" THICKNESS) WITH SEED & EROSION CONTROL BLANKET (TYPE ?)
-  WOODY VEGETATION (SHRUBS?) 3' OC & MnDOT TYPE II COMPOST (3" THICKNESS) WITH SEED & EROSION CONTROL BLANKET (TYPE ?)

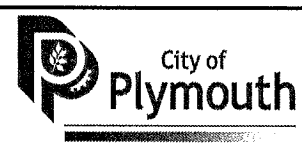


NO	DATE	BY	CKD	APPR	REVISION

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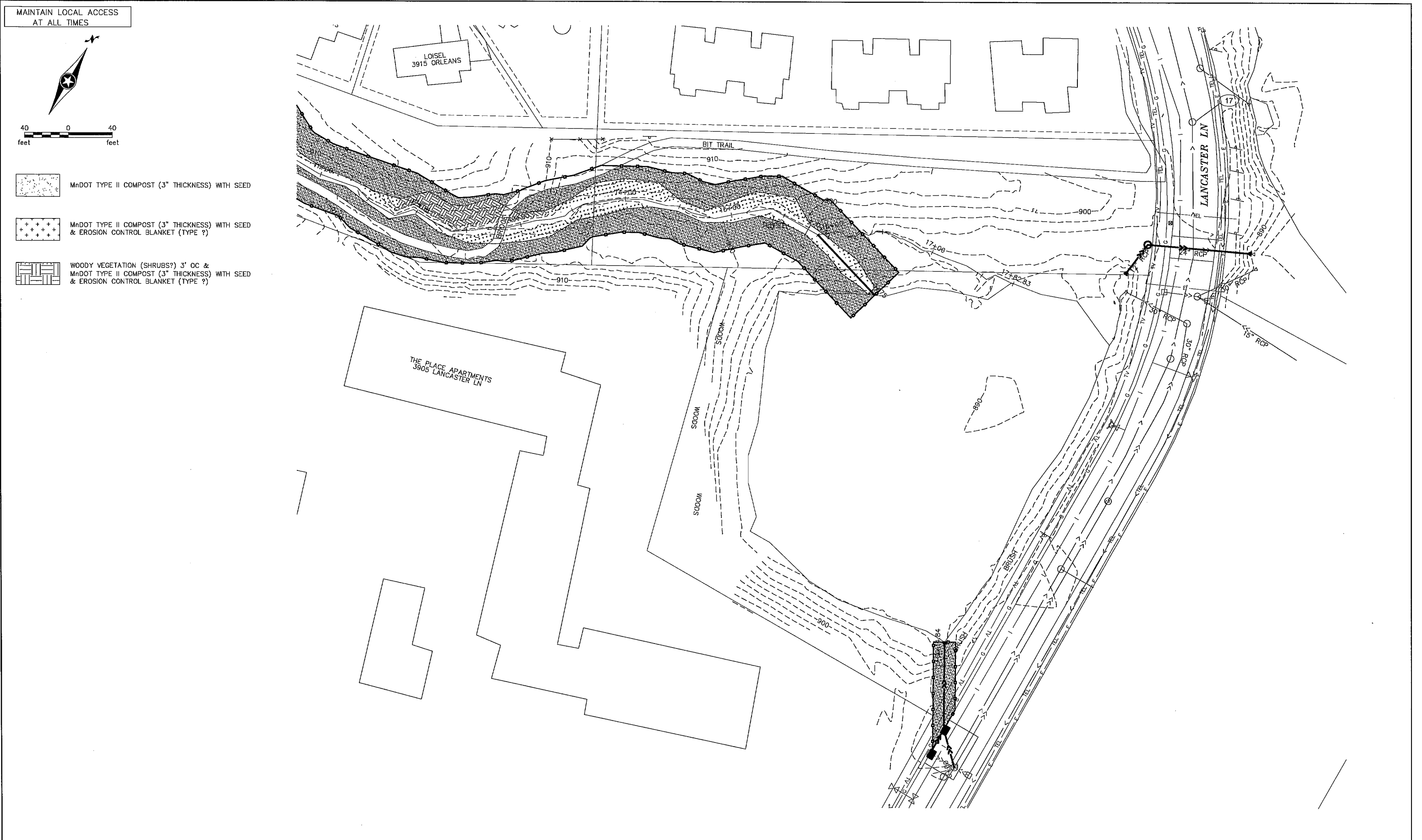
Date: X/XX/13 License#: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

RESTORATION

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
	DESIGNED BY M. PAYNE	7-13
DWG NAME	CHECKED BY D. ASCHÉ	7-13
FOUR SEASONS	REVIEWED BY J. RENNEBERG	7-13

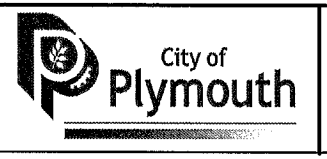


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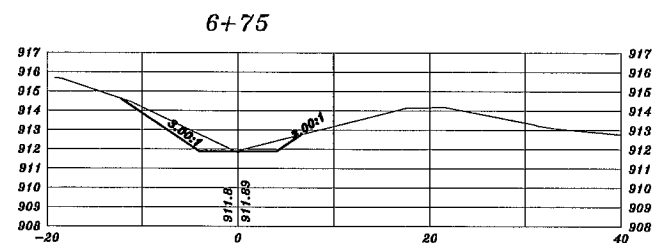
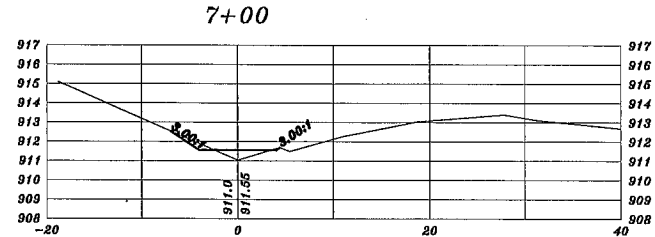
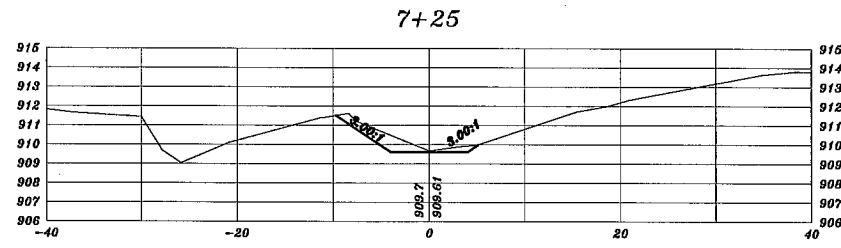
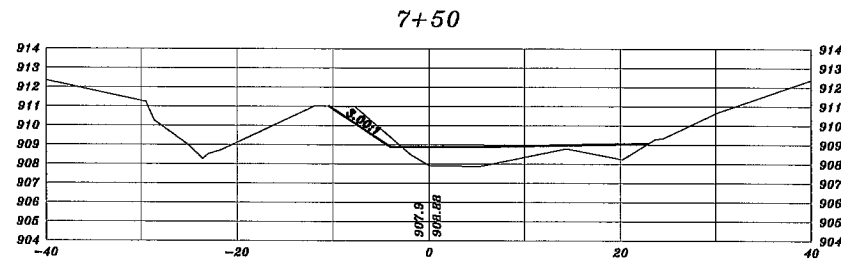
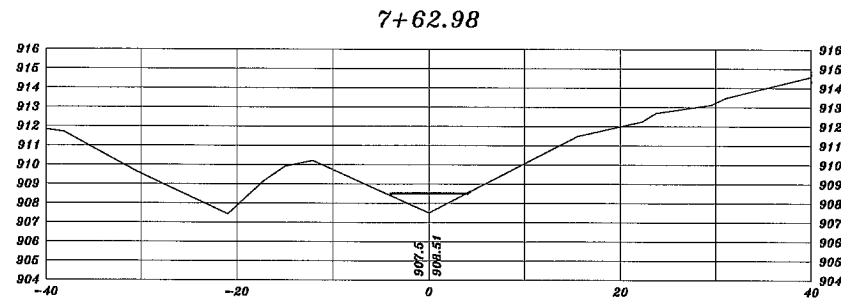
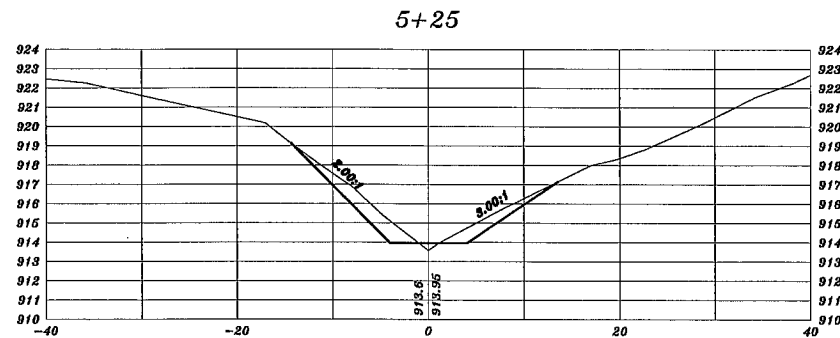
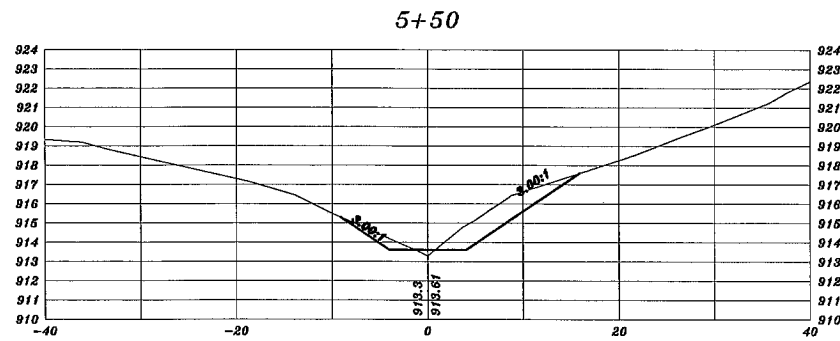
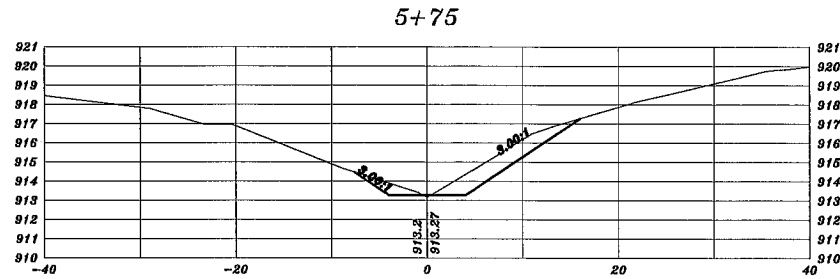
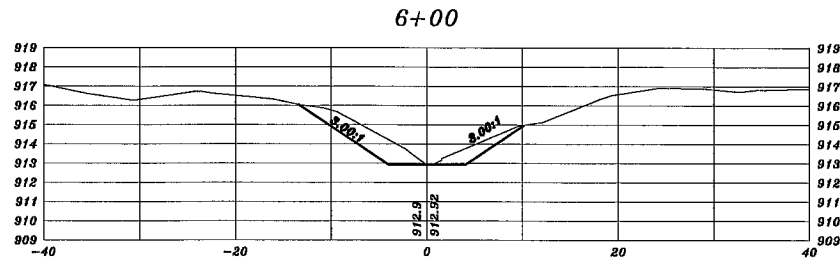
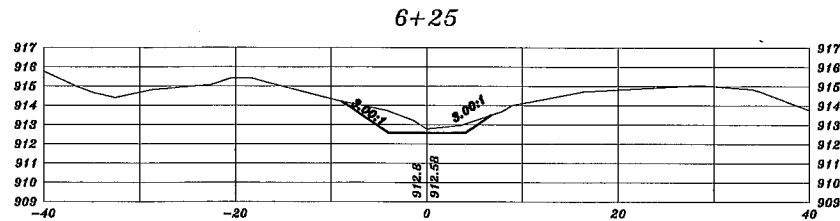
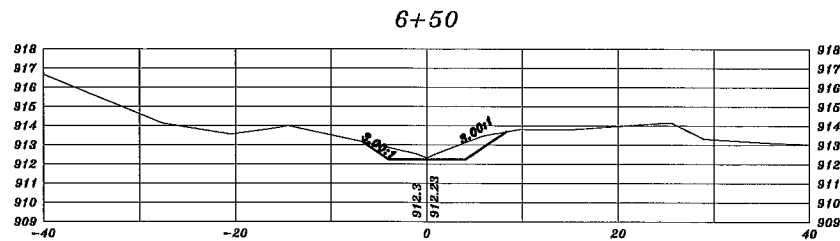
PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

RESTORATION

STATE AID PROJ. NO.	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME FOUR SEASONS	DESIGNED BY M. PAYNE	7-13
	CHECKED BY D. ASCHÉ	7-13
	REVIEWED BY J. RENNEBERG	7-13

