# FOUR RIVERS SANITATION AUTHORITY

## PLANT ROADWAY IMPROVEMENTS
## CAPITAL PROJECT 2406
## 2026


BOARD OF TRUSTEES

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| RICHARD T. POLLACK | PRESIDENT |
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| RICHARD W. MOWRIS | CLERK/TREASURER |
| BRAD LONG | TRUSTEE |
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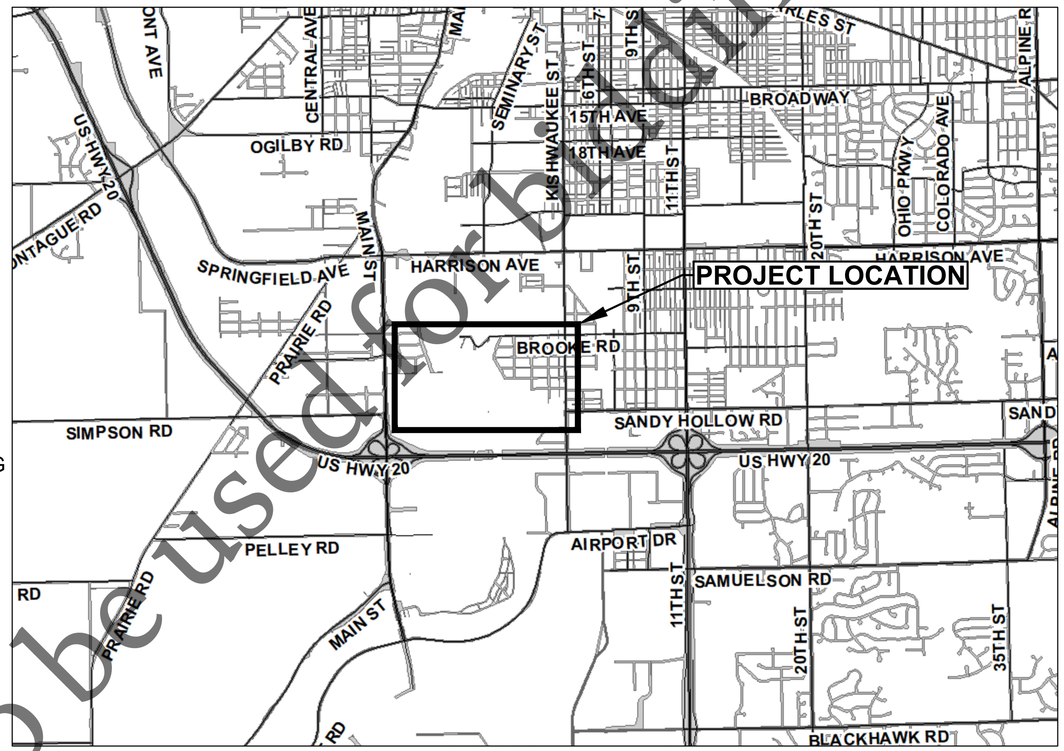
| MATTHEW L. CAMPBELL, PE | DIRECTOR OF ENGINEERING |


WINNEBAGO COUNTY, ILLINOIS

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Four Rivers Sanitation Authority

ANDREW J. HESS
062-068103
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS

SIGNED 7/14/2026
EXPIRES 11/30/2027

FOR BIDDING


Not to be used for Bidding purposes


plot date: 7/1/2026
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sheet set: 2406 PLANT ROADWAY ALL

# LEGEND

| EXISTING | PROPOSED | |
|---|---|---|
| BM# 1 CP# 1 | | BENCHMARK & CONTROL POINT |
| | | RIGHT OF WAY LINE |
| | | PROPERTY LINE |
| | | BUILDING / ABOVE GROUND STRUCTURE |
| | | WATER EDGE |
| | | EASEMENT - PERMANENT SANITARY |
| | | EASEMENT - TEMPORARY CONSTRUCTION |
| | | VEGETATION / TREE LINE |
| | | TREE DRIPLINE |
| | | CONTOUR - MAJOR |
| | | CONTOUR - MINOR |
| | | DITCH FLOWLINE |
| XXX.XX | XXX.XX | SPOT ELEVATION |
| X X | X X | FENCE |
| | | FENCE - TEMPORARY CONSTRUCTION |
| SF | SF | PERIMETER EROSION BARRIER |
| | | ROADWAY CENTERLINE |
| | | EDGE OF PAVEMENT |
| | | CURB & GUTTER |
| | | CURB & GUTTER, DEPRESSED |
| | | CURB & GUTTER, TIP-OUT |
| | | TRANSVERSE CONTRACTION PAVEMENT JOINT |
| | | LONGITUDINAL PAVEMENT JOINT |
| | | EXPANSION PAVEMENT JOINT |
| | PR ELEV EX ELEV | EXISTING & PROPOSED SURFACE ELEVATIONS |
| | | GUARD RAIL |
| | | RAILROAD TRACKS |
| OC | | CABLE - OVERHEAD |
| UC | | CABLE - UNDERGROUND |
| OE | | ELECTRIC - OVERHEAD |
| UE | E | ELECTRIC - UNDERGROUND |
| FO | | FIBER OPTIC |
| G G | G G | GAS LINE, GAS VALVE |
| OT | | TELEPHONE - OVERHEAD |
| UT | | TELEPHONE - UNDERGROUND |
| TV E T GM EM | | PEDESTALS (CATV, ELEC, TELE), GAS METER, ELEC METER |

# LEGEND

| EXISTING | PROPOSED | |
|---|---|---|
| | | DUCTBANK, ELEC OR FIBER |
| E HH A | E HH A | ELEC/FIBER MANHOLE, HANDHOLE, TRACER WIRE ACCESS POINT |
| | | UTILITY POLE W/ GUY WIRE & MAST ARM LIGHT POLE |
| | | SITE LIGHT FOUNDATION & POLE W/ FIXTURE(S) |
| | | GROUND / LANDSCAPE LIGHT |
| | | SANITARY SEWER & SANITARY MANHOLE |
| CO | CO | SANITARY SEWER SERVICE & CLEANOUT |
| FM | FM | SANITARY FORCEMAIN |
| TPP | TPP | TREATMENT PLANT PROCESS PIPING |
| | | STORM SEWER, WITH PRECAST CONCRETE END SECTION |
| | | STORM MH, CATCH BASIN, CURB & GUTTER INLET, CURB INLET SPECIAL |
| | | DRAINAGE CULVERT, WITH METAL END SECTION |
| W | W | WATER MAIN |
| WS | WS | WATER SERVICE & WATER SERVICE VALVE |
| | | WATER MAIN VALVE WITH VAULT |
| | | WATER MAIN VALVE WITH BOX |
| | | WATER MAIN VALVE |
| | | WATER MAIN REDUCER |
| | | FIRE HYDRANT |
| | | YARD HYDRANT |
| W | | WATER WELL |
| SH SV | SH SV | SPRINKLER HEAD & SPRINKLER VALVE |
| HMA CONC AGG TURF | | EXISTING SURFACE TYPE (HOT-MIX ASPHALT, CONCRETE, AGGREGATE, TURF) |
| SB 1 | | SOIL BORING |
| | | MAILBOX |
| | | TREE (DECIDUOUS & CONIFEROUS) |
| | | BUSH & SHRUB |
| | | INLET OR PIPE PROTECTION |
| | | DITCH CHECK |

# HATCH

| REMOVAL | |
|---|---|
| | CLEARING & GRUBBING |
| | STRIPPING TOPSOIL |
| | EARTH EXCAVATION |
| | CURB AND/OR GUTTER REMOVAL |

| REMOVAL | |
|---|---|
| | HMA PAVEMENT REMOVAL |
| | PCC PAVEMENT REMOVAL |
| | HMA SURFACE REMOVAL FOR BUTT JOINT |
| | REMOVAL OF LINEAR ITEMS |

| PROPOSED | |
|---|---|
| | STABILIZED CONSTRUCTION ENTRANCE |
| | RIP RAP |
| | EROSION CONTROL BLANKET |
| | HEAVY DUTY EROSION CONTROL BLANKET |
| | TEMPORARY EROSION CONTROL SEEDING |
| | SEEDING AREA, CLASS 1 |
| | SEEDING AREA, CLASS 2, 3, OR 4 |
| | LANDSCAPE MULCH |

| PROPOSED | |
|---|---|
| | PORTLAND CEMENT CONCRETE |
| | PAVEMENT REPLACEMENT, PCC |
| | PAVEMENT REPLACEMENT, HMA |
| | DRIVEWAY REPLACEMENT |
| | AGGREGATE REPLACEMENT |
| | DETECTABLE WARNING |

# ABBREVIATIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ABD | ABANDON(ED) | EA | EACH | PI | POINT OF INTERSECTION | SPL | SPECIAL |
| ADJ | ADJUST(ED) | EL | ELEVATION | PT | POINT OF TANGENCY | SQ FT | SQUARE FEET |
| AGG | AGGREGATE | EROS | EROSION | PVC | POINT OF VERTICAL CURVATURE | SQ YD | SQUARE YARD(S) |
| BSE | BASE | EX | EXISTING | PVI | POINT OF VERTICAL INTERSECTION | STA | STATION |
| BDR | BINDER | FT | FEET | PVT | POINT OF VERTICAL TANGENCY | STR | STRUCTURE |
| CI | CAST IRON | FFE | FINISHED FLOOR ELEVATION | PCC | PORTLAND CEMENT CONCRETE | SRF | SURFACE |
| CL | CLASS | FES | FLARED END SECTION | PRC | PRECAST REINFORCED CONCRETE | TEMP | TEMPORARY |
| CO | CLEAN OUT | FM | FORCE MAIN | PL | PROPERTY LINE | TC | TOP OF CURB |
| COMB | COMBINATION | FRSA | FOUR RIVERS SANITATION AUTHORITY | PR | PROPOSED | TP | TOP OF PAVEMENT |
| COMPL | COMPLETE | F&L | FRAME & LID | PROT | PROTECT(ION) | TW | TOP OF WALK |
| CONC | CONCRETE | F&P | FURNISH & PLACE | REC | RECONSTRUCT(ED) | TY | TYPE |
| CC&G | CONCRETE CURB & GUTTER | INV | INVERT | RCP | REINFORCED CONCRETE PIPE | T1F CL | TYPE 1 FRAME CLOSED LID |
| CONN | CONNECT(TION) | L, LT | LEFT | RPM | REINFORCED PLASTIC MORTAR | T1F OL | TYPE 1 FRAME OPEN LID |
| CTRL | CONTROL | LF | LINEAR FEET | REM | REMOVE(D) | TYP | TYPICAL |
| CMP | CORRUGATED METAL PIPE | LINCIPP | LINED WITH CURED IN PLACE PIPE | R/R | REMOVE & REPLACE | UNK | UNKNOWN |
| CSE | COURSE | L SUM | LUMP SUM | REPL | REPLACE(D)(MENT) | UPSM | UPSTREAM |
| CU YD | CUBIC YARD(S) | MH | MANHOLE | R, RT | RIGHT | VCP | VITRIFIED CLAY PIPE |
| CULV | CULVERT | O/S | OFFSET | ROW | RIGHT-OF-WAY | WM | WATER MAIN |
| DEP | DEPRESSED | PVMT | PAVEMENT | SAN | SANITARY | WMQ | WATER MAIN QUALITY |
| DNSM | DOWNSTREAM | PC | POINT OF CURVATURE | SVC | SERVICE | W | WITH |
| DI | DUCTILE IRON | | | SEW | SEWER | VV | VALVE VAULT |

Not to be used for bidding purposes

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Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**LEGEND**

Sheet No. 2 of 33

FOR BIDDING

Date: 7/1/2026

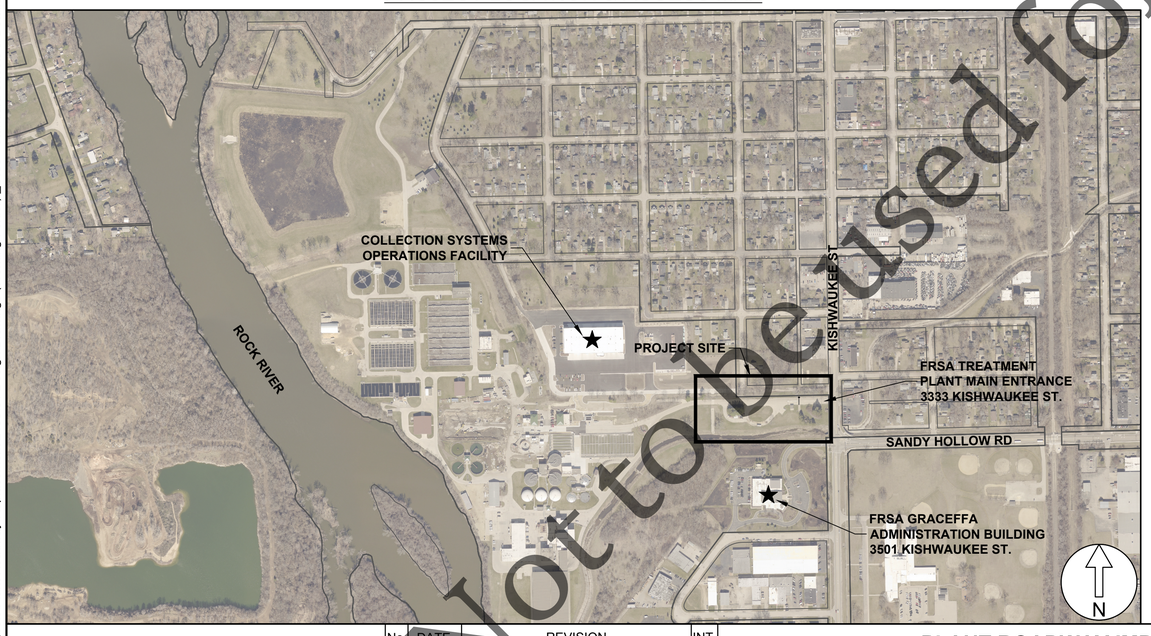
## GENERAL NOTES

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXECUTION OF WORK TO THE LINES AND GRADES SHOWN ON THE PLANS. CONSTRUCTION SHALL NOT VARY FROM THE PLANS WITHOUT PRIOR APPROVAL FROM THE FOUR RIVERS SANITATION AUTHORITY (FRSA).
2. THE PROJECT MANAGER ASSIGNED TO THIS PROJECT IS ANDREW HESS, (815) 387-7653.
3. FOR UTILITY LOCATES WITHIN PLANT BOUNDARIES, THE CONTRACTOR SHALL CONTACT MAINTENANCE DIVISION MANAGER, DEAN FRY AT (815) 387-7616, 72 HOURS, MINIMUM, PRIOR TO START OF CONSTRUCTION, TO ARRANGE FOR THE LOCATION OF PLANT INFRASTRUCTURE.
4. FOR UTILITY LOCATES OUTSIDE OF PLANT BOUNDARIES, THE CONTRACTOR SHALL IDENTIFY ALL UTILITY LOCATIONS IN THE FIELD BY CONTACTING J.U.L.I.E. AT 811 OR 1-800-892-0123 AND ALL UTILITIES NOT ON THE J.U.L.I.E. NETWORK 72 HOURS, MINIMUM, PRIOR TO START OF CONSTRUCTION.
5. ALL UTILITY OUTAGES SHALL BE COORDINATED WITH THE PROJECT MANAGER AND THE PLANT OPERATIONS MAINTENANCE DIVISION MANAGER. PROVIDE A MINIMUM OF 72 HOURS ADVANCED NOTICE PRIOR TO ANY SERVICE INTERRUPTION. DURING THE ENTIRE PERIOD OF THE CONTRACT, PROVIDE RESTORATION OF ANY UNSCHEDULED SERVICE INTERRUPTION WITHIN 30 MINUTES DURING NORMAL WORKING HOURS, OR WITHIN 2 HOURS OUTSIDE OF NORMAL WORKING HOURS. THE FRSA RESERVES THE RIGHT TO REQUEST ADDITIONAL ADVANCED NOTICE AND/OR COORDINATION MEETINGS FOR MAJOR OUTAGES.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND SHALL IMMEDIATELY NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES WITH THE PROJECT PLANS OR SPECIFICATIONS.
7. ALL WORK ON FRSA PLANT GROUNDS MUST BE PERFORMED DURING NORMAL CONTRACTOR WORKING HOURS, FROM 7:00 AM TO 4:30 PM, M-F, EXCLUDING WEEKENDS AND FRSA-OBSERVED HOLIDAYS. A 24-HOUR NOTICE FOR WORK OUTSIDE OF THESE HOURS SHALL BE GIVEN TO THE FRSA INSPECTOR FOR APPROVAL BY THE FRSA DIRECTOR OF ENGINEERING. THE CONTRACTOR SHALL PROVIDE A LIST OF ALL EMPLOYEES, INCLUDING PRIMARY CONTACT(S), WHO WILL BE PRESENT FOR THE OFF-HOUR WORK.
8. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN THE STATE OF ILLINOIS, LATEST EDITION, AND THE REQUIREMENTS OF THE FOUR RIVERS SANITATION AUTHORITY.
9. ALL ROADWAY CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AND THE FOUR RIVERS SANITATION AUTHORITY.
10. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE IEPA NPDES PERMIT AND THE ILLINOIS URBAN MANUAL FOR SOIL EROSION AND SEDIMENT CONTROL.
11. PROTECTION OF WATER SUPPLIES SHALL BE IN ACCORDANCE WITH TITLE 35, C, SECTION 370.350 OF THE ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS.

## SPECIAL CONSIDERATIONS

1. TREATMENT PLANT TRAFFIC SHALL BE DIVERTED AT TIMES ACCORDING TO THE STAGING PLANS. THE FRSA GUARD SHACK AND TRUCK WEIGHT SCALE ARE LOCATED IN THE CENTER OF THE PROJECT AND SHALL REMAIN OPEN THROUGHOUT CONSTRUCTION. ALL TRAFFIC CONTROL DEVICES AND APPROPRIATE SIGNAGE FOR DIVERTING PLANT TRAFFIC SHALL BE INCIDENTAL TO THIS CONTRACT.
2. NO WORK WILL ALLOWED DURING THE FRSA FALL LAND APPLICATION PERIOD. HISTORICALLY, LAND APPLICATION LASTS THREE TO FIVE DAYS AND OCCURING IN LATE OCTOBER/EARLY NOVEMBER. FRSA WILL PROVIDE THE CONTRACTOR 72-HOUR NOTICE PRIOR TO THE START OF LAND APPLICATION.
3. THE ENTRANCES AND EXITS TO THE HOUSEHOLD HAZARDOUS WASTE SITE AT THE NORTHWEST CORNER OF KISHWAUKEE STREET AND MARTIN ROAD SHALL BE OPERATIONAL FOR WEEKEND USE THROUGHOUT CONSTRUCTION. ALL ENTRANCE AND EXIT WORK SHALL BE COMPLETED WITHIN 30-CALENDAR DAYS. CONTACT ROB WILHELMI AT (779) 348-7425 TO COORDINATE WEEKDAY DELIVERY SCHEDULE.
4. THE CONTRACTOR SHALL PROVIDE TEMPORARY RESTROOM FACILITIES FOR THE WORKFORCE FOR THE DURATION OF THIS PROJECT.

## PROJECT LOCATION & ACCESS MAP




## SUMMARY OF QUANTITIES

| Item No. | Item Description | Unit | Qty. |
|---|---|---|---|
| 1 | Abandon and Fill Existing Sanitary Sewer | LS | 1 |
| 2 | Aggregate Base Course, Type B 10" | SQ YD | 3065 |
| 3 | Aggregate Base Course, Type B 12" | SQ YD | 954 |
| 4 | Aggregate Subgrade Improvement | CU YD | 345 |
| 5 | Barrier Gate | EACH | 2 |
| 6 | Bollard Removal | EACH | 4 |
| 7 | Chain Link Fence Removal | FOOT | 652 |
| 8 | Chain Link Fence, 6', Special | FOOT | 690 |
| 9 | Chain Link Gates Removal | EACH | 2 |
| 10 | Chain Link Gates, Manual Rolling, 30' Opening | EACH | 1 |
| 11 | Chain Link Gates, Manual Swinging Double, 10' Opening | EACH | 1 |
| 12 | Chain Link Gates, Motor Operated Rolling, 30' Opening | EACH | 1 |
| 13 | Class B Patches, Type IV, 10" | SQ YD | 240 |
| 14 | Class SI Concrete (Outlet) | CU YD | 2 |
| 15 | Concrete Cradle for Sanitary Sewer | EACH | 1 |
| 16 | Combination Concrete Curb and Gutter, Type M-6.18 (Modified) | FOOT | 2643 |
| 17 | Concrete Gutter, Low Flow | FOOT | 217 |
| 18 | Construction Layout | L SUM | 1 |
| 19 | Combination Curb and Gutter Removal | FOOT | 1020 |
| 20 | Curb Removal | FOOT | 40 |
| 21 | Detectable Warnings | SQ FT | 34 |
| 22 | Double Inlet, Special | EACH | 1 |
| 23 | Filter Fabric | SQ YD | 84 |
| 24 | Fire Hydrant with 6" Valve and Valve Box | EACH | 1 |
| 25 | Fire Hydrants To Be Removed | EACH | 1 |
| 26 | Guardrail Removal | FOOT | 42 |
| 27 | Handhole | EACH | 4 |
| 28 | Handhole, 2' Dia. | EACH | 1 |
| 29 | Hot-Mix Asphalt Binder Course, IL-19.0, N50 | TON | 215 |
| 30 | Hot-Mix Asphalt Surface Course, IL-9.5, Mix "D", N50 | TON | 107 |
| 31 | Inlet and Pipe Protection | EACH | 14 |
| 32 | Inlets, Special | EACH | 3 |
| 33 | Inlets, Special, No. 5 | EACH | 2 |
| 34 | Inlets, Type A, Type 8 Grate | EACH | 3 |
| 35 | Insulating Sanitary Sewers/Forcemains | FOOT | 67 |
| 36 | Landscape Mulch | SQ YD | 779 |
| 37 | Landscaping | L SUM | 1 |
| 38 | Light Pole & Fixtures | EACH | 8 |
| 39 | Light Pole Foundation, 24" Diameter | FOOT | 52 |
| 40 | Manholes To Be Adjusted with New Type 1 Frame, Closed Lid | EACH | 2 |
| 41 | Manholes To Be Adjusted with New Type 8 Grate | EACH | 1 |
| 42 | Manholes, Type A, 4' Diameter, Type 1 Frame, Open Lid | EACH | 2 |
| 43 | Modify Existing Gate | L SUM | 1 |
| 44 | Mulch, Method 2 | SQ YD | 8072 |
| 45 | Pavement Removal | SQ YD | 4421 |
| 46 | Perimeter Erosion Barrier | FOOT | 1292 |
| 47 | Pipe Culvert Removal | FOOT | 97 |
| 48 | Pipe Handrail, Special | FOOT | 68 |
| 49 | Portland Cement Concrete Pavement Sleeper Slab, 8" | SQ YD | 99 |
| 50 | Portland Cement Concrete Pavement, 8" (Jointed) | SQ YD | 3065 |
| 51 | Portland Cement Concrete Sidewalk Accesibility Ramp and Stoop | L SUM | 1 |
| 52 | Portland Cement Concrete Sidewalk, 4" | SQ FT | 1119 |
| 53 | Precast Reinforced Concrete Flared End Sections 12" | EACH | 1 |
| 54 | Precast Reinforced Concrete Flared End Sections 15" | EACH | 2 |
| 55 | Pulling Electric & Fiber Optic | FOOT | 635 |
| 56 | PVC Conduit (With Conductors), 1" | FOOT | 1123 |
| 57 | PVC Conduit, 1" | FOOT | 124 |
| 58 | PVC Conduit, 2" | FOOT | 278 |
| 59 | PVC Conduit, 4" | FOOT | 72 |
| 60 | Reinforced Concrete Ductbank Removal | FOOT | 30 |
| 61 | Reinforced Concrete Ductbank, 2-2", 1x2 | FOOT | 30 |
| 62 | Removal and Disposal of Unsuitable Material | CU YD | 345 |
| 63 | Remove and Relocate Landscape Boulders | L SUM | 1 |
| 64 | Remove Abandoned Sampling Tank | L SUM | 1 |
| 65 | Remove Electric Meter and Wooden Screen | L SUM | 1 |
| 66 | Remove Light Pole and Foundation | EACH | 7 |
| 67 | Remove Sign Assembly | L SUM | 1 |
| 68 | Removing Catch Basins | EACH | 3 |
| 69 | Removing Manholes | EACH | 1 |
| 70 | Sanitary Manholes To Be Adjusted with New Type 1 Frame, Closed Lid | EACH | 1 |
| 71 | Sanitary Manholes To Be Reconstructed with New Type 1 Frame, Closed Lid | EACH | 2 |
| 72 | Sanitary Manholes To Be Removed | EACH | 1 |
| 73 | Seeding, Class 1 and Fertilizing | SQ YD | 8072 |
| 74 | Sidewalk Removal | SQ FT | 464 |
| 75 | Sign Panel - Type 1 | SQ FT | 5 |
| 76 | Sign Panel - Type 3 | SQ FT | 40 |
| 77 | Stabilized Construction Entrance | SQ YD | 187 |
| 78 | Stone Riprap, Class A3 | SQ YD | 84 |
| 79 | Storm Sewers, Class A, Type 1 12" | FOOT | 147 |
| 80 | Storm Sewers, Class A, Type 1 15" | FOOT | 314 |
| 81 | Storm Sewers, PVC, 6" | FOOT | 45 |
| 82 | Storm Sewers, PVC, 8" | FOOT | 6 |
| 83 | Storm Sewers, PVC, 10" | FOOT | 10 |
| 84 | Storm Sewers, PVC, 12" | FOOT | 45 |
| 85 | Telescoping Steel Sign Support | FOOT | 15 |
| 86 | Temporary Ditch Checks | FOOT | 20 |
| 87 | Temporary Erosion Control Seeding | POUND | 168 |
| 88 | Temporary Guard Shack | L SUM | 1 |
| 89 | Thermoplastic Pavement Marking - Letters and Symbols | SQ FT | 69 |
| 90 | Thermoplastic Pavement Marking - Line 4" | FOOT | 1686 |
| 91 | Thermoplastic Pavement Marking - Line 24" | FOOT | 24 |
| 92 | Topsoil Furnish and Place, 4" | SQ YD | 8851 |
| 93 | Traffic Control and Protection | L SUM | 1 |
| 94 | Tree Removal (over 15 Units Diameter) | UNIT | 108 |
| 95 | Valve Vaults To Be Adjusted with New Type 1 Frame, Closed Lid | EACH | 1 |
| 96 | Wood Sign Support | FOOT | 28 |
| 97 | Yard Hydrant To Be Removed | EACH | 2 |

## HOT-MIX ASPHALT MIXTURE REQUIREMENTS

| MIXTURE USE(S) | SURFACE COURSE | BINDER COURSE |
|---|---|---|
| PG: | PG 64-22 | PG 64-22 |
| DESIGN AIR VOIDS | 4.0 @ N50 | 4.0 @ N50 |
| MIXTURE COMPOSITION (GRADATION MIXTURE) | IL 9.5 | IL 19.0 |
| FRICTION AGGREGATE | MIX "D" | N/A |
| MIX UNIT WEIGHT | 112 lbs/sy/in | 112 lbs/sy/in |
| QUALITY MGMT PROGRAM | QC/QA | QC/QA |
| THESE MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT | | |

## UTILITIES

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Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

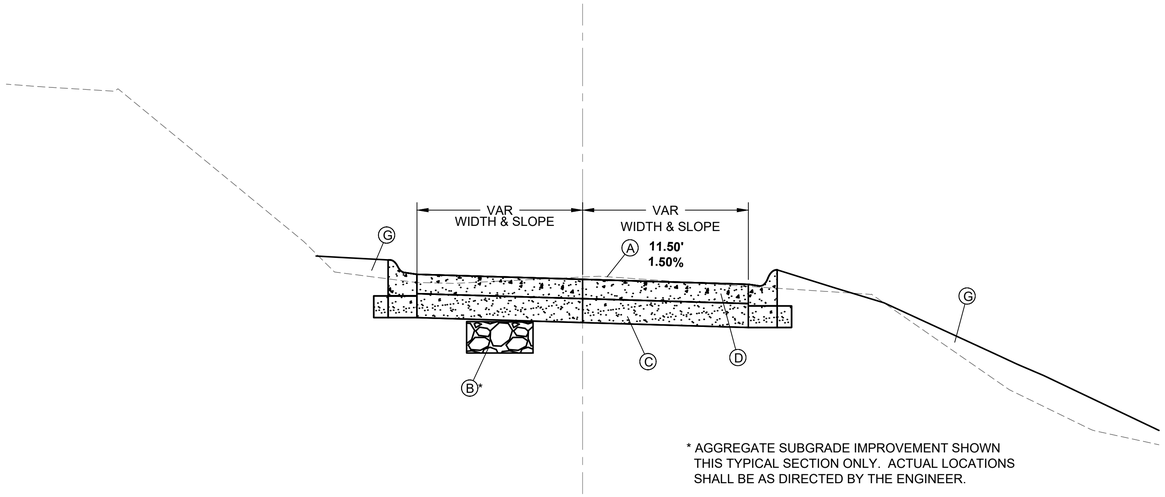
**GENERAL NOTES & SUMMARY OF QTYS**

Sheet No. 3 of 33

FOR BIDDING

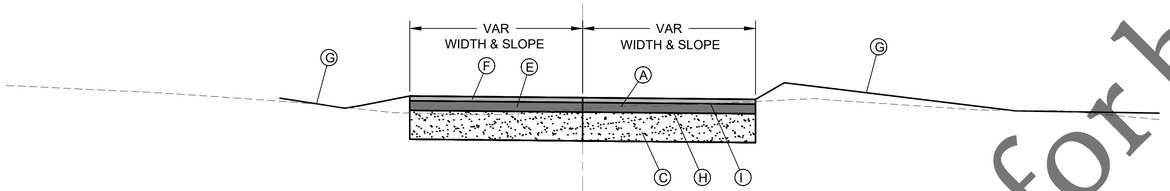
Date: 7/1/2026

file: i:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg




* AGGREGATE SUBGRADE IMPROVEMENT SHOWN THIS TYPICAL SECTION ONLY. ACTUAL LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER.