18  
26



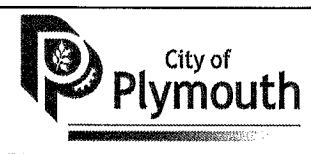


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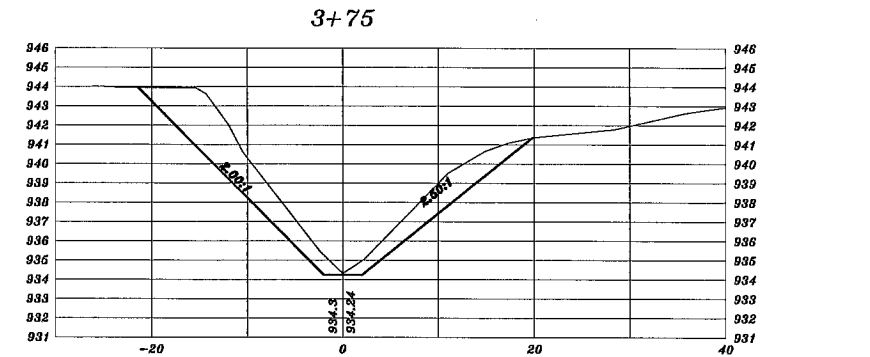
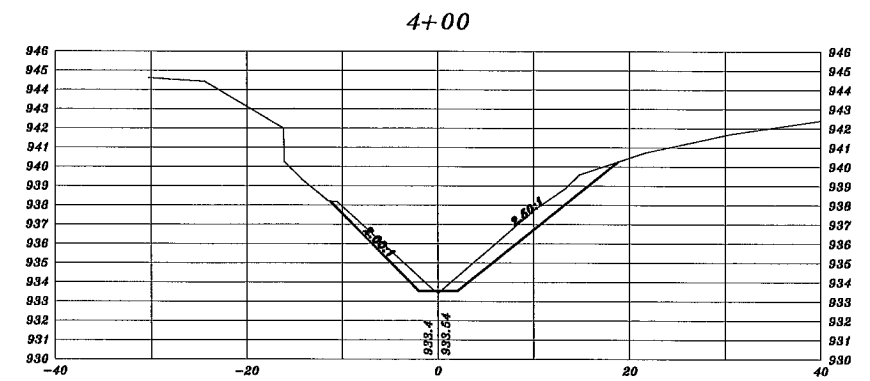
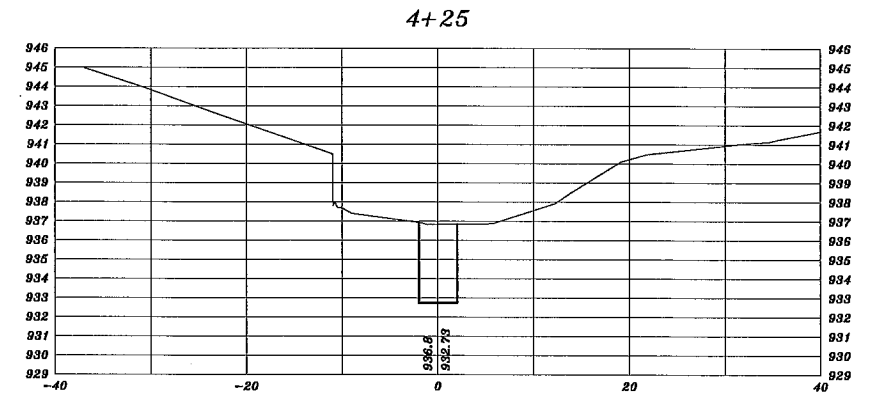
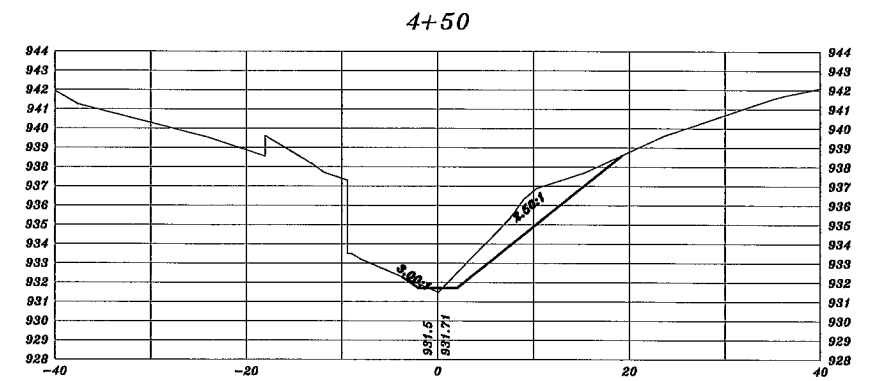
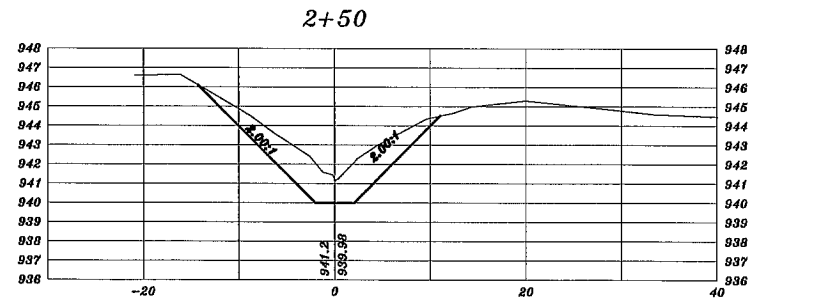
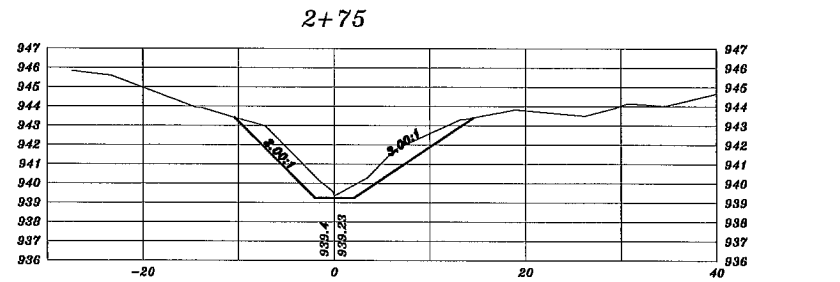
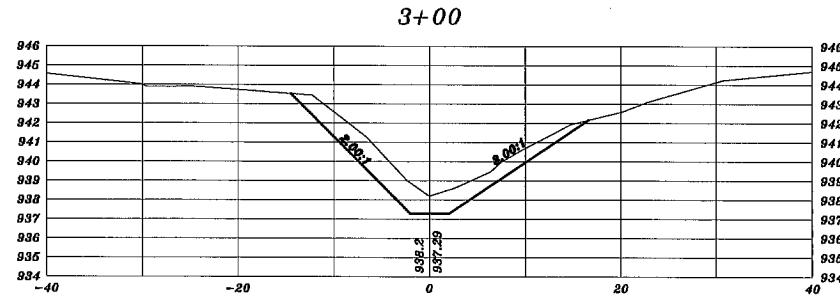
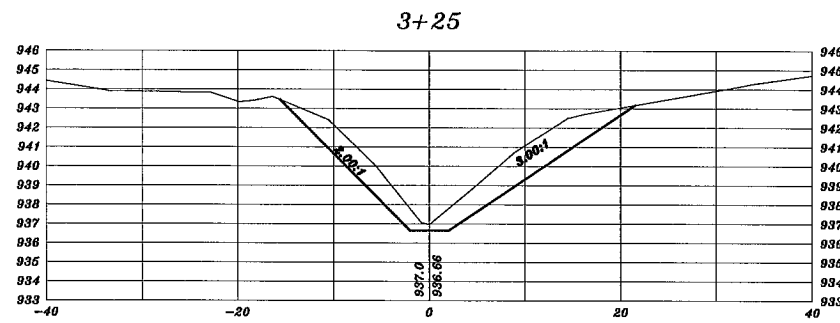
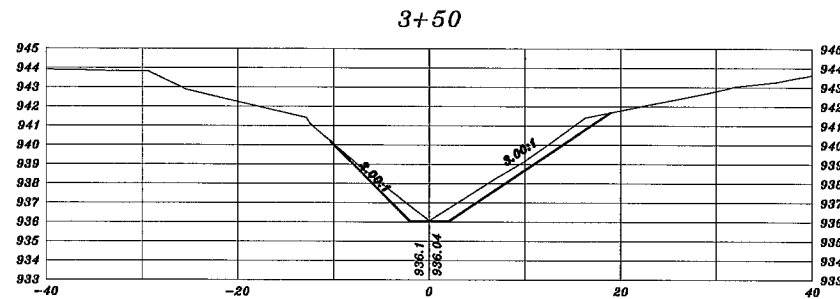
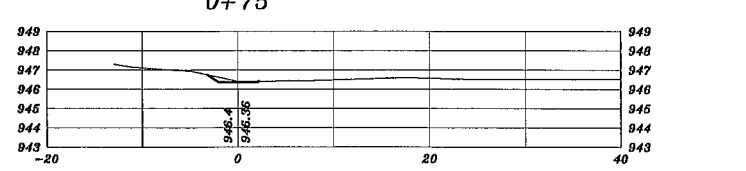
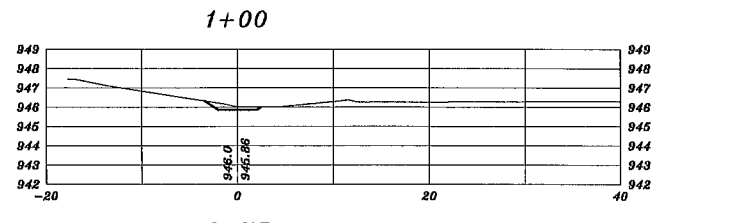
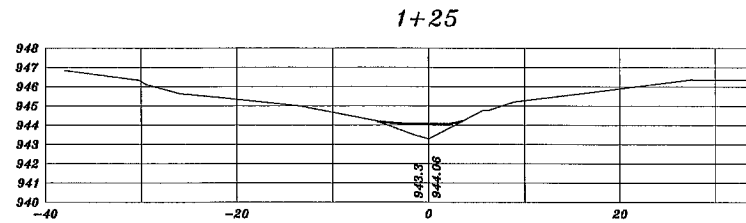
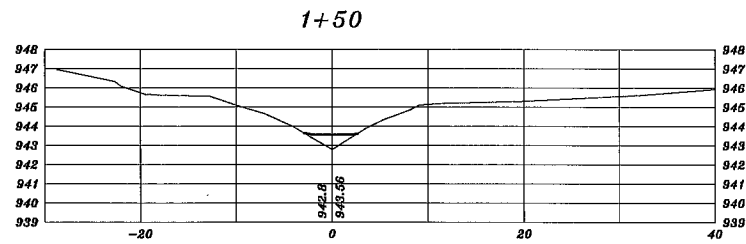
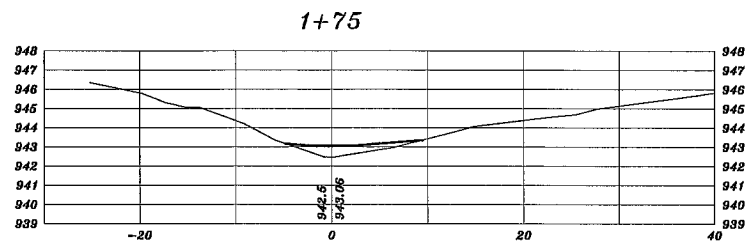
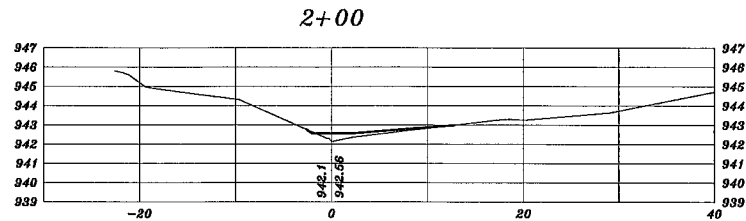
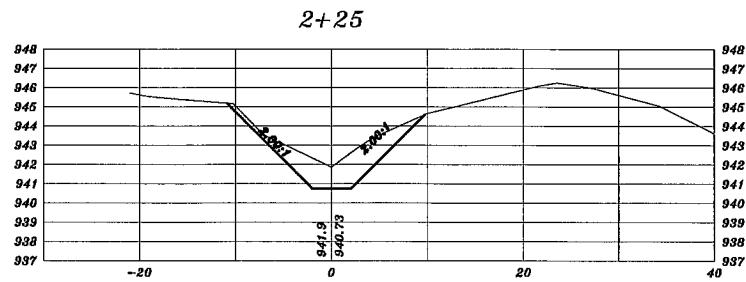
Date: X License#: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
LEFT CHANNEL  
STA. 0+00 TO STA. X

STATE AID PROJ. NO. NA	DRAWN BY M. PAYNE DESIGNED BY M. PAYNE CHECKED BY D. ASCHE REVIEWED BY J. RENNEBERG	DATE 7-13 7-13 7-13 7-13
DWG NAME XSECTIONS		