PCC PAVEMENT TYPICAL SECTION




HMA PAVEMENT TYPICAL SECTION

## LEGEND

- (A) PAVEMENT REMOVAL (FULL WIDTH)
- (B) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL, AND AGGREGATE SUBGRADE IMPROVEMENT, AT LOCATIONS & DEPTHS TO BE DETERMINED BY THE ENGINEER.
- (C) AGGREGATE BASE COURSE, TY. B
  12" (6" CA-02, 6" CA-06)
  (EXTEND 1.0' BEYOND BACK OF CURB)
- (D) PCC PAVEMENT, 8" (JOINTED)
- (E) HMA BINDER COURSE, IL-19.0, N50, 4"
- (F) HMA SURFACE COURSE, MIX 'C', N50, 2"
- (G) TOPSOIL FURNISH & PLACE, 6"
  SEEDING CLASS 1 & FERTILIZING
  EROSION CONTROL BLANKET
  (MATCH EX ELEV AT LOCATION SHOWN ON PLANS)
- (H) PRIME COAT
- (I) TACK COAT

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Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**TYPICAL SECTIONS**

Sheet No. 4 of 33

FOR BIDDING

Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Typical Sections.dwg

## LEGEND

- HMA PAVEMENT REMOVAL
- PCC PAVEMENT REMOVAL
- REMOVAL OF LINEAR ITEMS

FOLEY ST

16" GAS

2" GAS

N: 2026203.64'
E: 2588469.94'

N: 2026204.10'
E: 2588493.94'

FRSA OWNED PROPERTY

GUARDRAIL REM
42 FT

CHAIN LINK GATE
REMOVAL, 1 EA

PAVEMENT REM
1955 SY

CHAIN LINK FENCE REM
566 FT

REMOVE SIGN ASSEMBLY
1 LS

TREE REM
48 UNIT

CHAIN LINK FENCE REM
86 FT

CHAIN LINK GATE
REMOVAL, 1 EA

TREE REM
60 UNIT

TAFT RD

N: 2026104.98'
E: 2588993.62'

N: 2026111.57'
E: 2589013.87'

SIDEWALK REM
145 SF

SIDEWALK REM
164 SF

N: 2026020.59'
E: 2589015.91'

REM MANHOLE
1 EA

COMB C&G REM
372 FT

SIDEWALK REM
155 SF (INCLUDES STEP)

COMED POLE
ALL OH ELEC FROM HERE TO
NORTH TO BE REM BY OTHERS

KISHWAUKEE ST

TREATMENT PLANT
ENTRANCE

N: 2025980.74'
E: 2588332.60'

COMB C&G REM
165 FT

BOLLARD REM
4 EA

PIPE CULV REM (12")
57 FT

N: 2025978.05'
E: 2588751.26'

N: 2025979.15'
E: 2588829.15'

YARD HYDRANT REM
1 EA

COMB C&G REM
170 FT

REM EX STRUCTURE
1 LS

COMB C&G REM
235 FT

REM CATCH BASIN
1 EA

PAVEMENT REM
597 SY

PAVEMENT REM
351 SY

REMOVE ELECTRIC METER
& WOODEN SCREEN
1 LS

8" GAS

CURB REM
40 FT TOTAL

ABD & FILL EX SAN SEW
1 EA (12")

PAVEMENT REM
54 SY

YARD HYDRANT REM
1 EA

PAVEMENT REM
51 SY

REM CATCH BASIN
1 EA

PAVEMENT REM
160 SY

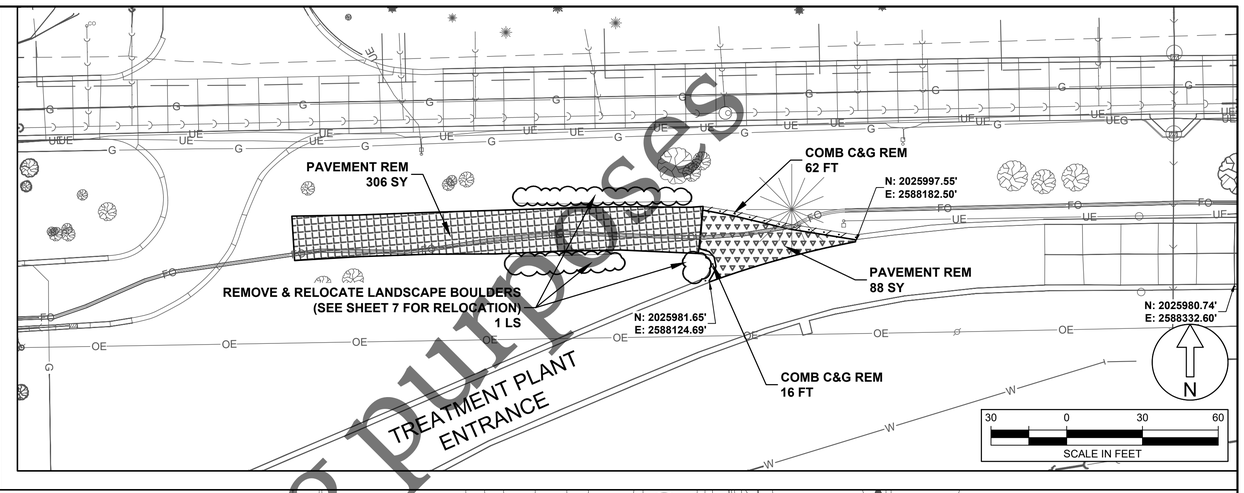
PAVEMENT REM
859 SY

SAN MH 169-036
SAN MH REM
1 EA
PLUG PIPE OUT (COST INCIDENTAL)

REM CATCH BASIN
1 EA
(PLUG EACH END OF CULV)

PIPE CULV REM (12")
40 FT

12" GAS



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Four Rivers Sanitation Authority

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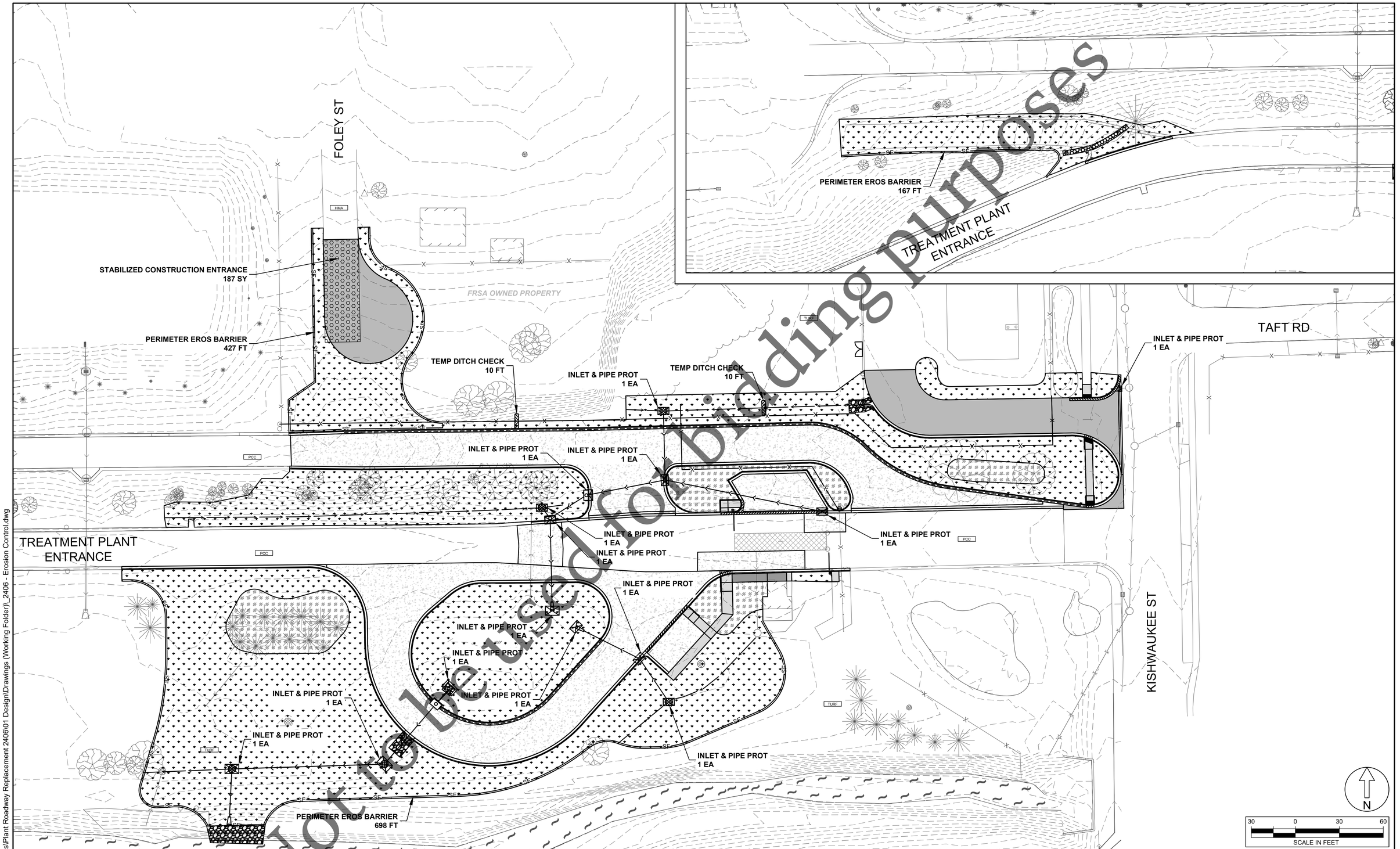
**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**EXISTING CONDITIONS & REMOVALS**

Sheet No. 5 of 33

FOR BIDDING

Date: 7/1/2026




Binding purposes
Not to be used for B

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Erosion Control.dwg

Four Rivers Sanitation Authority

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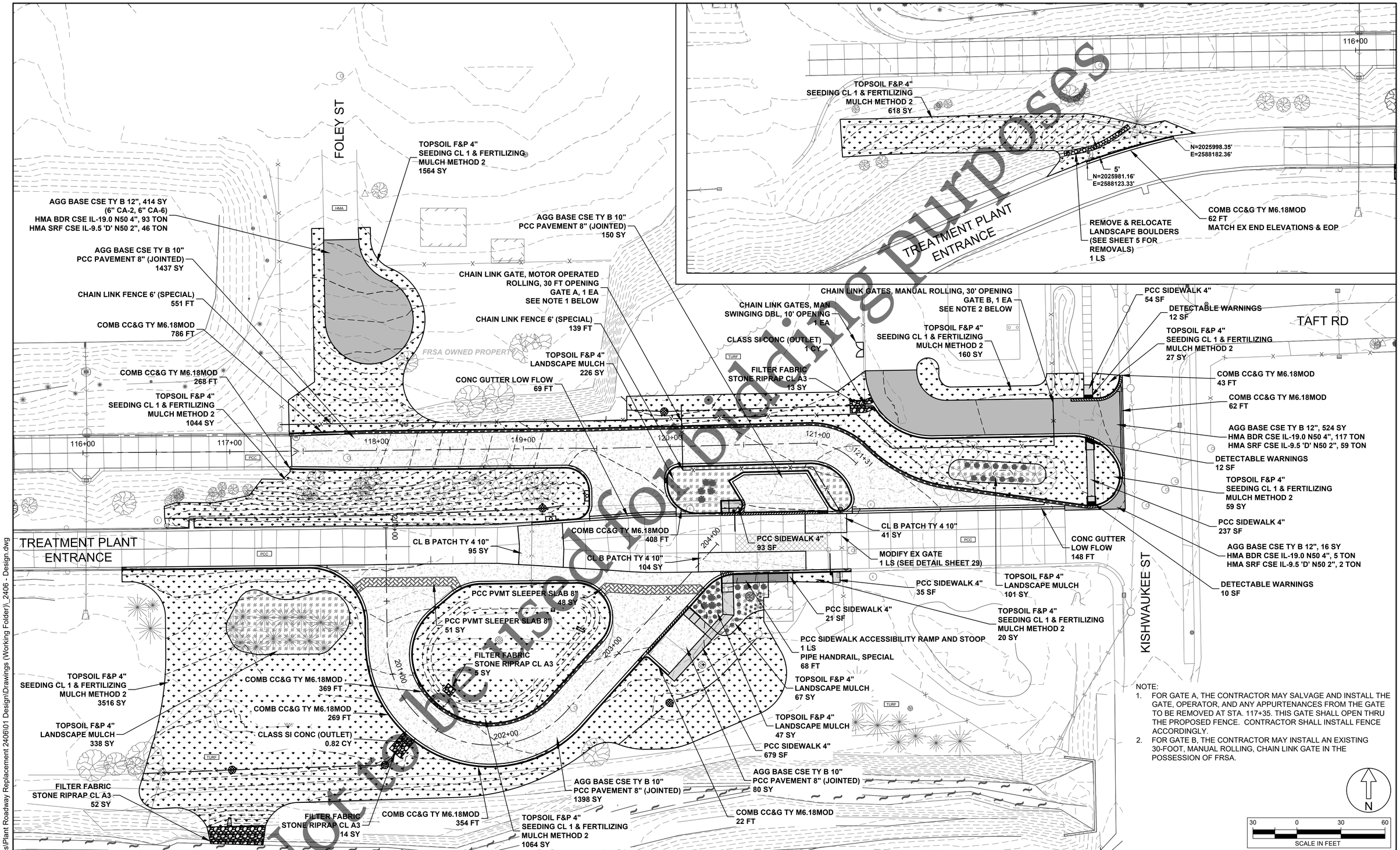
**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP)**

Sheet No.
6 of 33

FOR BIDDING

Date:
7/1/2026




NOTE:
1. FOR GATE A, THE CONTRACTOR MAY SALVAGE AND INSTALL THE GATE, OPERATOR, AND ANY APPURTENANCES FROM THE GATE TO BE REMOVED AT STA. 117+35. THIS GATE SHALL OPEN THRU THE PROPOSED FENCE. CONTRACTOR SHALL INSTALL FENCE ACCORDINGLY.
2. FOR GATE B, THE CONTRACTOR MAY INSTALL AN EXISTING 30-FOOT, MANUAL ROLLING, CHAIN LINK GATE IN THE POSSESSION OF FRSA.

N

30 0 30 60
SCALE IN FEET

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Four Rivers Sanitation Authority

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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**SITE PLAN**

Sheet No. 7 of 33

FOR BIDDING

Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Design.dwg

## POINT TABLE

| PT # | NORTHING | EASTING | ELEV | DESC |
|---|---|---|---|---|
| 1 | 2026203.64 | 2588469.94 | 716.06 | TP |
| 2 | 2026149.23 | 2588470.98 | 713.88 | TP PC |
| 3 | 2026149.23 | 2588500.98 | 714.11 | CTR |
| 4 | 2026176.95 | 2588512.45 | 715.60 | TP PT |
| 5 | 2026204.10 | 2588493.94 | 716.27 | TP |
| 6 | 2026049.33 | 2588448.30 | 707.89 | TP |
| 7 | 2026070.22 | 2588447.85 | 709.09 | TP |
| 8 | 2026071.80 | 2588496.15 | 707.60 | TP |
| 9 | 2026048.80 | 2588496.65 | 707.33 | TP |
| 10 | 2026073.45 | 2588646.79 | 700.20 | TP |
| 11 | 2026050.32 | 2588634.41 | 700.06 | TP PC |
| 12 | 2026032.52 | 2588652.61 | 699.68 | TP PT |
| 13 | 2026023.86 | 2588652.70 | 699.61 | TP PC |
| 14 | 2026011.76 | 2588641.58 | 699.46 | TP PT |
| 15 | 2026077.31 | 2588800.13 | 701.46 | TP PC |
| 16 | 2026062.67 | 2588838.48 | 700.99 | TP PT |
| 17 | 2026060.22 | 2588841.08 | 700.95 | TP PC |
| 18 | 2026034.02 | 2588895.91 | 701.24 | TP PT |
| 19 | 2026023.16 | 2588974.63 | 702.18 | TP |
| 20 | 2026019.58 | 2588974.71 | 702.14 | TP |
| 21 | 2026021.10 | 2588989.52 | 702.49 | TP PC |
| 22 | 2026021.02 | 2588992.53 | 702.54 | TP |
| 23 | 2026043.49 | 2589013.97 | 703.00 | TP |
| 24 | 2026050.28 | 2589012.74 | 702.95 | TP |
| 25 | 2026071.91 | 2588979.91 | 703.33 | TP PT |
| 26 | 2026071.35 | 2588946.10 | 703.57 | TP HP |
| 27 | 2026070.33 | 2588884.67 | 702.20 | TP PC |
| 28 | 2026114.58 | 2588838.93 | 701.68 | TP PT |
| 29 | 2026115.16 | 2588873.92 | 702.59 | TP |
| 30 | 2026114.16 | 2588873.94 | 702.56 | TP PC |

## POINT TABLE

| PT # | NORTHING | EASTING | ELEV | DESC |
|---|---|---|---|---|
| 31 | 2026094.49 | 2588894.27 | 702.50 | TP PT |
| 32 | 2026095.35 | 2588945.70 | 703.81 | TP HP |
| 33 | 2026093.90 | 2588978.98 | 703.31 | TP |
| 34 | 2026094.20 | 2588997.16 | 703.00 | TP PC |
| 35 | 2026100.45 | 2589010.05 | 702.70 | TP |
| 36 | 2026100.50 | 2589012.12 | 702.66 | TP |
| 37 | 2026111.57 | 2589013.87 | 702.66 | TP PT |
| 38 | 2026020.59 | 2589015.91 | 703.15 | TP PT |
| 39 | 2026051.08 | 2588711.84 | 700.34 | TP PT |
| 40 | 2026053.32 | 2588800.73 | 701.10 | TP PC |
| 41 | 2026032.07 | 2588830.19 | 700.29 | TP PT |
| 42 | 2026030.74 | 2588830.63 | 700.26 | TP PC |
| 43 | 2026020.45 | 2588828.41 | 699.98 | TP PT |
| 44 | 2026019.35 | 2588813.23 | 699.88 | TP |
| 45 | 2026021.35 | 2588813.23 | 699.90 | TP |
| 46 | 2026044.77 | 2588798.85 | 700.27 | TP |
| 47 | 2026043.70 | 2588756.11 | 700.21 | TP |
| 48 | 2026039.00 | 2588748.43 | 700.15 | TP |
| 49 | 2026026.87 | 2588755.84 | 700.01 | TP PC |
| 50 | 2026020.34 | 2588756.24 | 699.93 | TP PT |
| 51 | 2026018.34 | 2588756.28 | 699.90 | TP |
| 52 | 2026015.77 | 2588724.45 | 699.73 | TP PC |
| 53 | 2026037.21 | 2588702.19 | 700.10 | TP PT |
| 54 | 2026040.84 | 2588702.10 | 700.14 | TP PT |
| 55 | 2025980.83 | 2588332.60 | 701.04 | TP |
| 56 | 2025982.12 | 2588460.43 | 700.42 | TP PC |
| 57 | 2025942.60 | 2588500.07 | 698.80 | TP PT |
| 58 | 2025928.74 | 2588500.24 | 698.41 | TP PC |
| 59 | 2025874.10 | 2588644.85 | 698.29 | TP PT |
| 60 | 2025923.43 | 2588689.37 | 698.96 | TP |

## POINT TABLE

| PT # | NORTHING | EASTING | ELEV | DESC |
|---|---|---|---|---|
| 91 | 2025959.05 | 2588412.36 | 699.04 | LSCAPE |
| 92 | 2025961.45 | 2588433.68 | 698.88 | LSCAPE |
| 93 | 2025959.77 | 2588451.62 | 698.63 | LSCAPE |
| 94 | 2025964.25 | 2588467.49 | 699.02 | LSCAPE |
| 95 | 2025934.62 | 2588483.05 | 698.28 | LSCAPE |
| 96 | 2025925.60 | 2588474.78 | 698.61 | LSCAPE |
| 97 | 2025900.94 | 2588722.11 | 699.10 | LSCAPE |
| 98 | 2025933.61 | 2588754.54 | 699.50 | LSCAPE |
| 99 | 2026046.90 | 2588714.61 | 700.69 | FNC |
| 100 | 2026049.13 | 2588803.21 | 701.19 | FNC |
| 101 | 2026091.40 | 2588713.49 | 699.68 | FNC |

## POINT TABLE

| PT # | NORTHING | EASTING | ELEV | DESC |
|---|---|---|---|---|
| 61 | 2025908.73 | 2588705.67 | 699.30 | TP |
| 62 | 2025935.41 | 2588729.75 | 699.69 | TP |
| 63 | 2025948.78 | 2588714.94 | 699.39 | TP |
| 64 | 2025968.16 | 2588729.74 | 699.61 | TP PC |
| 65 | 2025978.06 | 2588751.43 | 699.76 | TP PT |
| 66 | 2025979.76 | 2588829.16 | 700.02 | TP |
| 67 | 2025971.24 | 2588577.78 | 699.70 | TP PT |
| 68 | 2025971.89 | 2588641.59 | 699.38 | TP PC |
| 69 | 2025930.14 | 2588660.40 | 699.19 | TP PT |
| 70 | 2025891.52 | 2588625.55 | 698.68 | TP PC |
| 71 | 2025901.89 | 2588533.49 | 697.89 | TP |
| 72 | 2025951.91 | 2588542.51 | 698.98 | TP PT |
| 73 | 2025962.92 | 2588555.49 | 699.26 | TP PC |
| 74 | 2026077.94 | 2588441.57 | 708.05 | FNC |
| 75 | 2026078.80 | 2588495.99 | 708.60 | FNC |
| 76 | 2026080.45 | 2588646.66 | 700.26 | FNC |
| 77 | 2026085.12 | 2588832.56 | 701.60 | FNC |
| 78 | 2026061.88 | 2588857.29 | 701.91 | FNC |
| 79 | 2026063.71 | 2588967.46 | 703.59 | FNC |
| 80 | 2026053.21 | 2588886.44 | 702.20 | LSCAPE |
| 81 | 2026043.39 | 2588885.00 | 702.20 | LSCAPE |
| 82 | 2026032.98 | 2588954.68 | 702.20 | LSCAPE |
| 83 | 2026051.32 | 2588962.45 | 702.59 | LSCAPE |
| 84 | 2026020.89 | 2588619.07 | 698.60 | LSCAPE |
| 85 | 2026039.76 | 2588588.03 | 701.86 | LSCAPE |
| 86 | 2026038.55 | 2588484.79 | 706.79 | LSCAPE |
| 87 | 2026014.23 | 2588379.56 | 701.23 | LSCAPE |
| 88 | 2025921.71 | 2588466.04 | 698.69 | LSCAPE |
| 89 | 2025921.34 | 2588425.94 | 698.24 | LSCAPE |
| 90 | 2025945.41 | 2588405.07 | 698.60 | LSCAPE |

## ALIGNMENT LINE TABLE

| LINE # | LENGTH (FT) | DIRECTION BEARING | START STATION | END STATION |
|---|---|---|---|---|
| L1 | 141.91 | N89° 34' 52.88"E | STA. 116+00.00<br>N: 2026058.73<br>E: 2588306.06 | STA. 117+41.91<br>N: 2026059.77<br>E: 2588447.96 |
| L2 | 12.01 | S88° 35' 59.63"E | STA. 119+34.24<br>N: 2026061.88<br>E: 2588640.27 | STA. 119+46.24<br>N: 2026061.59<br>E: 2588652.28 |
| L3 | 148.20 | N88° 33' 29.13"E | STA. 119+46.24<br>N: 2026061.59<br>E: 2588652.28 | STA. 120+94.44<br>N: 2026065.32<br>E: 2588800.43 |
| L4 | 57.94 | S63° 19' 10.32"E | STA. 500+00.00<br>N: 2025943.95<br>E: 2588633.99 | STA. 500+57.94<br>N: 2025917.94<br>E: 2588685.76 |
| L5 | 42.06 | S33° 56' 32.28"E | STA. 500+57.94<br>N: 2025917.94<br>E: 2588685.76 | STA. 501+00.00<br>N: 2025883.04<br>E: 2588709.24 |
| L6 | 78.85 | S00° 40' 22.64"E | STA. 200+00.00<br>N: 2026007.74<br>E: 2588512.31 | STA. 200+78.85<br>N: 2025928.89<br>E: 2588513.24 |
| L7 | 153.45 | N42° 04' 07.20"E | STA. 202+46.55<br>N: 2025882.81<br>E: 2588635.20 | STA. 204+00.00<br>N: 2025996.73<br>E: 2588738.01 |
| L8 | 98.61 | N02° 57' 01.80"E | STA. 300+00.00<br>N: 2025744.37<br>E: 2588402.62 | STA. 300+98.61<br>N: 2025842.84<br>E: 2588407.70 |

## ALIGNMENT LINE TABLE

| LINE # | LENGTH (FT) | DIRECTION BEARING | START STATION | END STATION |
|---|---|---|---|---|
| L9 | 104.10 | N88° 10' 43.90"E | STA. 300+98.61<br>N: 2025842.84<br>E: 2588407.70 | STA. 302+02.70<br>N: 2025846.15<br>E: 2588511.74 |
| L10 | 68.40 | N40° 32' 49.97"E | STA. 302+02.70<br>N: 2025846.15<br>E: 2588511.74 | STA. 302+71.11<br>N: 2025898.13<br>E: 2588556.21 |
| L11 | 84.15 | N56° 22' 00.04"E | STA. 302+71.11<br>N: 2025898.13<br>E: 2588556.21 | STA. 303+55.25<br>N: 2025944.73<br>E: 2588626.27 |
| L12 | 69.06 | N01° 18' 20.62"W | STA. 303+55.25<br>N: 2025944.73<br>E: 2588626.27 | STA. 304+24.31<br>N: 2026013.78<br>E: 2588624.69 |
| L13 | 29.25 | N57° 35' 48.91"E | STA. 304+24.31<br>N: 2026013.78<br>E: 2588624.69 | STA. 304+53.56<br>N: 2026029.45<br>E: 2588649.39 |
| L14 | 54.74 | N79° 02' 00.55"E | STA. 304+53.56<br>N: 2026029.45<br>E: 2588649.39 | STA. 305+08.29<br>N: 2026039.86<br>E: 2588703.12 |
| L15 | 159.25 | S78° 38' 23.64"E | STA. 305+08.29<br>N: 2026039.86<br>E: 2588703.12 | STA. 306+67.55<br>N: 2026008.49<br>E: 2588859.26 |
| L16 | 100.00 | N01° 26' 30.87"W | STA. 400+00.00<br>N: 2026031.36<br>E: 2588703.34 | STA. 401+00.00<br>N: 2026131.33<br>E: 2588700.82 |