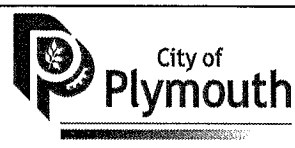


NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE

Date: X License #: 50484

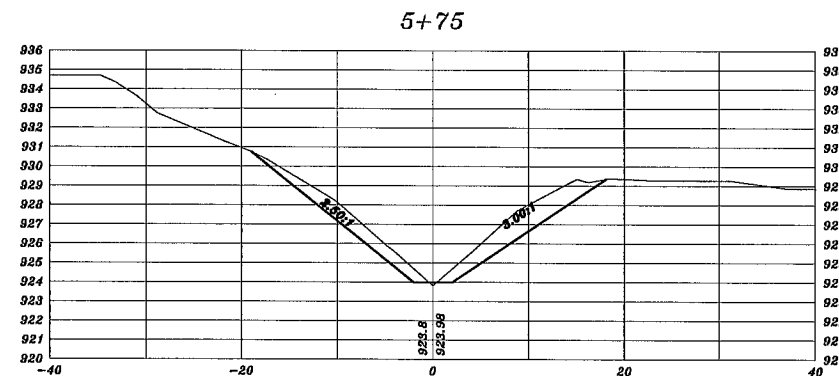
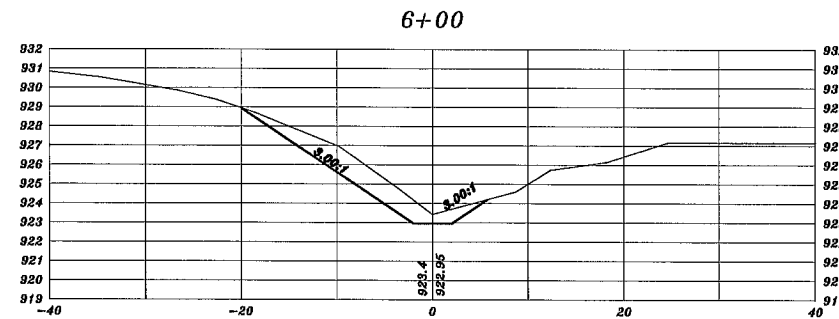
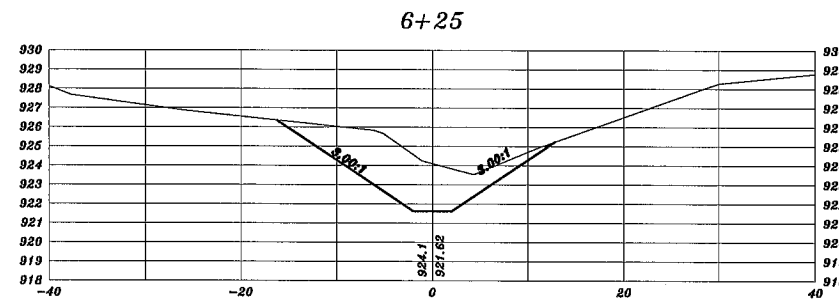
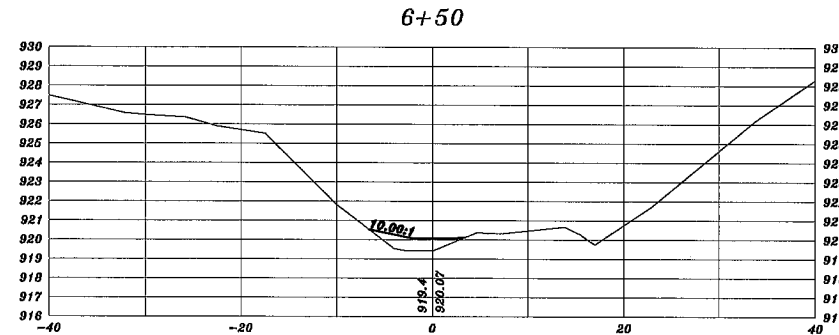
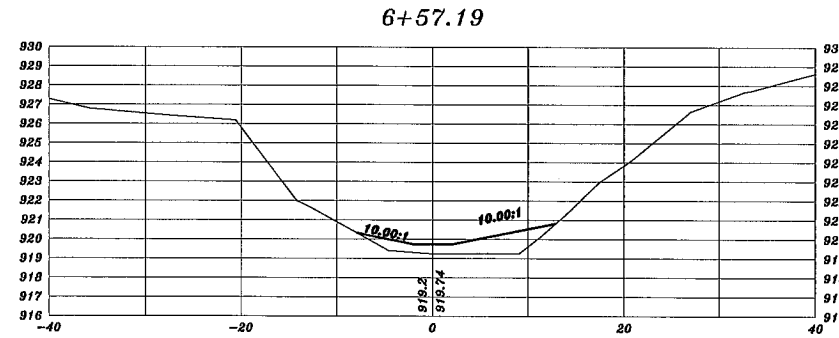
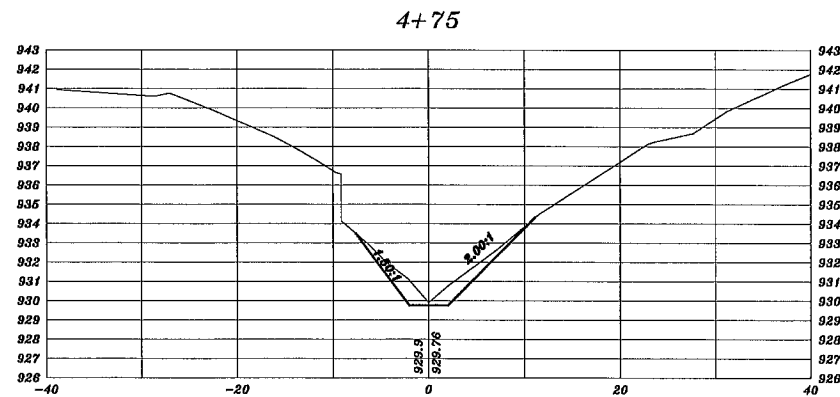
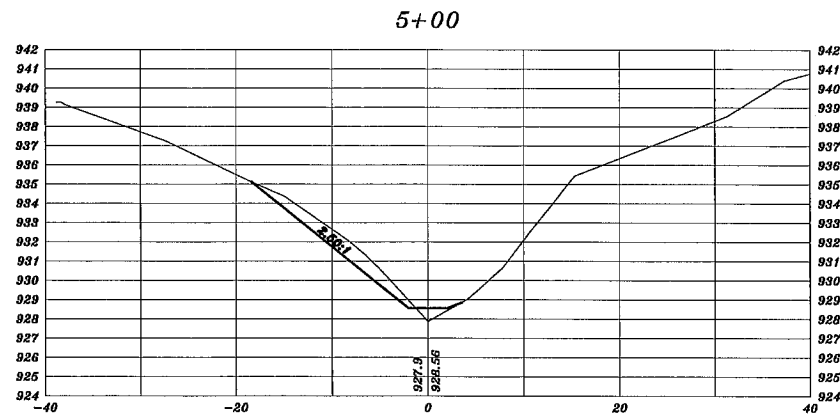
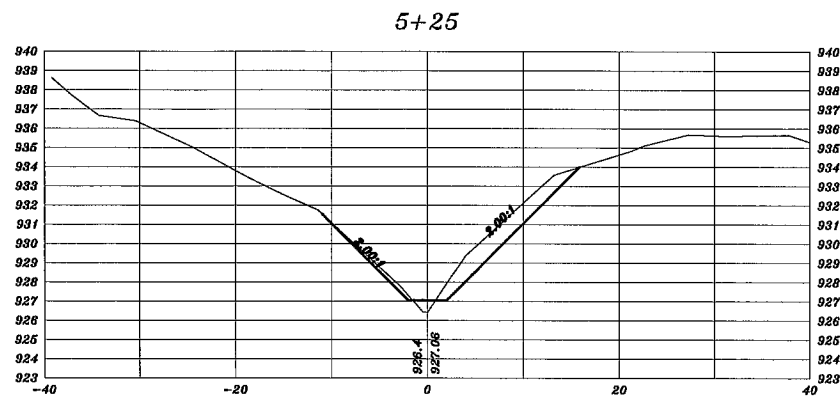
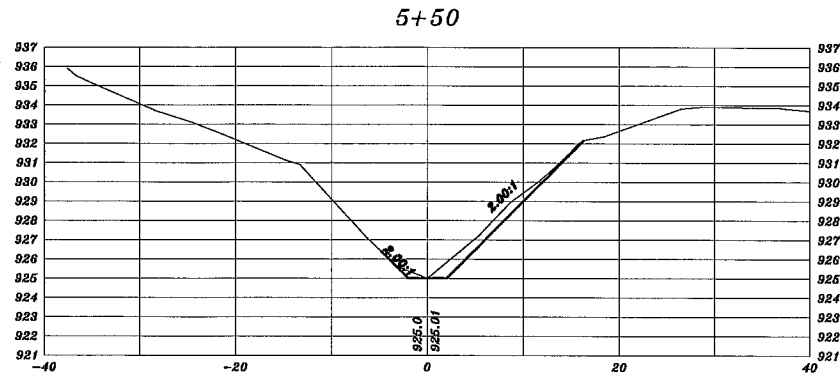


PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
CENTER CHANNEL  
STA. 0+00 TO STA. 4+50

STATE AID PROJ. NO. NA  
DWG NAME XSECTIONS  
DRAWN BY M. PAYNE  
DESIGNED BY M. PAYNE  
CHECKED BY D. ASCHÉ  
REVIEWED BY J. RENNEBERG