## ALIGNMENT CURVE TABLE

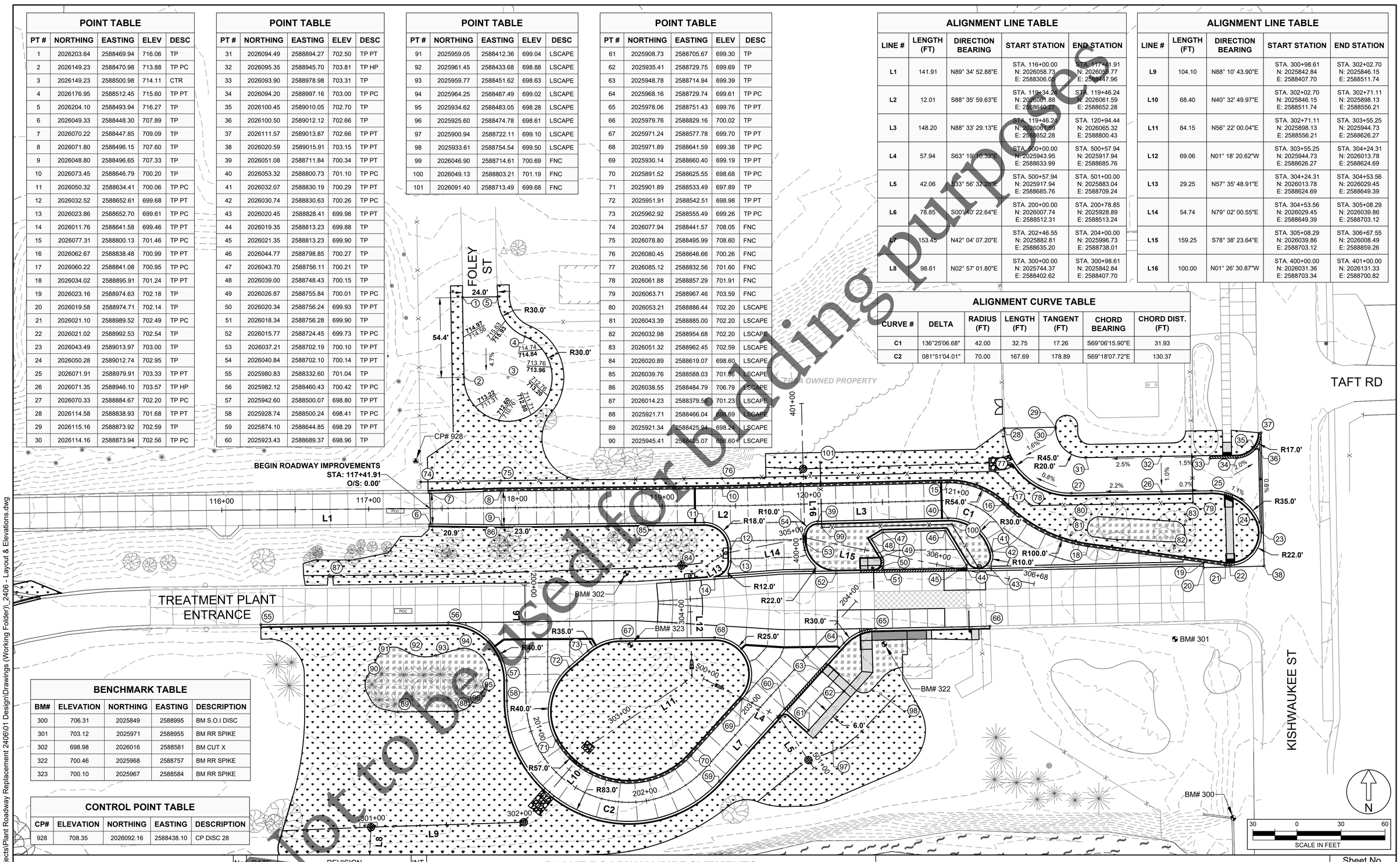
| CURVE # | DELTA | RADIUS (FT) | LENGTH (FT) | TANGENT (FT) | CHORD BEARING | CHORD DIST. (FT) |
|---|---|---|---|---|---|---|
| C1 | 136°25'06.68" | 42.00 | 32.75 | 17.26 | S69°06'15.90"E | 31.93 |
| C2 | 081°51'04.01" | 70.00 | 167.69 | 178.89 | S69°18'07.72"E | 130.37 |

## BENCHMARK TABLE

| BM# | ELEVATION | NORTHING | EASTING | DESCRIPTION |
|---|---|---|---|---|
| 300 | 706.31 | 2025849 | 2588995 | BM S.O.I DISC |
| 301 | 703.12 | 2025971 | 2588955 | BM RR SPIKE |
| 302 | 698.98 | 2026016 | 2588581 | BM CUT X |
| 322 | 700.46 | 2025968 | 2588757 | BM RR SPIKE |
| 323 | 700.10 | 2025967 | 2588584 | BM RR SPIKE |

## CONTROL POINT TABLE

| CP# | ELEVATION | NORTHING | EASTING | DESCRIPTION |
|---|---|---|---|---|
| 928 | 708.35 | 2026092.16 | 2588438.10 | CP DISC 28 |

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|---|---|---|---|
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Four Rivers Sanitation Authority

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**SITE LAYOUT**

Sheet No. 8 of 33

FOR BIDDING

Date: 7/1/2026

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EXPANSION JOINT PER FRSA 'TREATMENT PLANT SEPARATION JOINT WITH SLEEPER SLAB' DETAIL

PCC PAVEMENT SLEEPER SLAB, 8" 51 SY

PCC PAVEMENT SLEEPER SLAB, 8" 48 SY

EXPANSION JOINT PER FRSA 'TREATMENT PLANT SEPARATION JOINT WITH SLEEPER SLAB' DETAIL

BEGIN DEP STA: 203+86.10 O/S: 15.89' R

END DEP STA: 203+93.18 O/S: 20.57' R

END DEP STA: 203+55.00 O/S: 13.00' R

END TIP-OUT STA: 202+98.57 O/S: 13.00' L

BEGIN TIP-OUT STA: 201+13.74 O/S: 13.00' L

DEP CURB (8' WIDE DETENTION SPILL) STA: 201+38.43 O/S: 15.00' L 697.72 (SEE DETAIL THIS SHEET)

BEGIN DEP STA: 203+13.00 O/S: 13.00' R

SEE SHEET 14 FOR SIDEWALK ELEVATIONS

3H:1V

5.0' ± 3.0%

8.0'

695.20

## LEGEND

- DEPRESSED CURB & GUTTER
- TIP-OUT CURB & GUTTER
- PR ELEV (EX ELEV) — EX & PR SURFACE ELEVATIONS

PAVEMENT JOINTS

- TRANSVERSE CONTRACTION
- LONGITUDINAL
- EXPANSION
- PAVEMENT REPLACEMENT, PCC
- PAVEMENT REPLACEMENT, HMA

N

10 0 10 20
SCALE IN FEET

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Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PAVEMENT JOINTS & ELEVATIONS 1**

Sheet No. 9 of 33

FOR BIDDING

Date: 7/1/2026

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BEGIN TIP-OUT
STA: 117+78.23
O/S: 11.24' L

TRANSVERSE EXPANSION JOINT PER
IDOT HWY STD 420001

118+00

119+00

120+00

120+00

121+00

121+31

END TIP-OUT
N: 2026021.10'
E: 2588989.52'

SEE SHEET 15 FOR
SIDEWALK ELEVATIONS

SCALE IN FEET

## LEGEND

- DEPRESSED CURB & GUTTER
- TIP-OUT CURB & GUTTER
- EX & PR SURFACE ELEVATIONS (PR ELEV / (EX ELEV))

PAVEMENT JOINTS

- TRANSVERSE CONTRACTION
- LONGITUDINAL
- EXPANSION
- PAVEMENT REPLACEMENT, PCC
- PAVEMENT REPLACEMENT, HMA

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Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PAVEMENT JOINTS & ELEVATIONS 2**

Sheet No. 10 of 33

FOR BIDDING

Date: 7/1/2026

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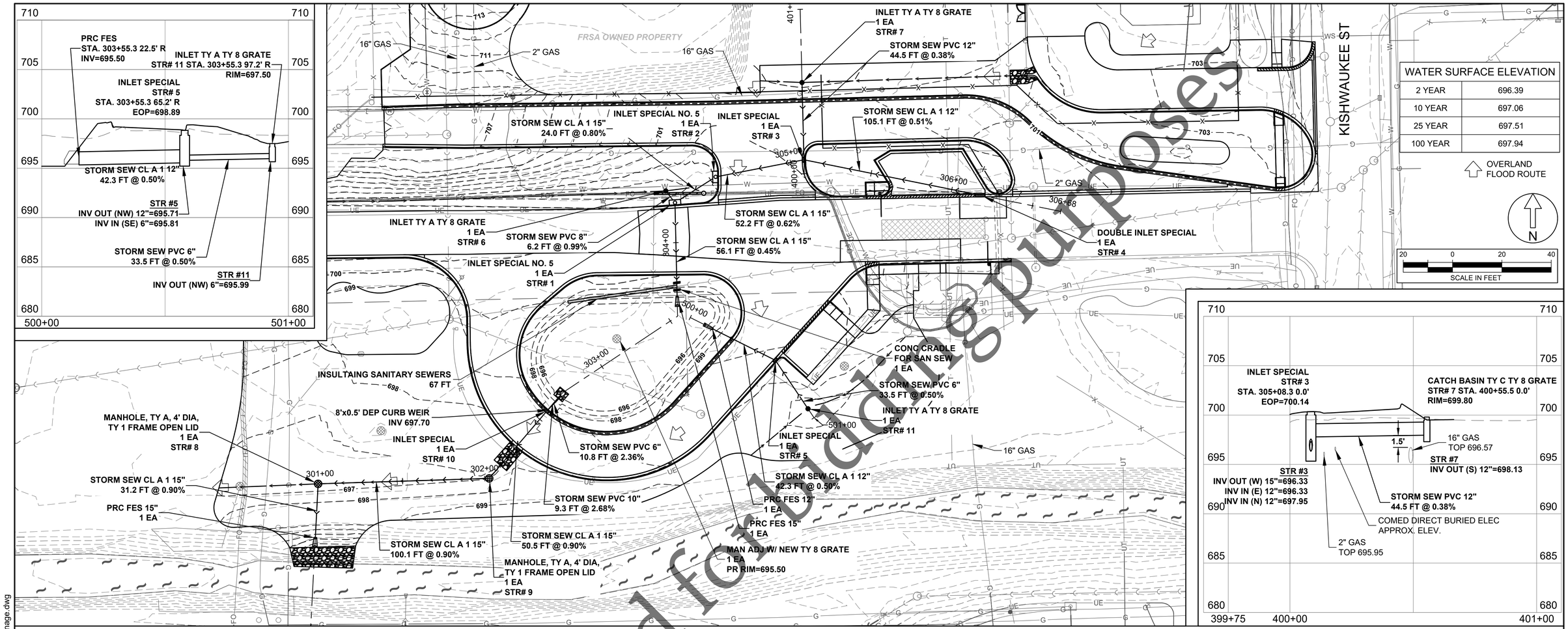





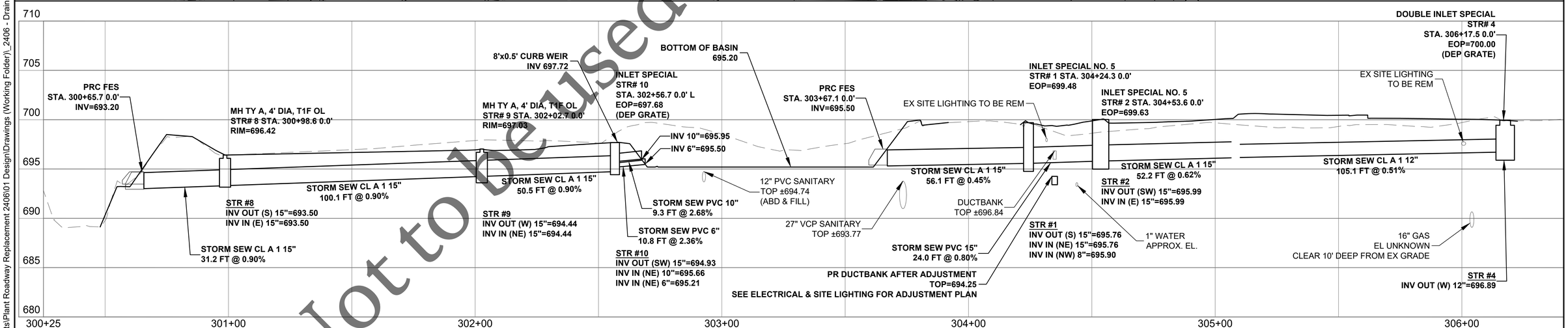


Not to be used for Bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**DRAINAGE PLAN**

Sheet No. 11 of 33

FOR BIDDING

Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Drainage.dwg

FOLEY ST

KISHWAUKEE ST

TAFT RD

FIRE HYD W/ 6" VALVE & VALVE BOX
1 EA

16" GAS

2" GAS

SAN MH REC NEW T1F CL
MH# 004-002, 4' DIA
1 EA

FRSA OWNED PROPERTY

VALVE VAULTS ADJ NEW T1F CL
1 EA

FIRE HYDRANT REM
1 EA
(RECONNECT WATER SERVICE TO MAIN, COST INCIDENTAL)

SAN MH REC NEW T1F CL
MH# 004-007, 4' DIA
1 EA

16" GAS

707.86
707.86

707.60
707.48

700.97
701.48

2" GAS

700.24
700.18

MH ADJ NEW T1F CL
1 EA

YARD HYDRANT REM
1 EA

700.11
700.02

ABD FILL EX SAN SEW
1 EA (12")

698.44
698.43

SAN MH ADJ NEW T1F CL
MH# 169-004, 4' DIA
1 EA
PLUG PIPE IN 12" PVC (SE)
(COST INCIDENTAL)

MH ADJ NEW T1F CL
FMH-46
1 EA

YARD HYDRANT REM
1 EA

SAN MH REM
MH# 169-036, 4' DIA
1 EA
PLUG PIPE OUT (COST INCIDENTAL)

Not to be used for bidding purposes

N

30 0 30 60
SCALE IN FEET

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Four Rivers Sanitation Authority

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|---|---|---|---|
| | | | |

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**UTILITY PLAN**

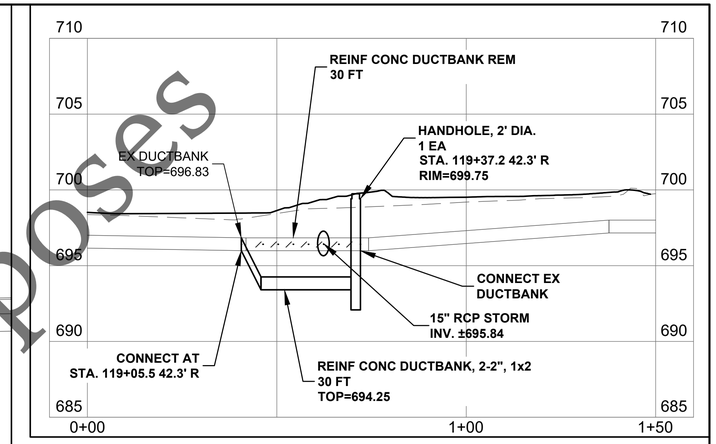
Sheet No.
12 of 33

FOR BIDDING

Date:
7/1/2026

## LIGHTING SCHEDULE

| FIXTURE ID | LAMP SIZE & TYPE | MOUNTING | MANUFACTURER'S FIXTURE | MANUFACTURER'S POLE | COMMENTS |
|---|---|---|---|---|---|
| A | LED, 10000 LM, 117 W, 5000K | POLE ON FND (SEE FND DETAIL) | IVAT3-100LPA750ZU | PS4-11-25D2 | SINGLE AREA LUMINAIRE SIZE 1, TYPE 3 LUMEN DISTRIBUTION. BRONZE FINISH. W/ HOUSE SIDE SHEILD. 25' SQ POLE. |
| B | LED, 10000 LM, 117 W, 5000K | POLE ON FND (SEE FND DETAIL) | (2) IVAT3-100LPA750ZU | PS4-11-25D2 | DOUBLE AREA LUMINAIRE SIZE 1, TYPE 3 LUMEN DISTRIBUTION. BRONZE FINISH. 25' SQ POLE FOR 2 FIXTURES. |
| C | LED, 10000 LM, 117 W, 5000K | POLE ON FND (SEE FND DETAIL) | (4) IVAT3-100LPA750ZU | PS4-11-25D2 | DOUBLE AREA LUMINAIRE SIZE 1, TYPE 3 LUMEN DISTRIBUTION. BRONZE FINISH. 25' SQ POLE FOR 4 FIXTURES. |




FRSA OWNED PROPERTY

FOLEY ST

TAFT RD

KISHWAUKEE ST

TREATMENT PLANT ENTRANCE

PULL FO
(FMH-48 TO NEW HH)
285 FT

PVC CONDUIT (W/ CONDUCTORS), 1"
150 FT
(EX CONDUIT TO NEW LT POLE, ELEC SITE LIGHTING)

FMH-48

16" GAS

2" GAS

118+08 17' R
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'A'

PULL FO
(NEW HH TO GUARD HOUSE)
250 FT

HANDHOLE, 2' DIA.
1 EA
STA: 119+37.2
O/S: 42.3' R

SEE SHEET 14

STA: 119+05.5
O/S: 42.3' R

REM LT POLE & FOUNDATION
1 EA

REINF CONC DUCTBANK REM
REINF CONC DUCTBANK, 2-2", 1x2
30 FT
(SEE PROFILE VIEW THIS SHEET)

REM LIGHT POLE & FOUNDATION
1 EA

200+70 18' R
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'A'

12" SAN
TO BE ABD

PVC CONDUIT (W/ CONDUCTORS), 1"
137 FT
(NEW LT POLE TO NEW LT POLE, ELEC SITE LIGHTING)

201+81 18' R
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'A'

REM LIGHT POLE & FOUNDATION
1 EA

203+00 19' R
REM LT POLE & FOUNDATION, 1 EA
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'A'

PVC CONDUIT (W/ CONDUCTORS), 1"
135 FT
(NEW LT POLE TO NEW LT POLE, ELEC SITE LIGHTING)

PVC CONDUIT (W/ CONDUCTORS), 1"
92 FT
(PR HANDHOLE TO NEW LT POLE, ELEC SITE LIGHTING)

N: 2026029.3
E: 2588966.4
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'A'

REM LT POLE & FOUNDATION
1 EA

116+00 117+00 118+00 119+00 120+00 121+00 200+00 201+00 202+00 203+00

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N

30 0 30 60
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Four Rivers Sanitation Authority

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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**ELECTRICAL & SITE LIGHTING**

Sheet No. 13 of 33

FOR BIDDING

Date: 7/1/2026

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PVC CONDUIT (W/ CONDUCTORS), 1"
(2) 5 FT
10 FT TOTAL
(PR HH TO PR GATE C, ELEC & FO)

FRSA OWNED PROPERTY

HANDHOLE
1 EA

16" GAS

N: 2026093.9
E: 2588934.2
(CONNECT TO EX
2" CONDUITS)

PVC CONDUIT, 2"
(1) 26 FT
(EX CONDUIT TO CAP
2' BEYOND BOC)

PVC CONDUIT, 2"
(1) 252 FT
(EX EMH-53 TO EX CONDUIT)

CH LK GATE, MOTOR OPERATED
ROLLING, 30 FT OPENING
GATE A, 1 EA

120+00

121+00

PVC CONDUIT (W/ CONDUCTORS), 1"
(2) 33 FT, 66 FT TOTAL
(PR HH TO PR HH, ELEC & FO)

COMED UG

COMED UG

HANDHOLE
1 EA

HANDHOLE
1 EA

2" GAS

PVC CONDUIT (W/ CONDUCTORS), 1"
(2) 28 FT, 56 FT TOTAL
(EX EMH-53 TO PR HH, ELEC & FO)

120+19 37' R
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'C'

REM LIGHT POLE & FOUNDATION
1 EA

PVC CONDUIT, 1"
(1) 10 FT
(EMPTY)

N: 2026045.3
E: 2588873.3
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'A'

120+42 45' R
BARRIER GATE, 14 FT ARM
1 EA

REM MANHOLE
1 EA

PVC CONDUIT, 4"
(2) 36 FT
72 FT TOTAL
(CONNECT & EXTEND EX 4" CONDUITS

PVC CONDUIT (W/ CONDUCTORS), 1"
140 FT
(EX HH TO EX EMH-53, ELEC SITE
LIGHTING, CONNECT TO EX
CONDUCTORS IN EMH-53)

EMH-53
MH ADJ NEW T1F CL
1 EA

PVC CONDUIT (W/ CONDUCTORS), 1"
(2) 30 FT, 60 FT TOTAL
(EX EMH-53 TO PR GATE, ELEC & FO)

16" GAS

PVC CONDUIT (W/ CONDUCTORS), 1"
160 FT
(EX EMH-53 TO PR LT POLE, ELEC SITE LIGHTING,
CONNECT TO EX CONDUCTORS IN EMH-53)

PVC CONDUIT (W/ CONDUCTORS), 1"
93 FT
(NEW LT POLE TO NEW LT POLE,
ELEC SITE LIGHTING)

PVC CONDUIT (W/ CONDUCTORS), 1"
(1) 10 FT
(EX EMH-53 TO PR LT POLE, ELEC)

(1) 4" EMPTY SPARE
(1) 4" EX SITE LIGHTING

PULL FO (FOR GATES)
(VIA SPARE 4")
60 FT

COMED
UTILITY
POLE

PVC CONDUIT, 1"
(2) 57 FT
114 FT TOTAL

(2) 4" SPARE PVC CONDUITS

MH ADJ NEW T1F CL
1 EA

PULL FO (FOR GATES)
(VIA SPARE 2")
40 FT

PVC CONDUIT (W/ CONDUCTORS), 1"
(2) 7 FT, 14 FT TOTAL
(EX GATE CTRL TO PR GATE, ELEC & FO)

N: 2025976.6
E: 2588815.8
BARRIER GATE, 14 FT ARM
1 EA

(1) 2" EMPTY SPARE
(1) 2" EX SITE LIGHTING

N: 2025972.2
E: 2588796.9
REM LT POLE & FOUNDATION, 1 EA
LT POLE FOUNDATION 24", 6.5 FT
LT POLE & FIXTURE, 1 EA
'A'

HANDHOLE
1 EA
(CONNECT EX CONDUIT)

203+00

N

5 0 5 10
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Four Rivers Sanitation Authority

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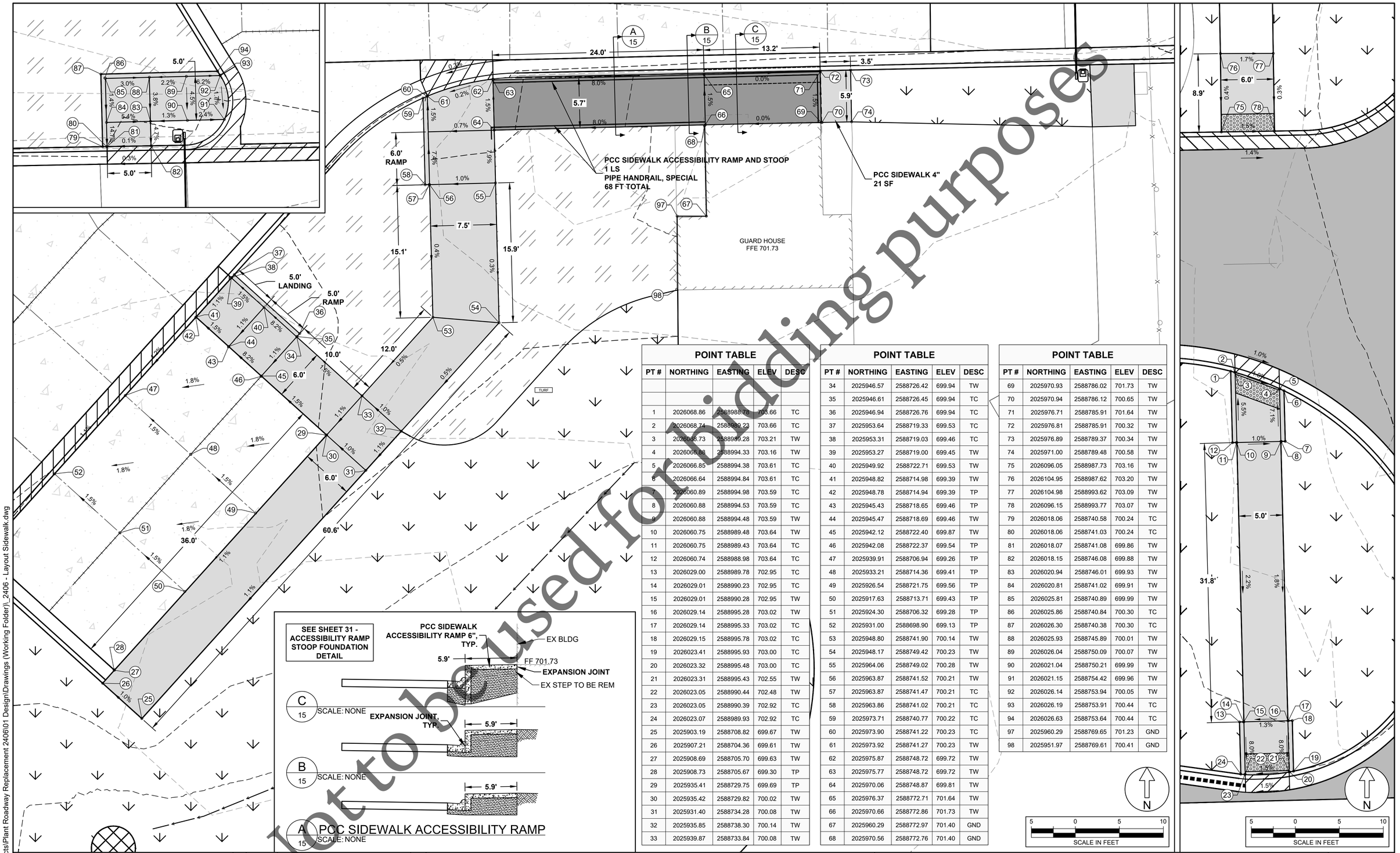
PLANT ROADWAY IMPROVEMENTS
CAPITAL PROJECT 2406

ELECTRICAL & SITE LIGHTING 2

Sheet No.
14 of 33

FOR BIDDING

Date:
7/1/2026




SEE SHEET 31 - ACCESSIBILITY RAMP STOOP FOUNDATION DETAIL




**POINT TABLE**

| PT # | NORTHING | EASTING | ELEV | DESC |
|---|---|---|---|---|
| | | | | |
| | | | | |
| 1 | 2026068.86 | 2588988.78 | 703.66 | TC |
| 2 | 2026068.74 | 2588989.23 | 703.66 | TC |
| 3 | 2026068.73 | 2588989.28 | 703.21 | TW |
| 4 | 2026066.88 | 2588994.33 | 703.16 | TW |
| 5 | 2026066.85 | 2588994.38 | 703.61 | TC |
| 6 | 2026066.64 | 2588994.84 | 703.61 | TC |
| 7 | 2026060.89 | 2588994.98 | 703.59 | TC |
| 8 | 2026060.88 | 2588994.53 | 703.59 | TC |
| 9 | 2026060.88 | 2588994.48 | 703.59 | TW |
| 10 | 2026060.75 | 2588989.48 | 703.64 | TW |
| 11 | 2026060.75 | 2588989.43 | 703.64 | TC |
| 12 | 2026060.74 | 2588988.98 | 703.64 | TC |
| 13 | 2026029.00 | 2588989.78 | 702.95 | TC |
| 14 | 2026029.01 | 2588990.23 | 702.95 | TC |
| 15 | 2026029.01 | 2588990.28 | 702.95 | TW |
| 16 | 2026029.14 | 2588995.28 | 703.02 | TW |
| 17 | 2026029.14 | 2588995.33 | 703.02 | TC |
| 18 | 2026029.15 | 2588995.78 | 703.02 | TC |
| 19 | 2026023.41 | 2588995.93 | 703.00 | TC |
| 20 | 2026023.32 | 2588995.48 | 703.00 | TC |
| 21 | 2026023.31 | 2588995.43 | 702.55 | TW |
| 22 | 2026023.05 | 2588990.44 | 702.48 | TW |
| 23 | 2026023.05 | 2588990.39 | 702.92 | TC |
| 24 | 2026023.07 | 2588989.93 | 702.92 | TC |
| 25 | 2025903.19 | 2588708.82 | 699.67 | TW |
| 26 | 2025907.21 | 2588704.36 | 699.61 | TW |
| 27 | 2025908.69 | 2588705.70 | 699.63 | TW |
| 28 | 2025908.73 | 2588705.67 | 699.30 | TP |
| 29 | 2025935.41 | 2588729.75 | 699.69 | TP |
| 30 | 2025935.42 | 2588729.82 | 700.02 | TW |
| 31 | 2025931.40 | 2588734.28 | 700.08 | TW |
| 32 | 2025935.85 | 2588738.30 | 700.14 | TW |
| 33 | 2025939.87 | 2588733.84 | 700.08 | TW |