DATE 7-13  
DATE 7-13  
DATE 7-13  
DATE 7-13  
20  
26

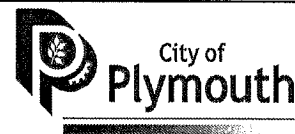


NO	DATE	BY	CKD	APPR	REVISION

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Signature: MICHAEL J. PAYNE

Date: X License#: 50484



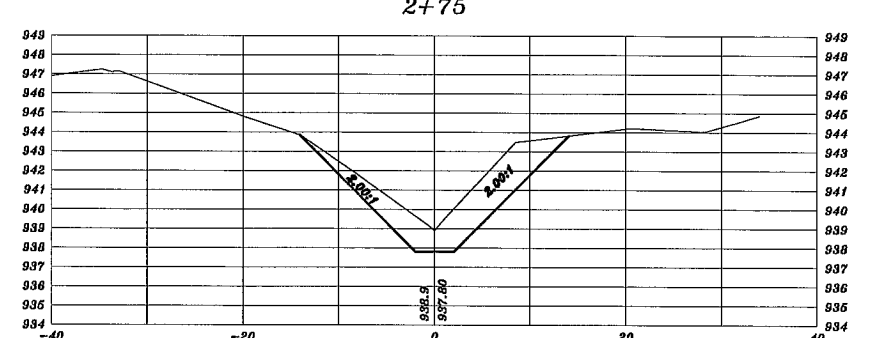
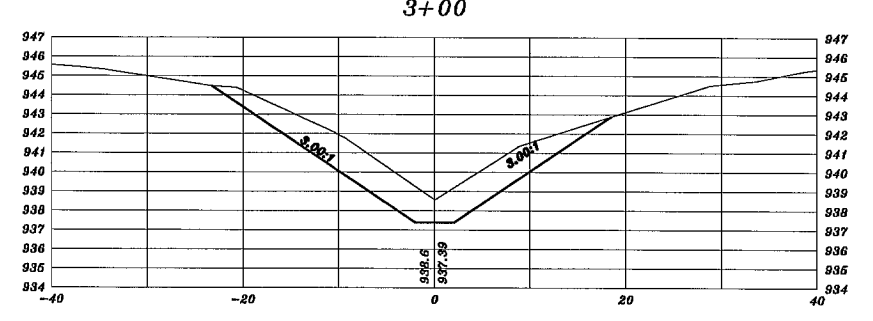
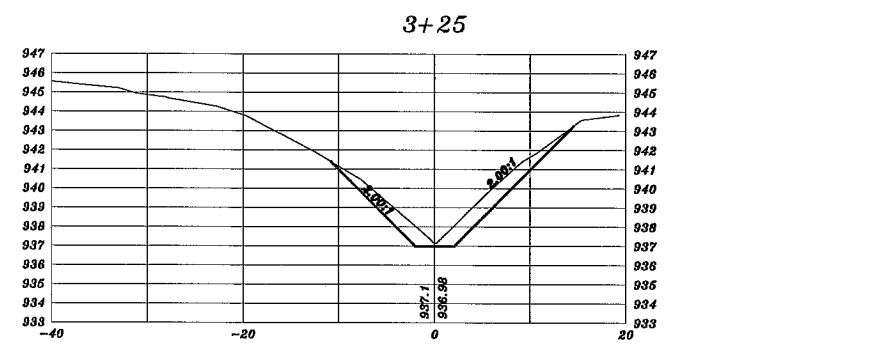
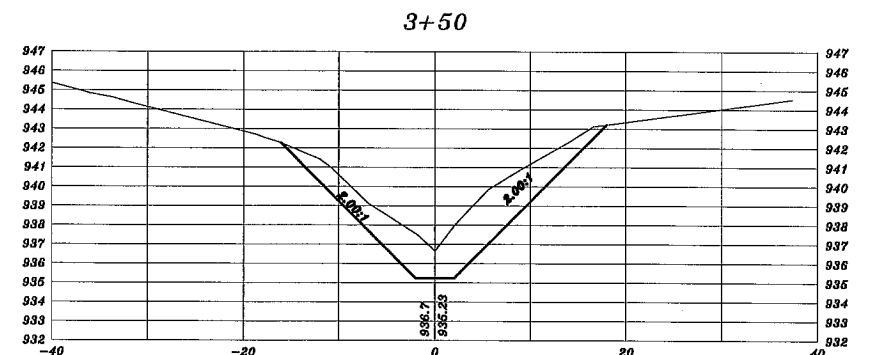
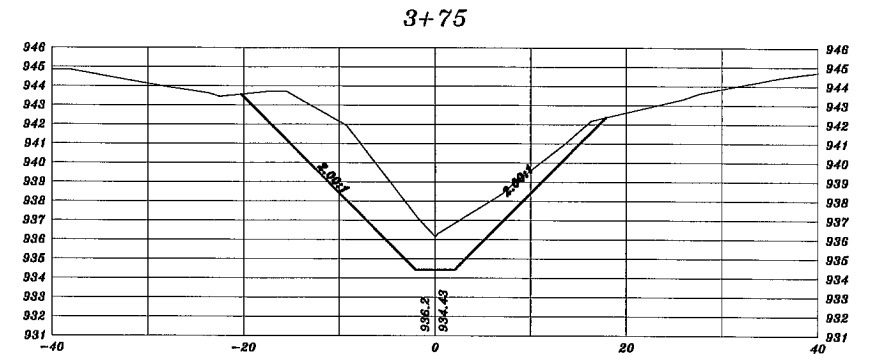
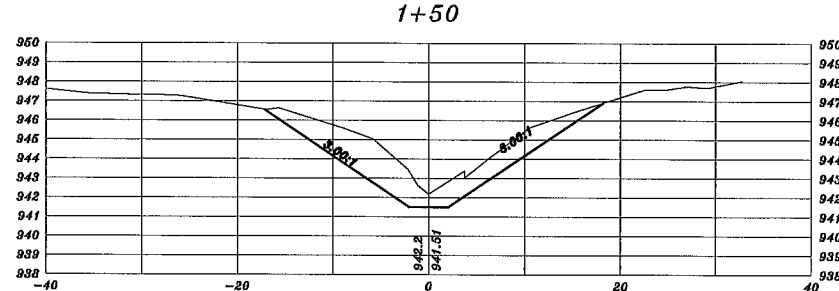
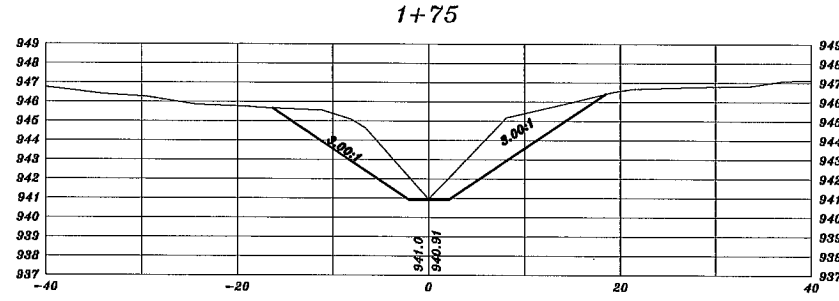
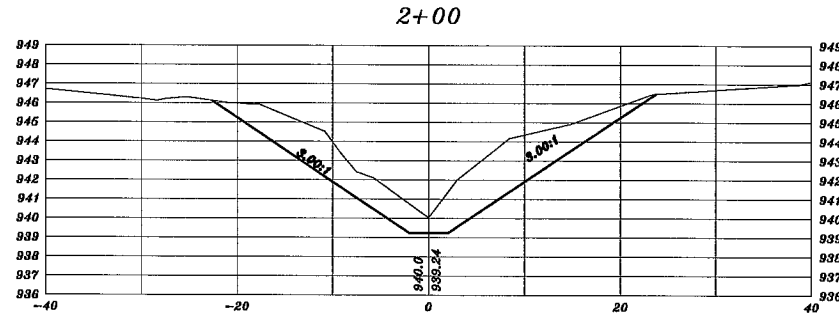
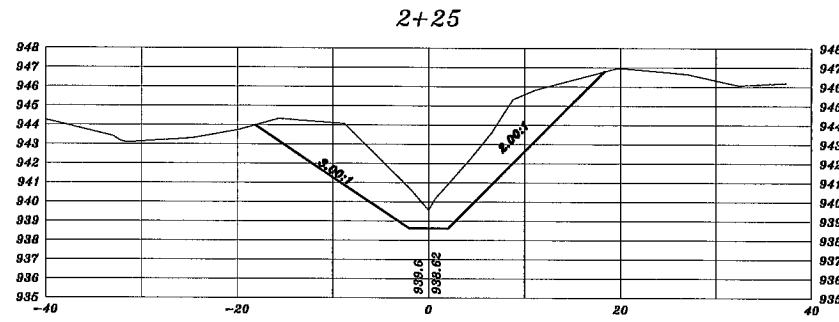
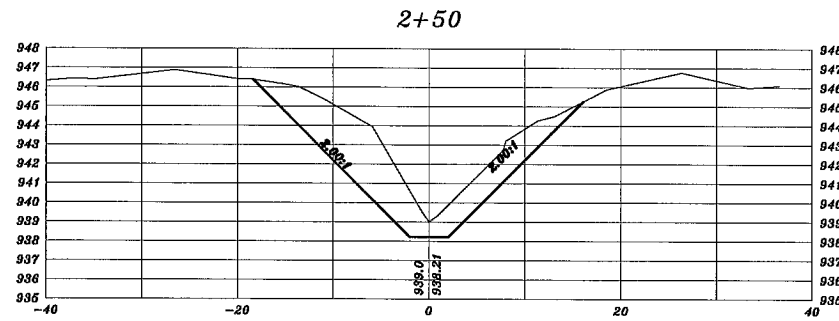
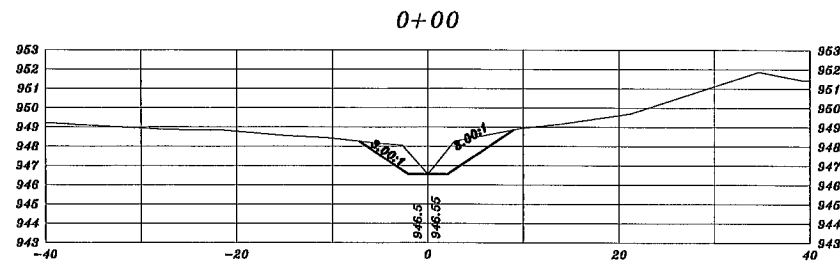
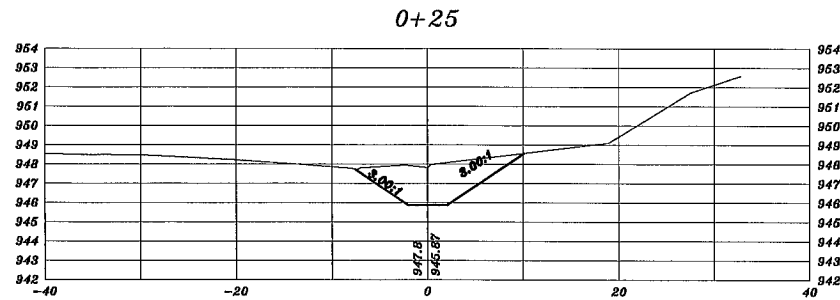
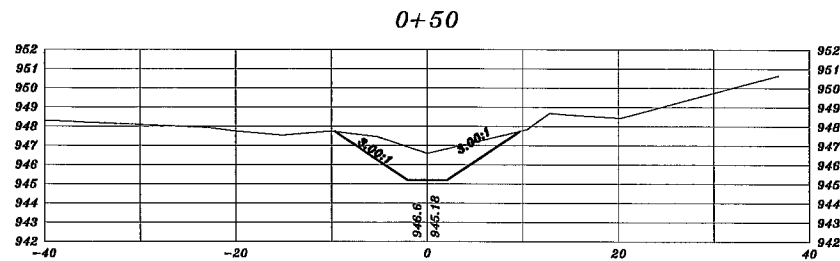
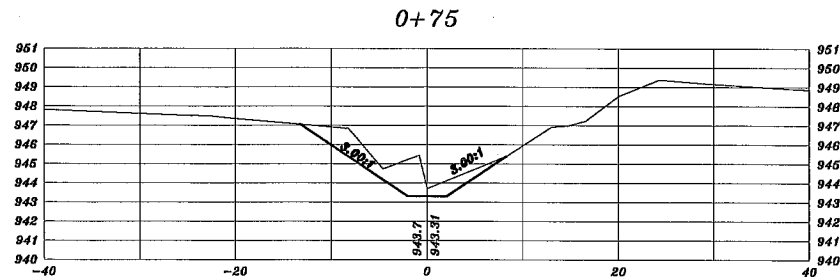
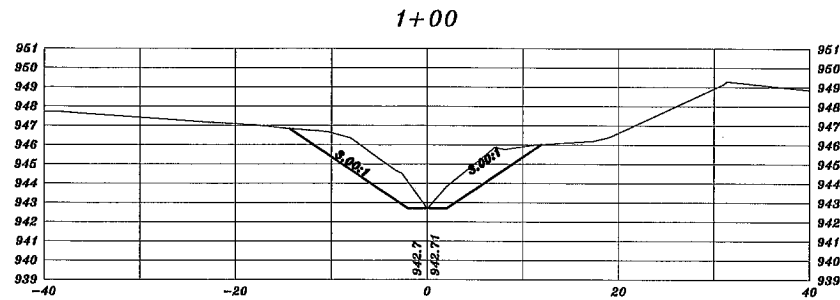
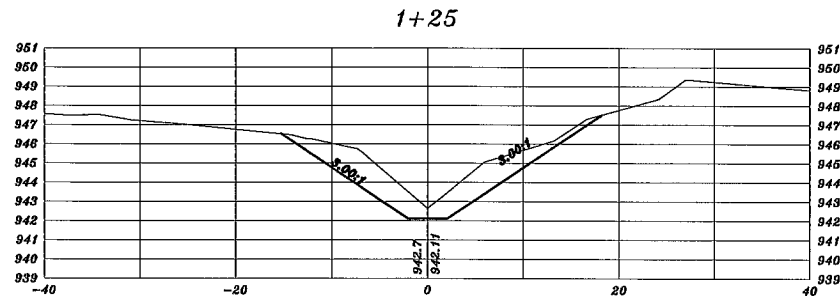
PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
RIGHT CHANNEL  
STA. 4+75 TO STA. 6+57.19

STATE AID PROJ. NO. NA	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME XSECTIONS	DESIGNED BY M. PAYNE	7-13
	CHECKED BY D. ASCHÉ	7-13
	REVIEWED BY J. RENNEBERG	7-13