**POINT TABLE**

| PT # | NORTHING | EASTING | ELEV | DESC |
|---|---|---|---|---|
| 34 | 2025946.57 | 2588726.42 | 699.94 | TW |
| 35 | 2025946.61 | 2588726.45 | 699.94 | TC |
| 36 | 2025946.94 | 2588726.76 | 699.94 | TC |
| 37 | 2025953.64 | 2588719.33 | 699.53 | TC |
| 38 | 2025953.31 | 2588719.03 | 699.46 | TC |
| 39 | 2025953.27 | 2588719.00 | 699.45 | TW |
| 40 | 2025949.92 | 2588722.71 | 699.53 | TW |
| 41 | 2025948.82 | 2588714.98 | 699.39 | TW |
| 42 | 2025948.78 | 2588714.94 | 699.39 | TP |
| 43 | 2025945.43 | 2588718.65 | 699.46 | TP |
| 44 | 2025945.47 | 2588718.69 | 699.46 | TW |
| 45 | 2025942.12 | 2588722.40 | 699.87 | TW |
| 46 | 2025942.08 | 2588722.37 | 699.54 | TP |
| 47 | 2025939.91 | 2588706.94 | 699.26 | TP |
| 48 | 2025933.21 | 2588714.36 | 699.41 | TP |
| 49 | 2025926.54 | 2588721.75 | 699.56 | TP |
| 50 | 2025917.63 | 2588713.71 | 699.43 | TP |
| 51 | 2025924.30 | 2588706.32 | 699.28 | TP |
| 52 | 2025931.00 | 2588698.90 | 699.13 | TP |
| 53 | 2025948.80 | 2588741.90 | 700.14 | TW |
| 54 | 2025948.17 | 2588749.42 | 700.23 | TW |
| 55 | 2025964.06 | 2588749.02 | 700.28 | TW |
| 56 | 2025963.87 | 2588741.52 | 700.21 | TW |
| 57 | 2025963.87 | 2588741.47 | 700.21 | TC |
| 58 | 2025963.86 | 2588741.02 | 700.21 | TC |
| 59 | 2025973.71 | 2588740.77 | 700.22 | TC |
| 60 | 2025973.90 | 2588741.22 | 700.23 | TC |
| 61 | 2025973.92 | 2588741.27 | 700.23 | TW |
| 62 | 2025975.87 | 2588748.72 | 699.72 | TW |
| 63 | 2025975.77 | 2588748.72 | 699.72 | TW |
| 64 | 2025970.06 | 2588748.87 | 699.81 | TW |
| 65 | 2025976.37 | 2588772.71 | 701.64 | TW |
| 66 | 2025970.66 | 2588772.86 | 701.73 | TW |
| 67 | 2025960.29 | 2588772.97 | 701.40 | GND |
| 68 | 2025970.56 | 2588772.76 | 701.40 | GND |

**POINT TABLE**

| PT # | NORTHING | EASTING | ELEV | DESC |
|---|---|---|---|---|
| 69 | 2025970.93 | 2588786.02 | 701.73 | TW |
| 70 | 2025970.94 | 2588786.12 | 700.65 | TW |
| 71 | 2025976.71 | 2588785.91 | 701.64 | TW |
| 72 | 2025976.81 | 2588785.91 | 700.32 | TW |
| 73 | 2025976.89 | 2588789.37 | 700.34 | TW |
| 74 | 2025971.00 | 2588789.48 | 700.58 | TW |
| 75 | 2026096.05 | 2588987.73 | 703.16 | TW |
| 76 | 2026104.95 | 2588987.62 | 703.20 | TW |
| 77 | 2026104.98 | 2588993.62 | 703.09 | TW |
| 78 | 2026096.15 | 2588993.77 | 703.07 | TW |
| 79 | 2026018.06 | 2588740.58 | 700.24 | TC |
| 80 | 2026018.06 | 2588741.03 | 700.24 | TC |
| 81 | 2026018.07 | 2588741.08 | 699.86 | TW |
| 82 | 2026018.15 | 2588746.08 | 699.88 | TW |
| 83 | 2026020.94 | 2588746.01 | 699.93 | TW |
| 84 | 2026020.81 | 2588741.02 | 699.91 | TW |
| 85 | 2026025.81 | 2588740.89 | 699.99 | TW |
| 86 | 2026025.86 | 2588740.84 | 700.30 | TC |
| 87 | 2026026.30 | 2588740.38 | 700.30 | TC |
| 88 | 2026025.93 | 2588745.89 | 700.01 | TW |
| 89 | 2026026.04 | 2588750.09 | 700.07 | TW |
| 90 | 2026021.04 | 2588750.21 | 699.99 | TW |
| 91 | 2026021.15 | 2588754.42 | 699.96 | TW |
| 92 | 2026026.14 | 2588753.94 | 700.05 | TW |
| 93 | 2026026.19 | 2588753.91 | 700.44 | TC |
| 94 | 2026026.63 | 2588753.64 | 700.44 | TC |
| 97 | 2025960.29 | 2588769.65 | 701.23 | GND |
| 98 | 2025951.97 | 2588769.61 | 700.41 | GND |

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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**SIDEWALK LAYOUT 1**

Sheet No. 15 of 33

FOR BIDDING

Date: 7/1/2026

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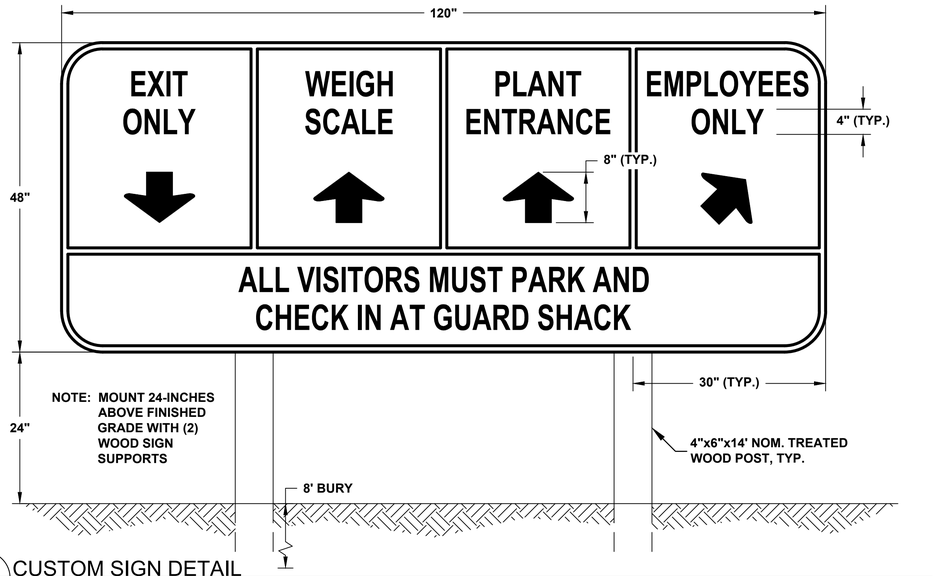
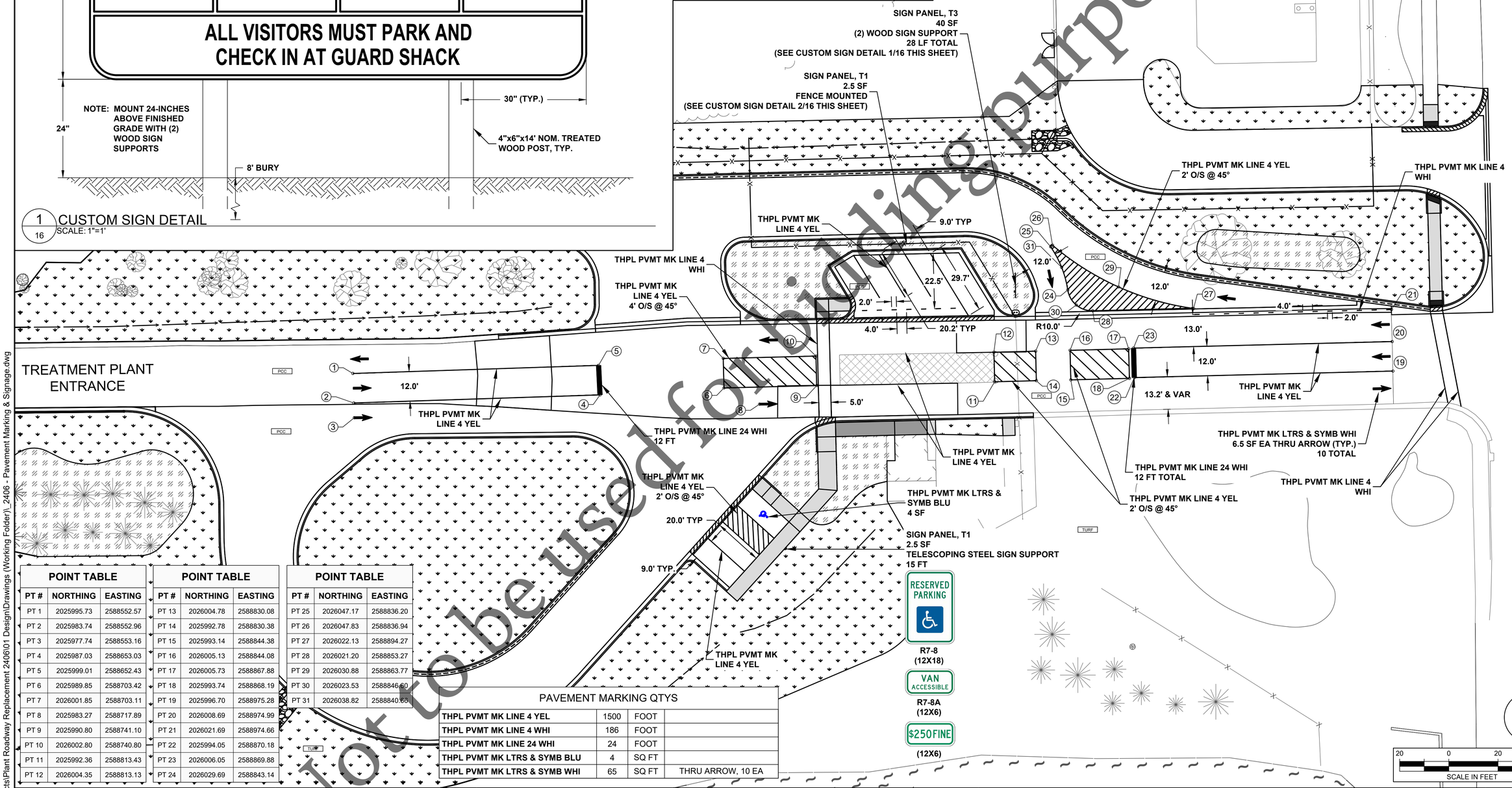



1 / 16 CUSTOM SIGN DETAIL
SCALE: 1"=1'

2 / 16 CUSTOM SIGN DETAIL
SCALE: 1"=1'




| POINT TABLE | | |
|---|---|---|
| PT # | NORTHING | EASTING |
| PT 1 | 2025995.73 | 2588552.57 |
| PT 2 | 2025983.74 | 2588552.96 |
| PT 3 | 2025977.74 | 2588553.16 |
| PT 4 | 2025987.03 | 2588653.03 |
| PT 5 | 2025999.01 | 2588652.43 |
| PT 6 | 2025989.85 | 2588703.42 |
| PT 7 | 2026001.85 | 2588703.11 |
| PT 8 | 2025983.27 | 2588717.89 |
| PT 9 | 2025990.80 | 2588741.10 |
| PT 10 | 2026002.80 | 2588740.80 |
| PT 11 | 2025992.36 | 2588813.43 |
| PT 12 | 2026004.35 | 2588813.13 |

| POINT TABLE | | |
|---|---|---|
| PT # | NORTHING | EASTING |
| PT 13 | 2026004.78 | 2588830.08 |
| PT 14 | 2025992.78 | 2588830.38 |
| PT 15 | 2025993.14 | 2588844.38 |
| PT 16 | 2026005.13 | 2588844.08 |
| PT 17 | 2026005.73 | 2588867.88 |
| PT 18 | 2025993.74 | 2588868.19 |
| PT 19 | 2025996.70 | 2588975.28 |
| PT 20 | 2026008.69 | 2588974.99 |
| PT 21 | 2026021.69 | 2588974.66 |
| PT 22 | 2025994.05 | 2588870.18 |
| PT 23 | 2026006.05 | 2588869.88 |
| PT 24 | 2026029.69 | 2588843.14 |

| POINT TABLE | | |
|---|---|---|
| PT # | NORTHING | EASTING |
| PT 25 | 2026047.17 | 2588836.20 |
| PT 26 | 2026047.83 | 2588836.94 |
| PT 27 | 2026022.13 | 2588894.27 |
| PT 28 | 2026021.20 | 2588853.27 |
| PT 29 | 2026030.88 | 2588863.77 |
| PT 30 | 2026023.53 | 2588846.60 |
| PT 31 | 2026038.82 | 2588840.66 |

| PAVEMENT MARKING QTYS | | | |
|---|---|---|---|
| THPL PVMT MK LINE 4 YEL | 1500 | FOOT | |
| THPL PVMT MK LINE 4 WHI | 186 | FOOT | |
| THPL PVMT MK LINE 24 WHI | 24 | FOOT | |
| THPL PVMT MK LTRS & SYMB BLU | 4 | SQ FT | |
| THPL PVMT MK LTRS & SYMB WHI | 65 | SQ FT | THRU ARROW, 10 EA |