21

26

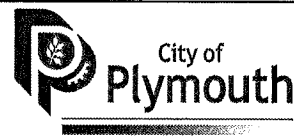


NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE

Date: X License#: 50484

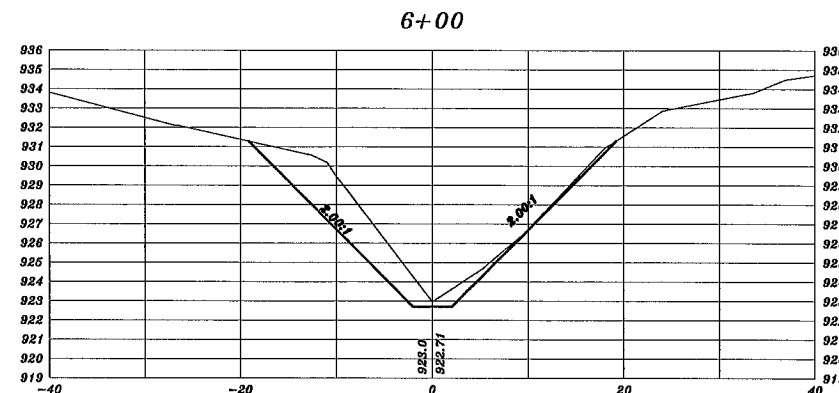
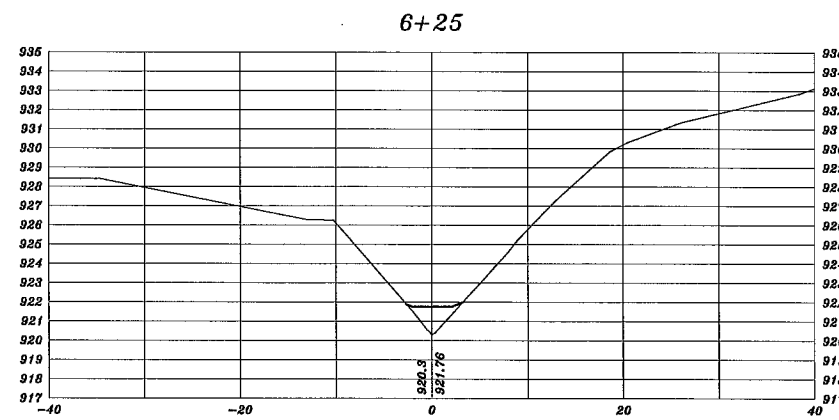
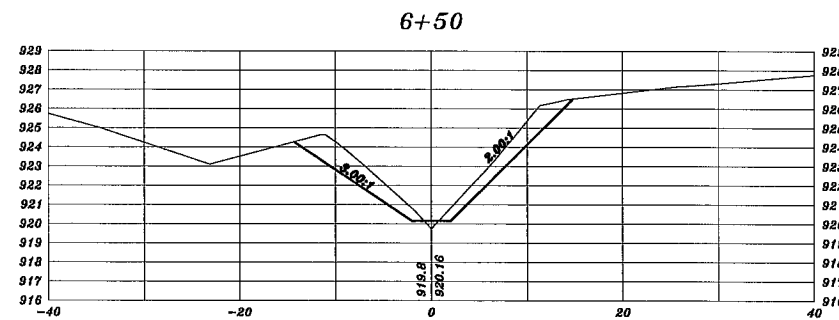
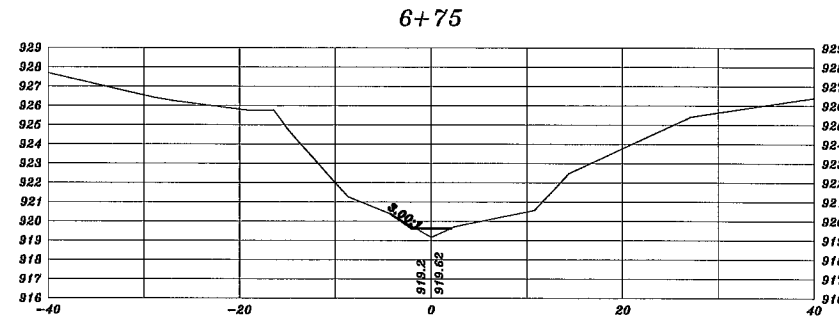
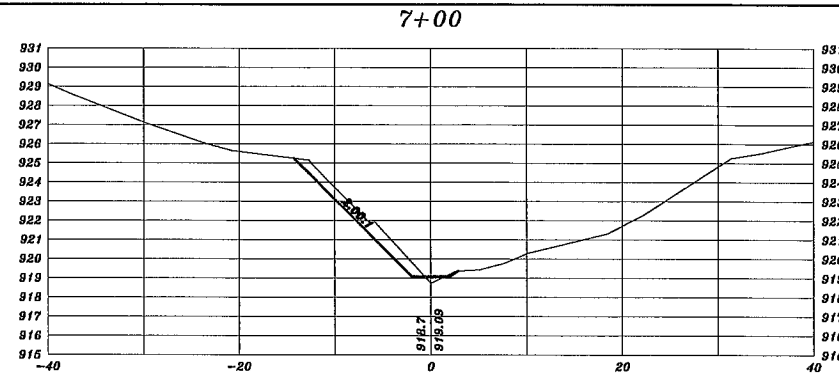
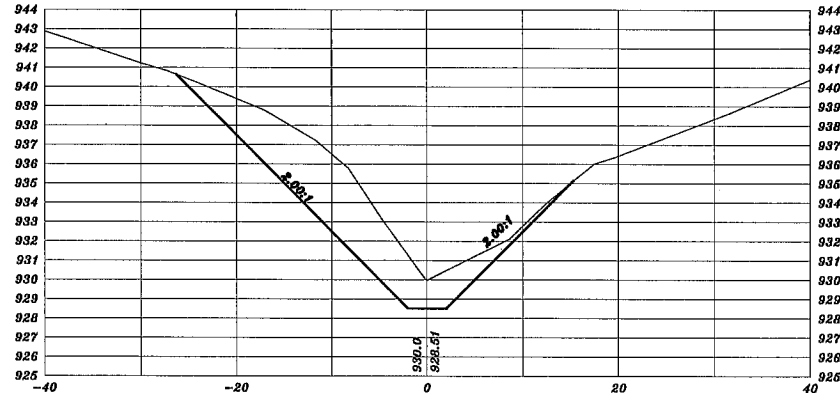
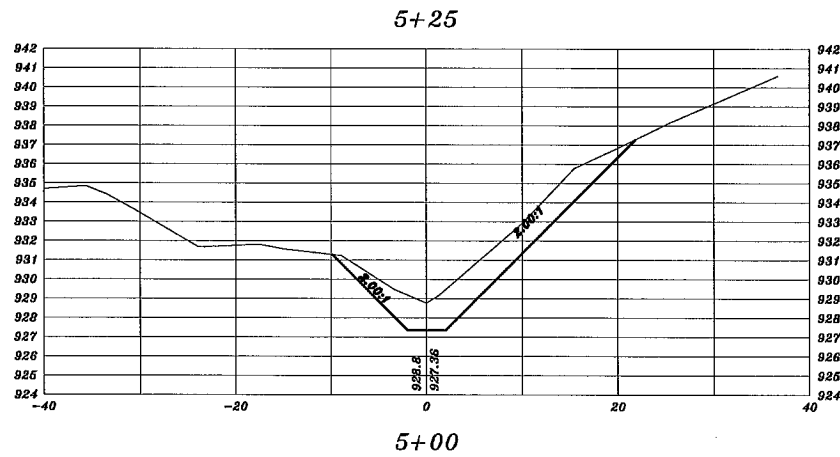
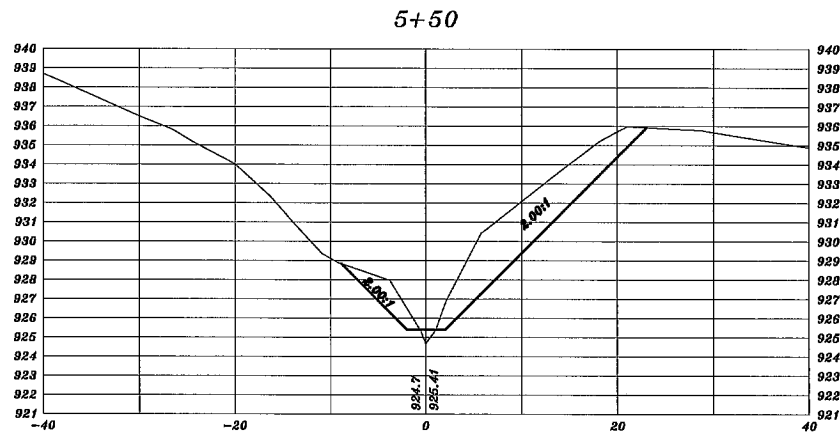
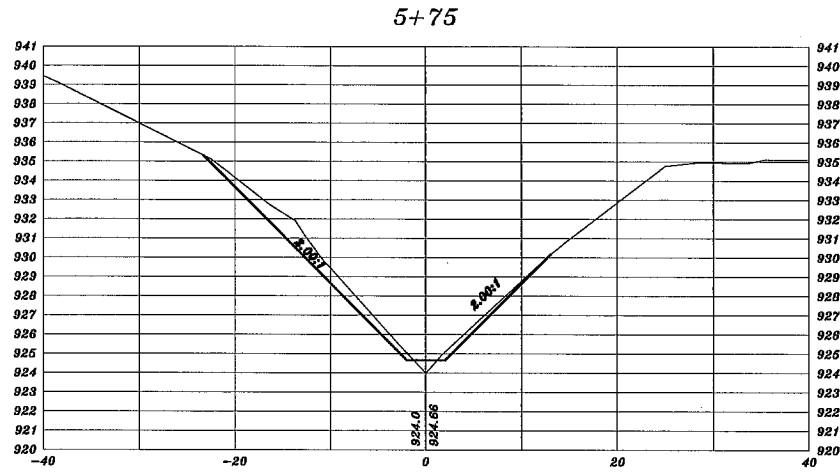
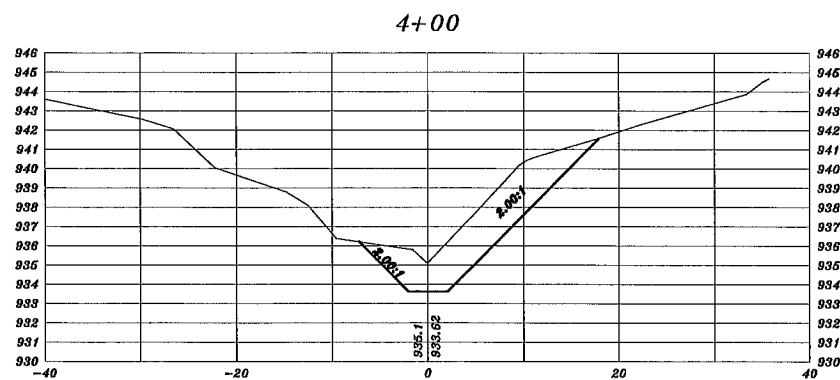
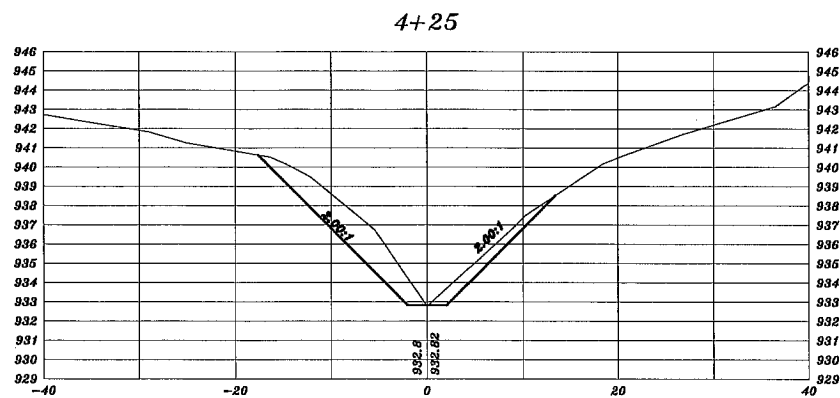
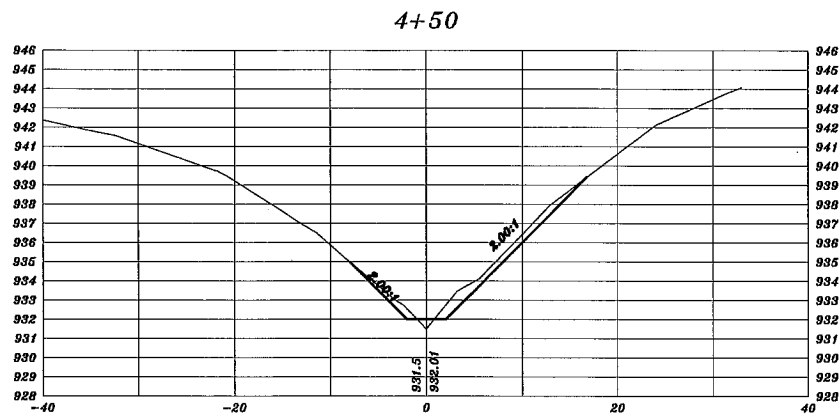
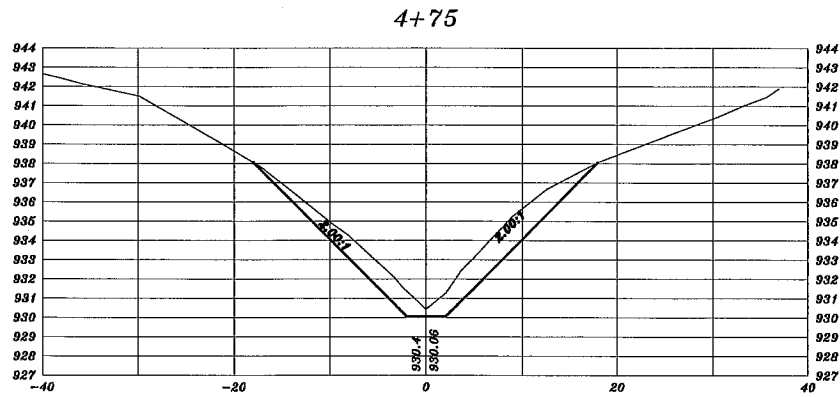


PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
RIGHT CHANNEL  
STA. 0+00 TO STA. 3+75

STATE AID	DRAWN BY	DATE
PROJ. NO.	M. PAYNE	7-13
NA	DESIGNED BY	7-13
DWG NAME	M. PAYNE	
	CHECKED BY	7-13
	D. ASCHÉ	
XSECTIONS	REVIEWED BY	7-13
	J. RENNEBERG	

22  
26

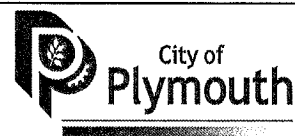


NO	DATE	BY	CKD	APPR	REVISION

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Signature: MICHAEL J. PAYNE

Date: X License#: 50484

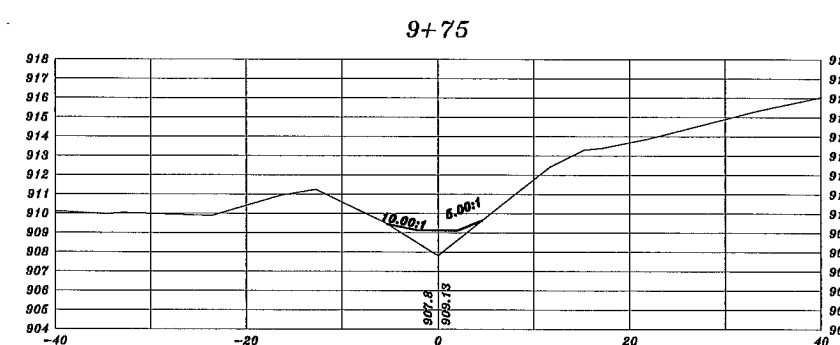
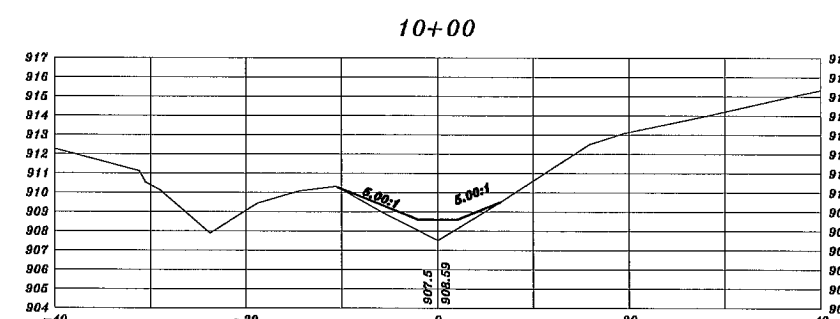
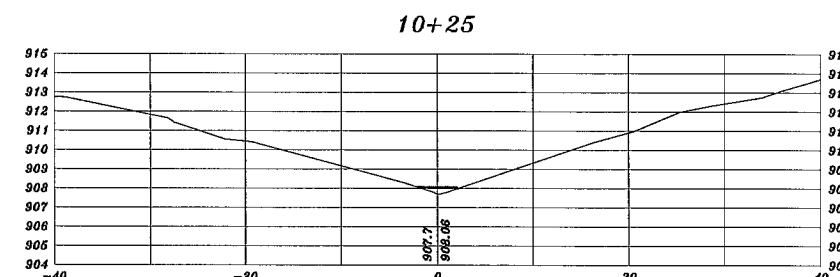
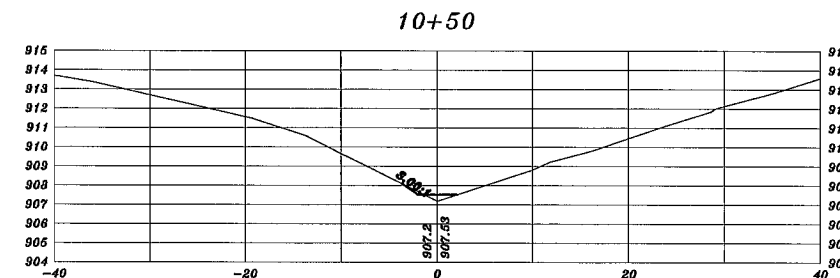
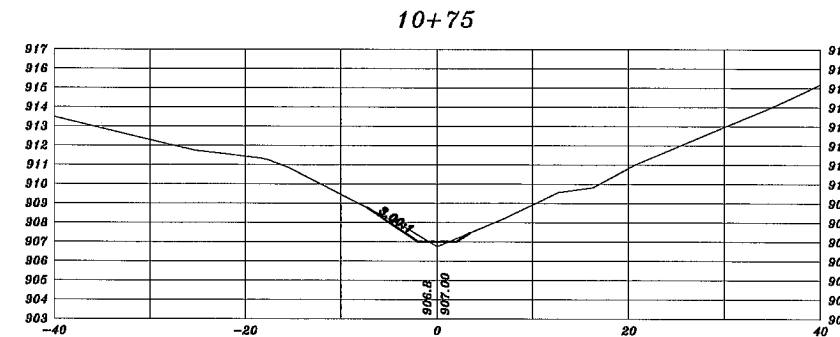
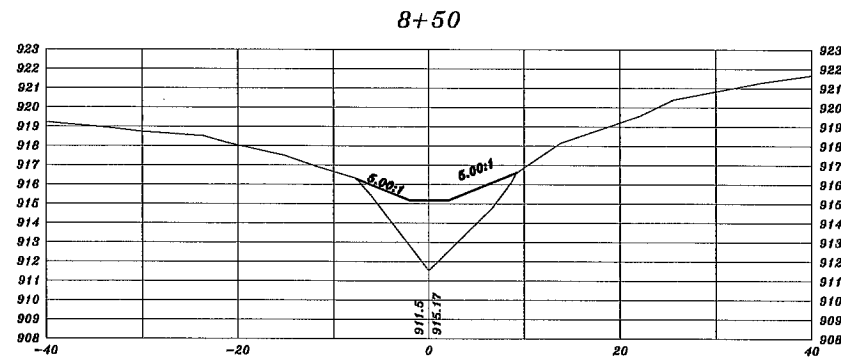
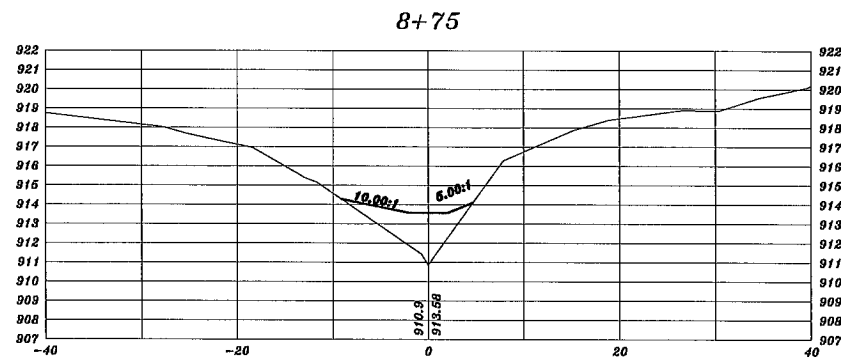
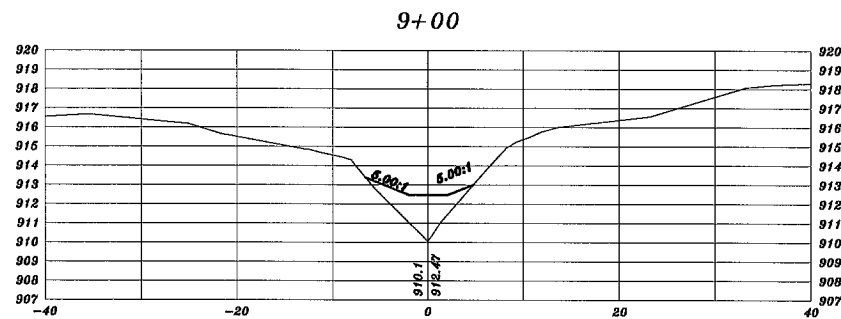
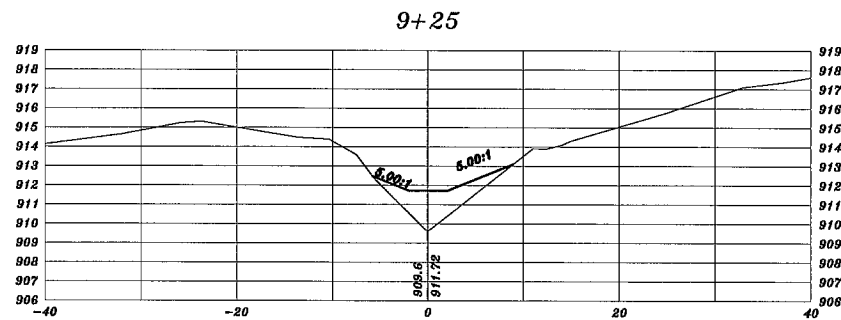
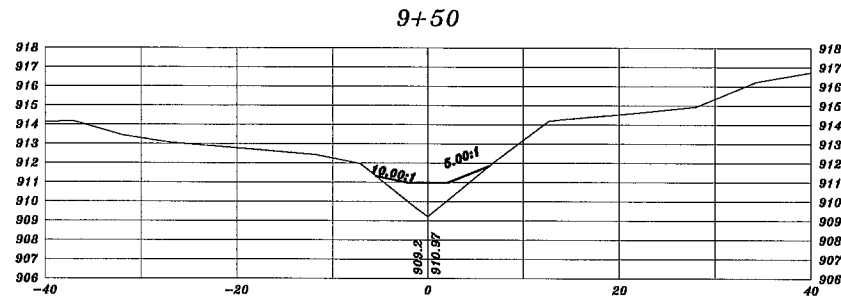
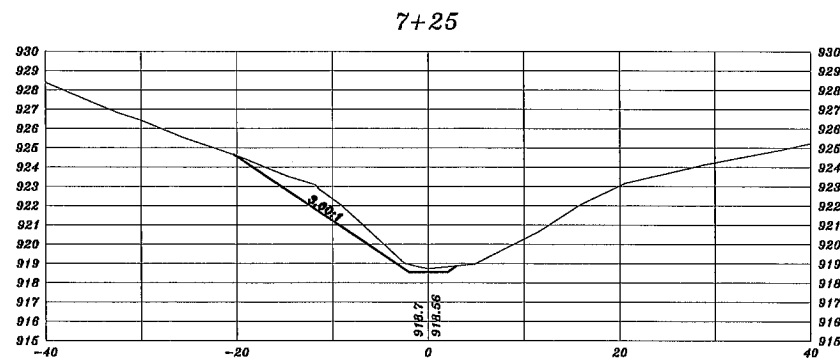
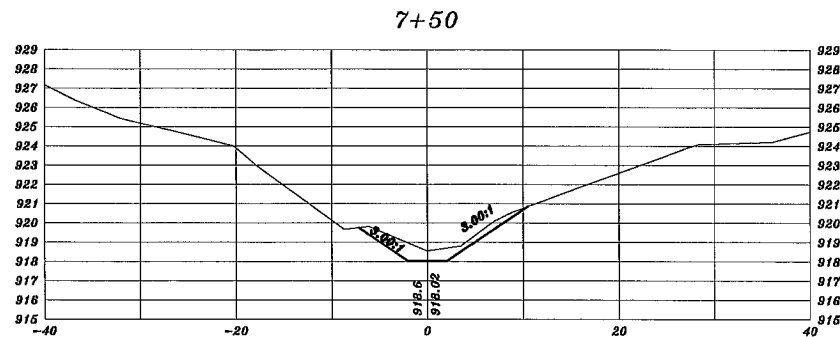
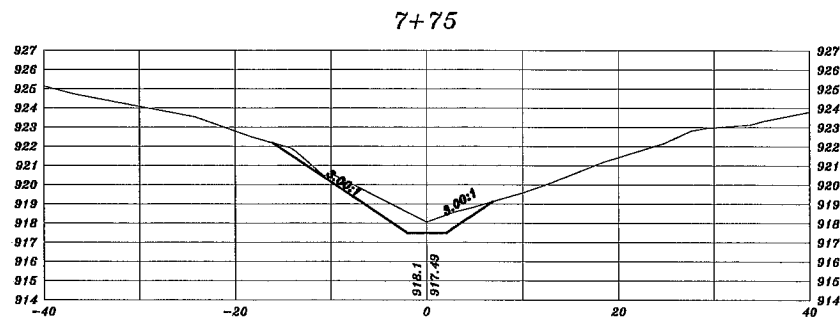
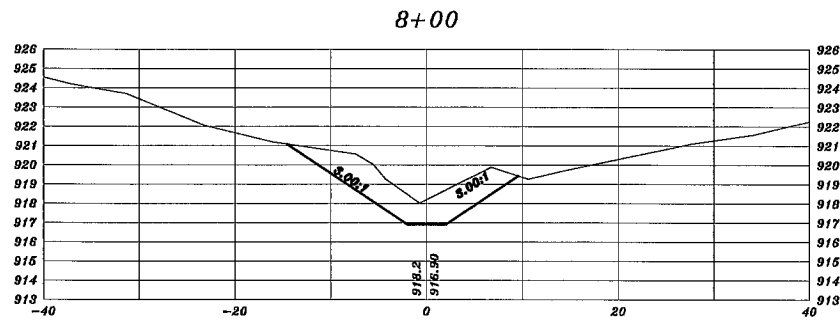
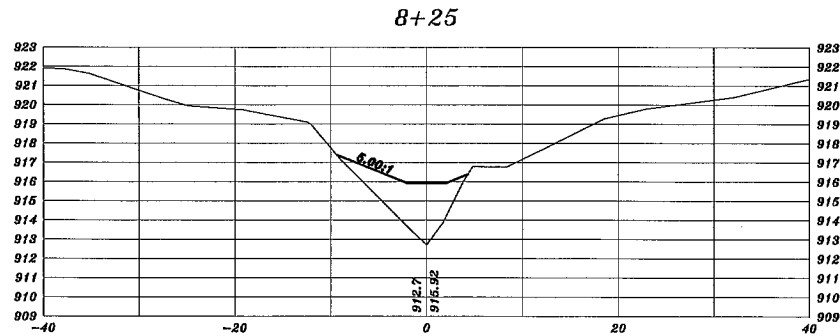


PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
RIGHT CHANNEL  
STA. 4+00 TO STA. 7+00

STATE AID PROJ. NO.	NA	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME	XSECTIONS	DESIGNED BY M. PAYNE	7-13
		CHECKED BY D. ASCHÉ	7-13
		REVIEWED BY J. RENNEBERG	7-13



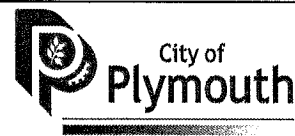


NO	DATE	BY	CKD	APPR	REVISION

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Signature: MICHAEL J. PAYNE

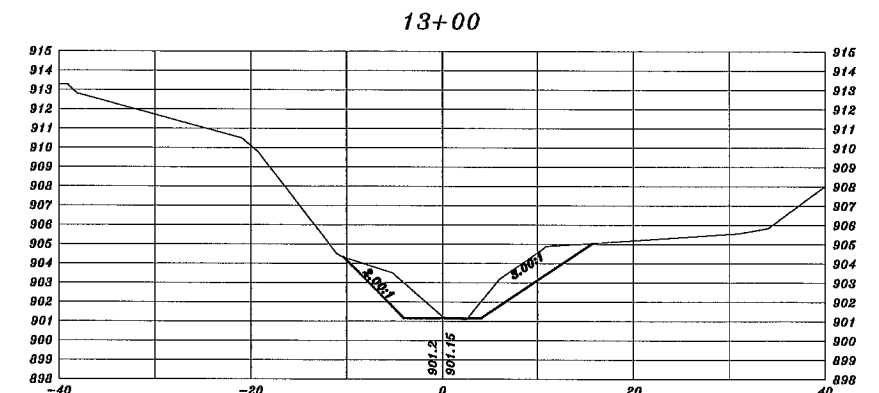
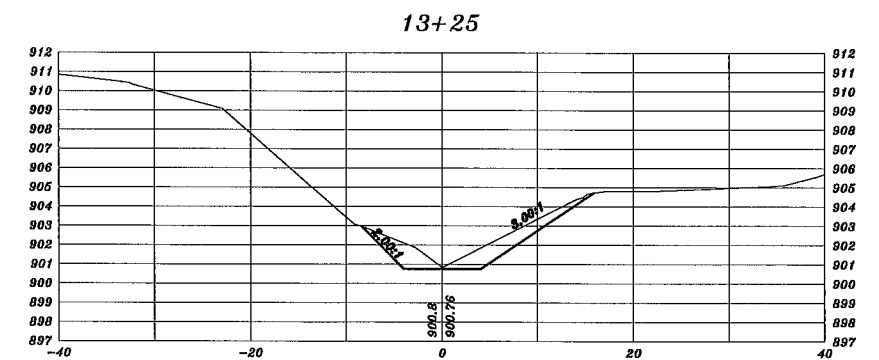
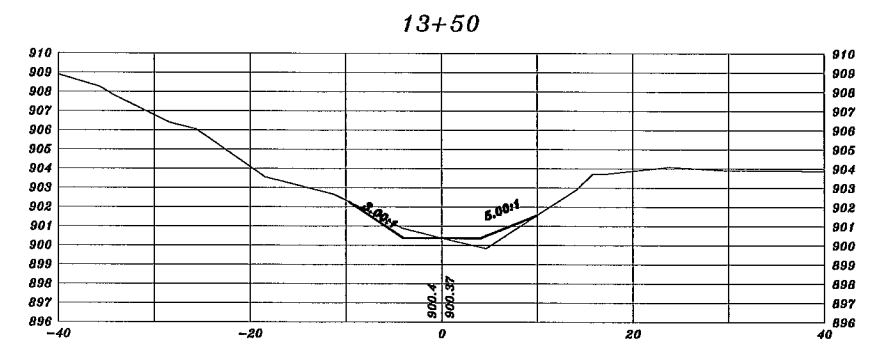
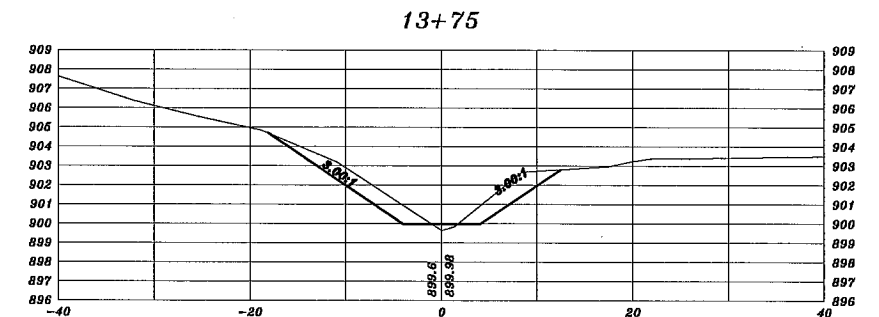
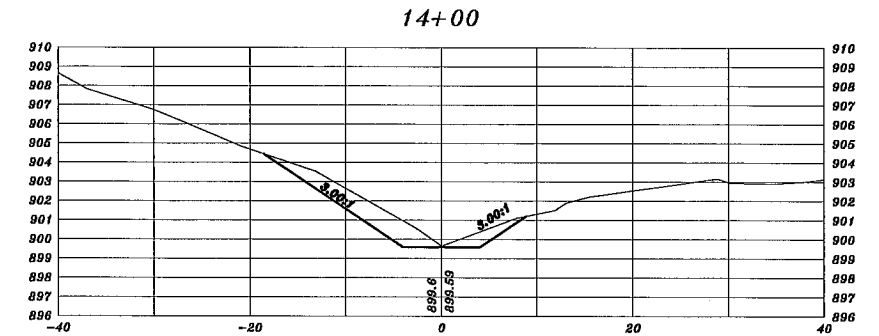
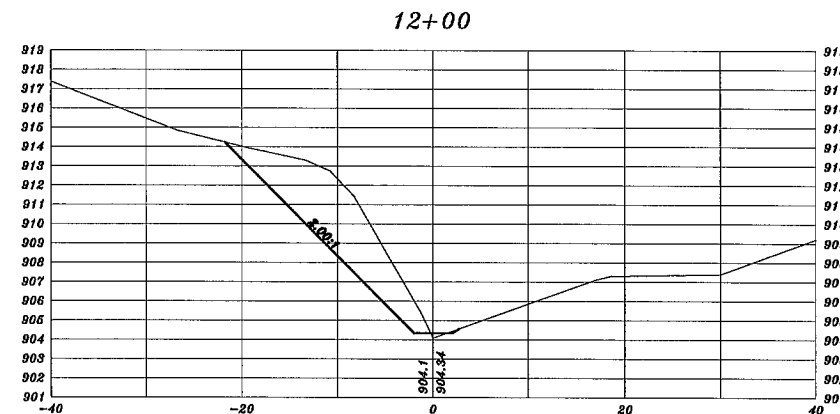
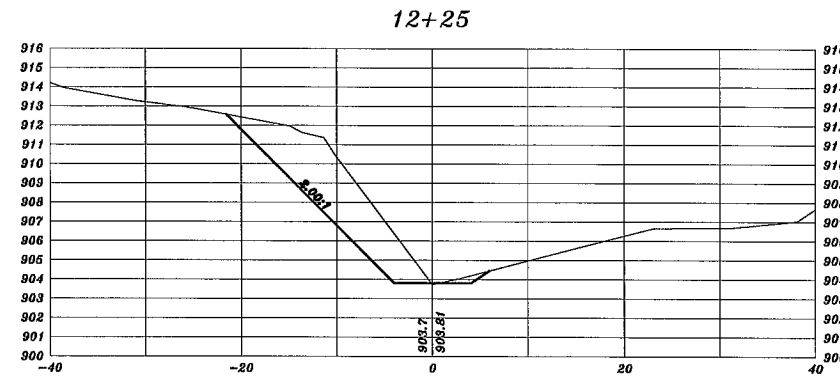
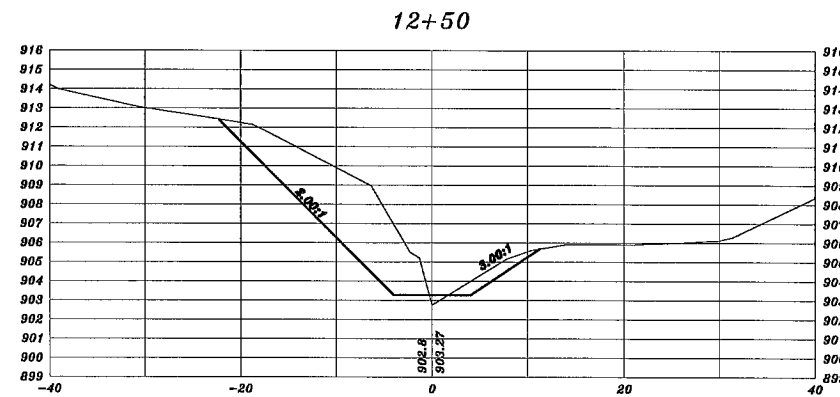
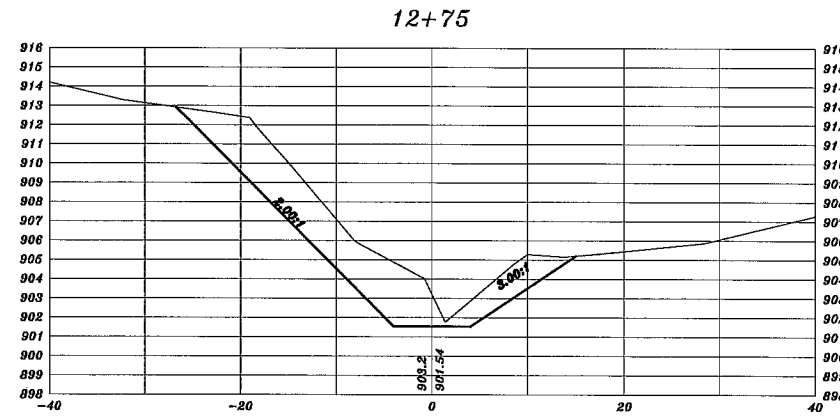
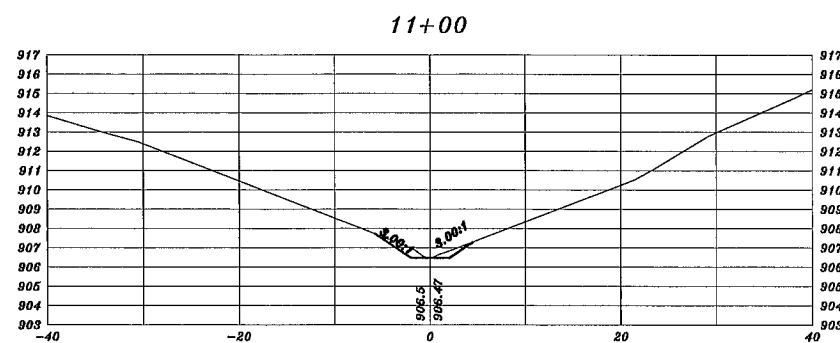
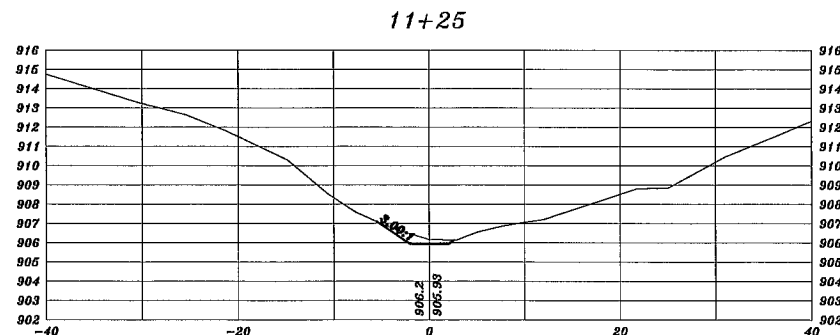
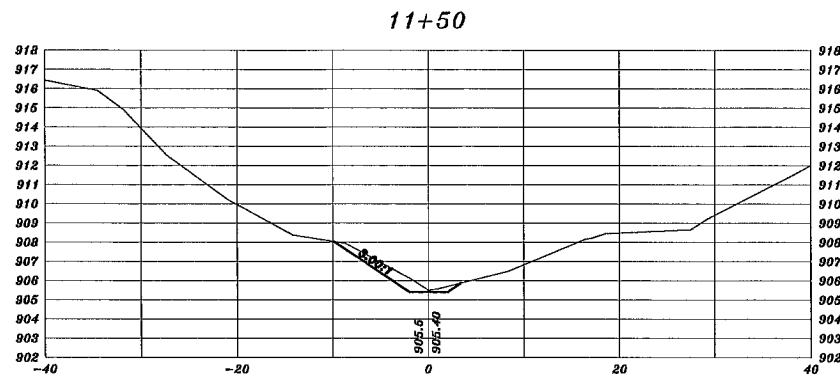
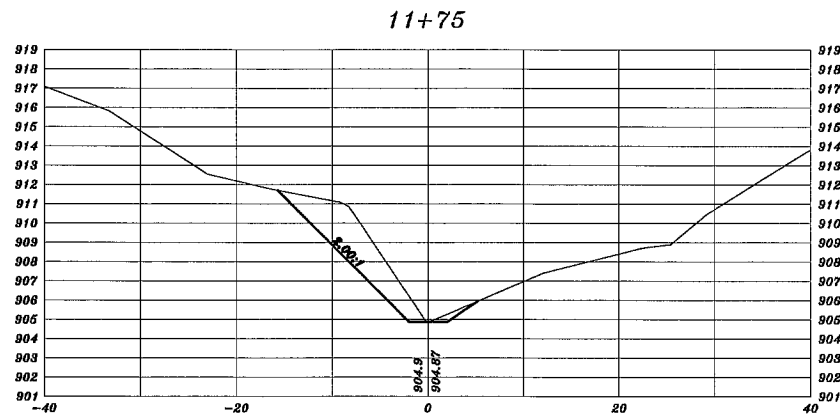
Date: X License #: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
RIGHT CHANNEL  
STA. 7+25 TO STA. 10+75

STATE AID PROJ. NO.	NA	DRAWN BY M. PAYNE	DATE 7-13
DWG NAME	XSECTIONS	DESIGNED BY M. PAYNE	DATE 7-13
		CHECKED BY D. ASCHÉ	DATE 7-13
		REVIEWED BY J. RENNEBERG	DATE 7-13

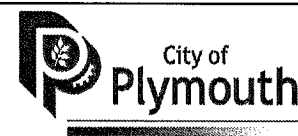


NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE

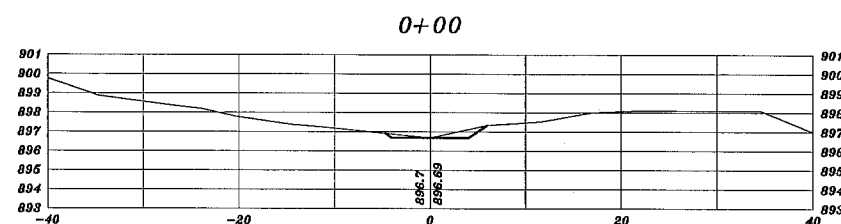
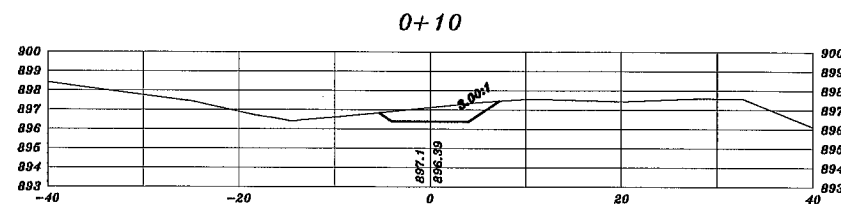
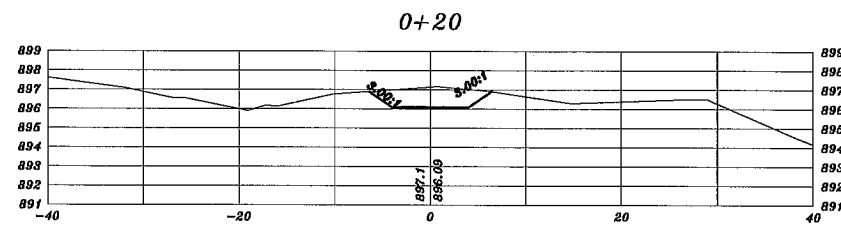
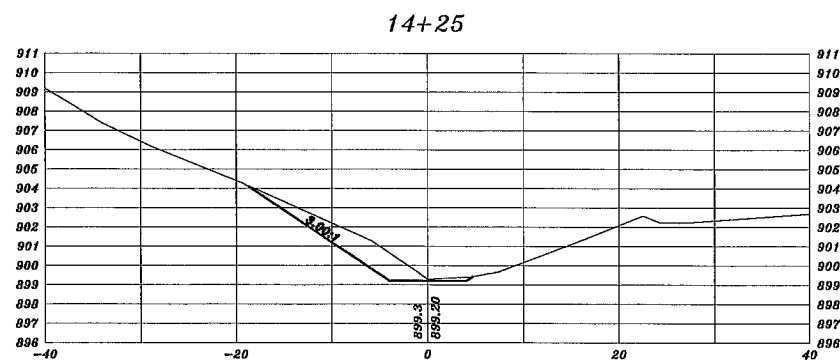
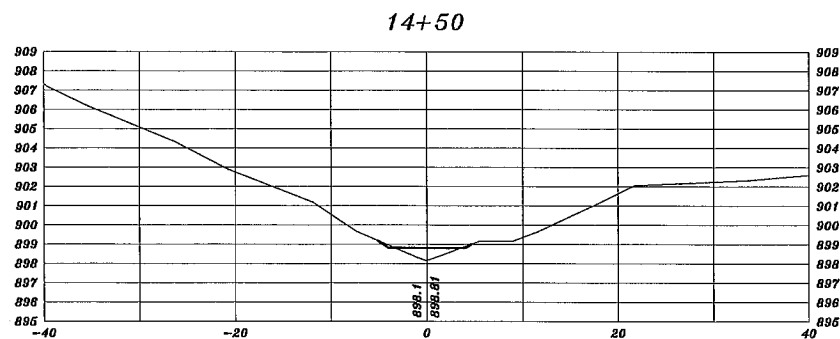
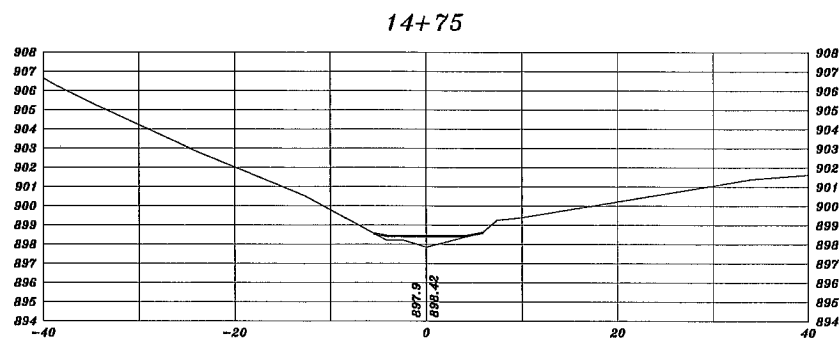
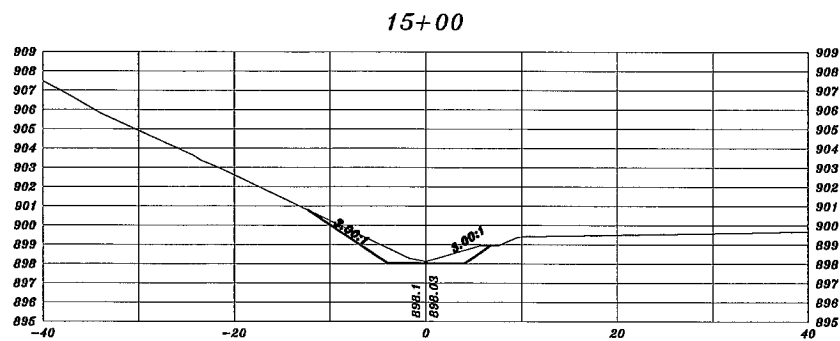
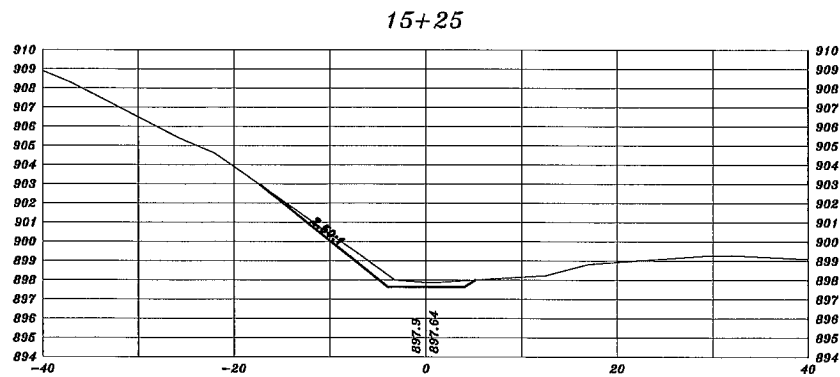
Date: X License #: 50484



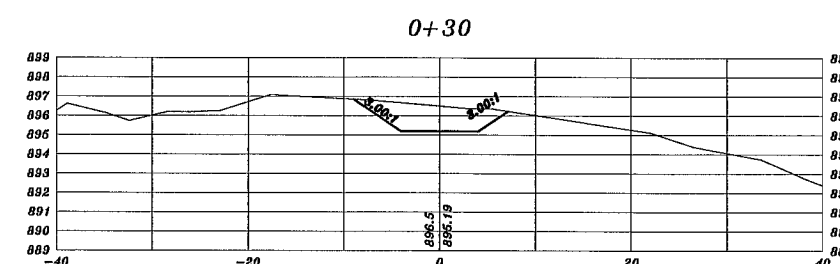
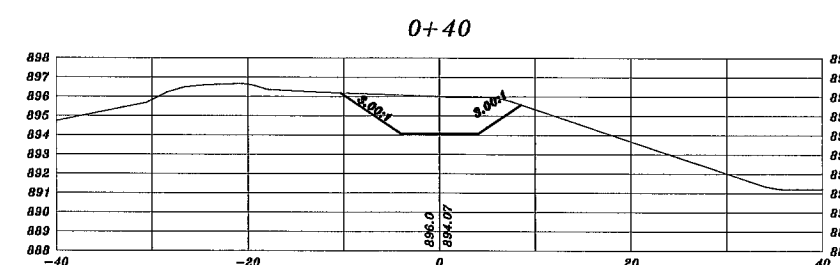
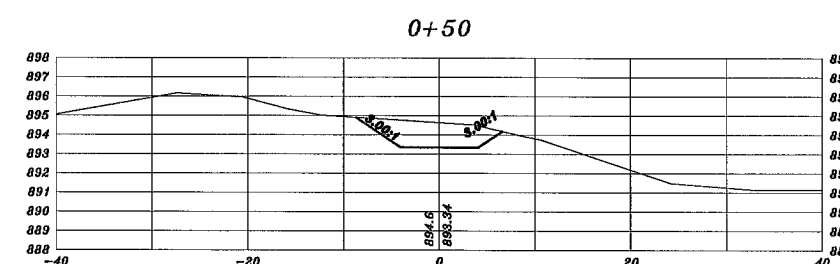
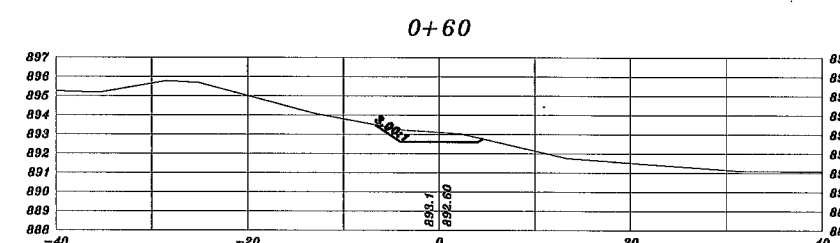
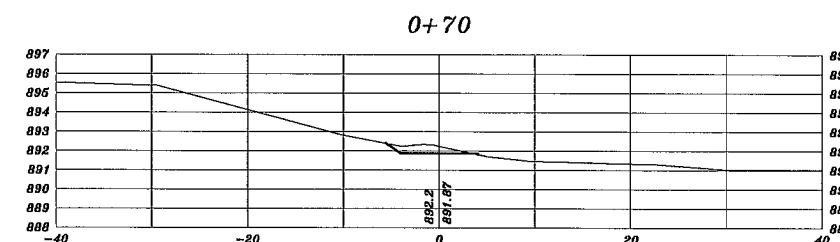
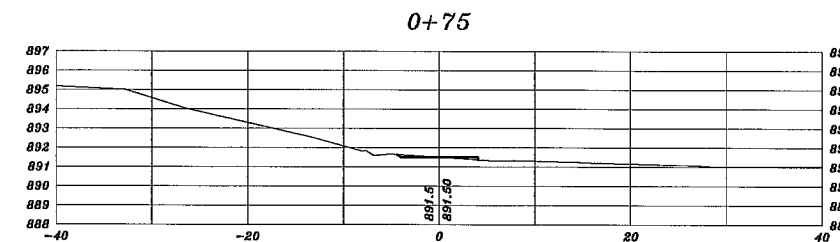
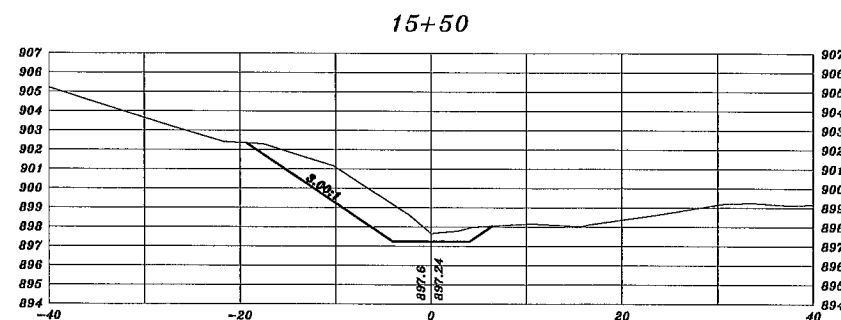
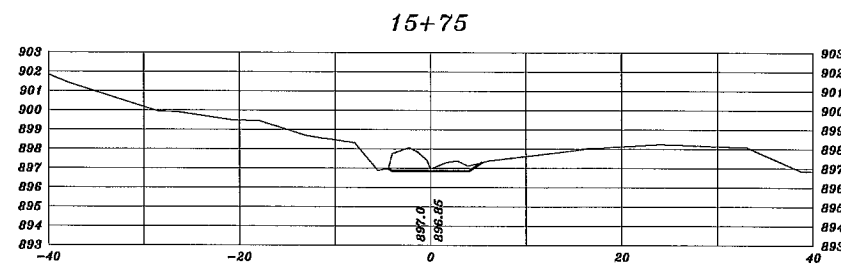
PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
RIGHT CHANNEL  
STA. 11+00 TO STA. 14+00

STATE AID PROJ. NO.	NA	DRAWN BY	M. PAYNE	DATE	7-13
DWG NAME	XSECTIONS	DESIGNED BY	M. PAYNE		7-13
		CHECKED BY	D. ASCHÉ		7-13
		REVIEWED BY	J. RENNEBERG		7-13



PROPOSED CHANNEL

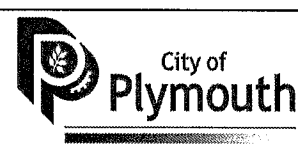


NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: MICHAEL J. PAYNE

Date: X License#: 50484



PLYMOUTH, MINNESOTA  
FOUR SEASONS MALL  
WATER QUALITY IMPROVEMENT  
CITY PROJECT NO. 11022

CROSS SECTIONS  
RIGHT CHANNEL  
STA. 14+25 TO STA. 15+75  
PROPOSED CHANNEL  
STA. 0+00 TO STA. 0+75

STATE AID PROJ. NO. NA	DRAWN BY M. PAYNE 7-13	DATE 7-13
DWG NAME XSECTIONS	DESIGNED BY M. PAYNE 7-13	26
	CHECKED BY D. ASCHÉ 7-13	26
	REVIEWED BY J. RENNEBERG 7-13	