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| | | | |

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PAVEMENT MARKING & SIGNAGE**

Sheet No. 16 of 33

FOR BIDDING

Date: 7/1/2026

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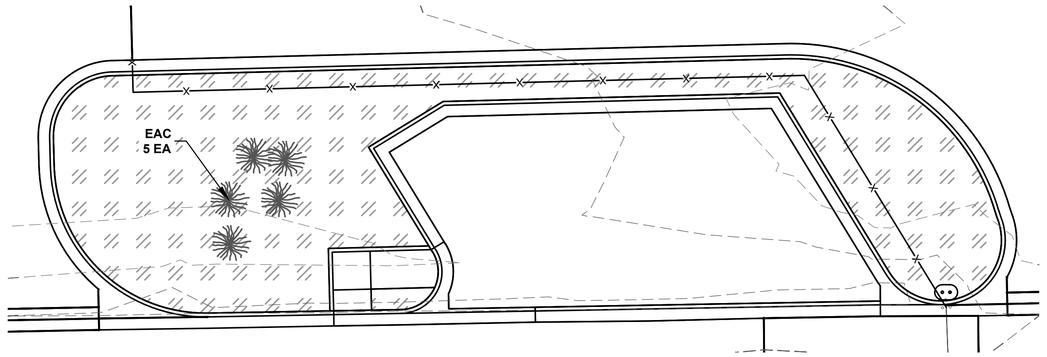
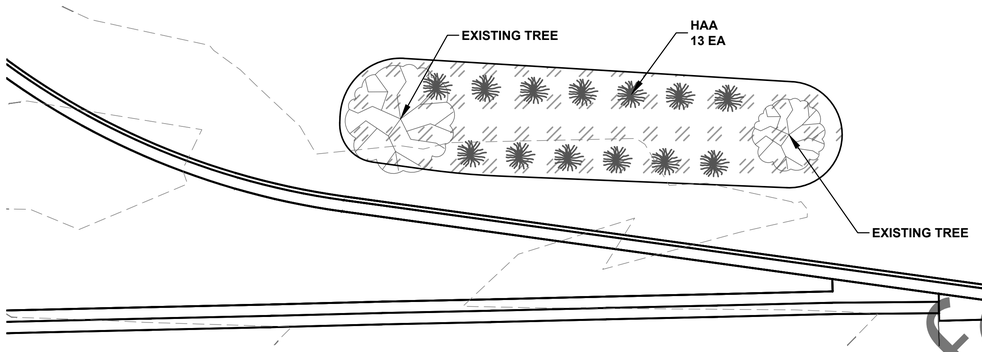
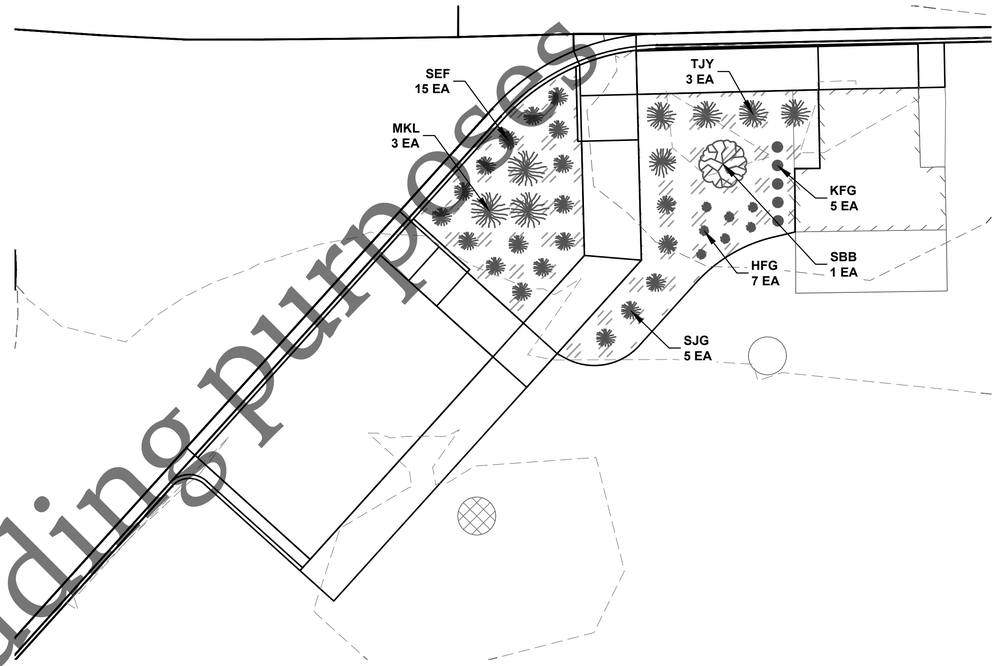


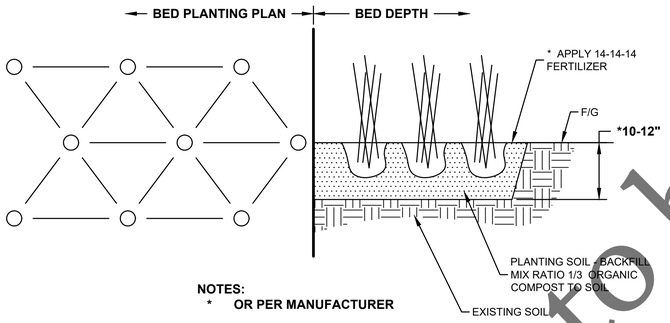

1 / 17 PLANTING BED 'A'
SCALE: 1"=10'



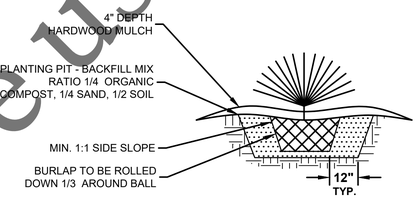

2 / 17 PLANTING BED 'B'
SCALE: 1"=10'




3 / 18 PLANTING BED 'C'
SCALE: 1"=10'




4 / 18 BED PLANTING DETAIL
SCALE: NOT TO SCALE




5 / 17 WOODY PLANT PLANTING DETAIL
SCALE: NOT TO SCALE

## PLANT LIST

| KEY | BOTANICAL NAME | COMMON NAME | QTY | SIZE |
|---|---|---|---|---|
| SBB | AMELANCHIER ARBOREA | SERVICEBERRY BUSH | 1 | 4' |
| KFG | CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' | KARL FOERSTER GRASS | 5 | 1 GALLON |
| EAC | EUONYMUS ALATUS 'COMPACTA' | DWARF BURNING BUSH | 5 | 5 GALLON |
| HAA | HYDRANGEA ARBORESCENS ' ANNABELLE' | HYDRANGEA ANNABELLE | 13 | 5 GALLON |
| HFG | PENNISETUM ALOPECUROIDES 'HAMELN' | HAMELN DWARF FOUNTAIN GRASS | 7 | 1 GALLON |
| SEF | SALVIA NEMOROSA 'OSTFRIESLAND' | SALVIA EAST FRIESLAND | 15 | 1 GALLON |
| SJG | SPIRAEA JAPONICA ' GOLDMOUND' | GOLDMOUND SPIREA | 5 | 5 GALLON |
| MKL | SYRINGA PUBESCENS SUBSP. PATULA ' MISS KIM' | MISS KIM LILACS | 3 | 5 GALLON |
| TJY | TAXUS X MEDIA 'TAUTONII' | TAUNTON JAPANESE YEW | 5 | 5 GALLON |

N

10 0 10 20
SCALE IN FEET

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**LANDSCAPING PLAN**

Sheet No. 17 of 33

FOR BIDDING

Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Landscaping.dwg

STAGING SEQUENCES:

A. INSTALL PROPOSED STORM SEWER ACROSS THE TREATMENT PLANT ENTRANCE. PATCH TREATMENT PLANT ENTRANCE. CONTINUE INSTALLING REMAINING STORM SEWER.

B. COMPLETE ALL IMPROVEMENTS NORTH OF THE STAGE LINE SHOWN BELOW.

STAGING NOTES:

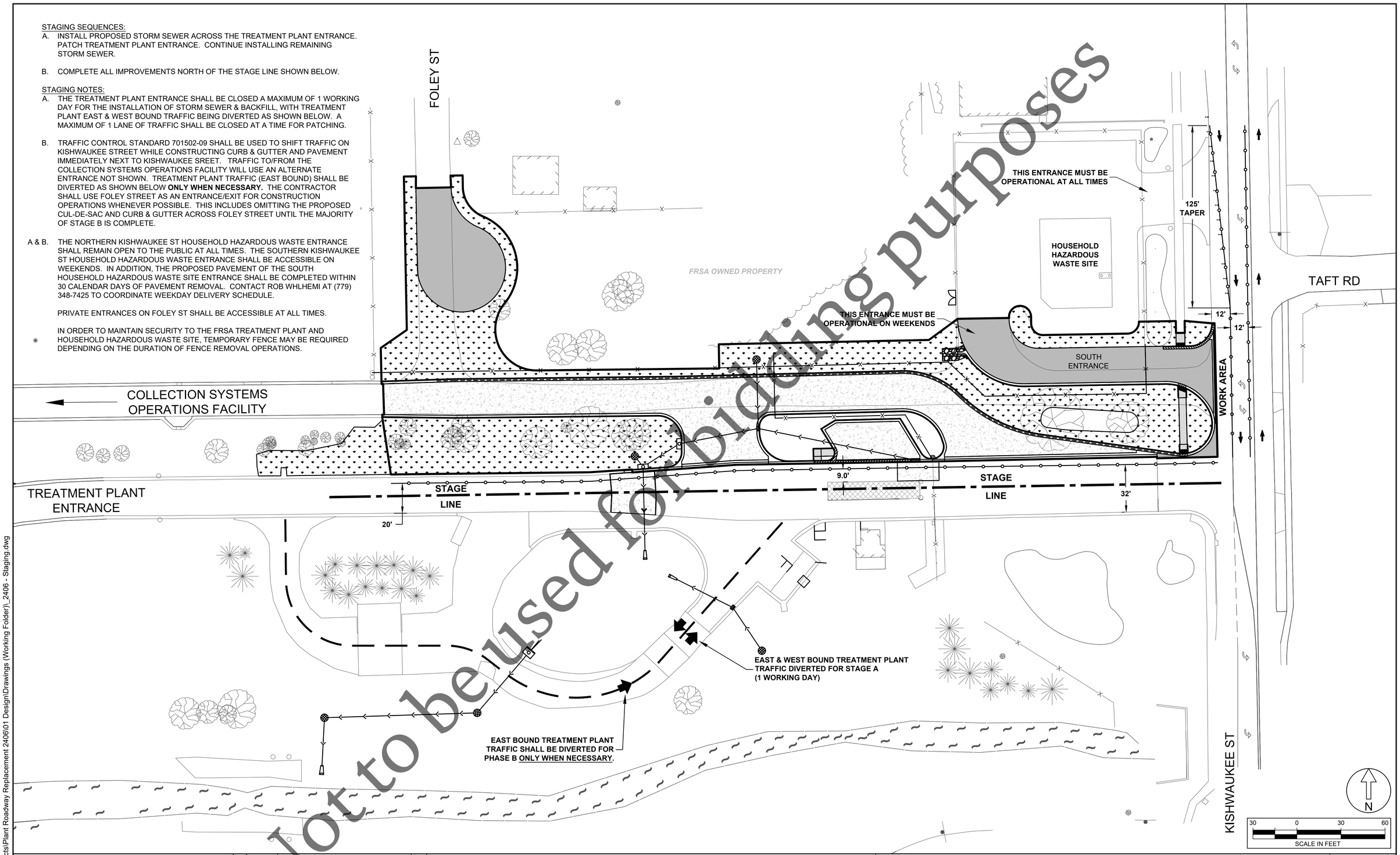
A. THE TREATMENT PLANT ENTRANCE SHALL BE CLOSED A MAXIMUM OF 1 WORKING DAY FOR THE INSTALLATION OF STORM SEWER & BACKFILL, WITH TREATMENT PLANT EAST & WEST BOUND TRAFFIC BEING DIVERTED AS SHOWN BELOW. A MAXIMUM OF 1 LANE OF TRAFFIC SHALL BE CLOSED AT A TIME FOR PATCHING.

B. TRAFFIC CONTROL STANDARD 701502-09 SHALL BE USED TO SHIFT TRAFFIC ON KISHWAUKEE STREET WHILE CONSTRUCTING CURB & GUTTER AND PAVEMENT IMMEDIATELY NEXT TO KISHWAUKEE SREET. TRAFFIC TO/FROM THE COLLECTION SYSTEMS OPERATIONS FACILITY WILL USE AN ALTERNATE ENTRANCE NOT SHOWN. TREATMENT PLANT TRAFFIC (EAST BOUND) SHALL BE DIVERTED AS SHOWN BELOW **ONLY WHEN NECESSARY.** THE CONTRACTOR SHALL USE FOLEY STREET AS AN ENTRANCE/EXIT FOR CONSTRUCTION OPERATIONS WHENEVER POSSIBLE. THIS INCLUDES OMITTING THE PROPOSED CUL-DE-SAC AND CURB & GUTTER ACROSS FOLEY STREET UNTIL THE MAJORITY OF STAGE B IS COMPLETE.

A & B. THE NORTHERN KISHWAUKEE ST HOUSEHOLD HAZARDOUS WASTE ENTRANCE SHALL REMAIN OPEN TO THE PUBLIC AT ALL TIMES. THE SOUTHERN KISHWAUKEE ST HOUSEHOLD HAZARDOUS WASTE ENTRANCE SHALL BE ACCESSIBLE ON WEEKENDS. IN ADDITION, THE PROPOSED PAVEMENT OF THE SOUTH HOUSEHOLD HAZARDOUS WASTE SITE ENTRANCE SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS OF PAVEMENT REMOVAL. CONTACT ROB WHLHEMI AT (779) 348-7425 TO COORDINATE WEEKDAY DELIVERY SCHEDULE.

PRIVATE ENTRANCES ON FOLEY ST SHALL BE ACCESSIBLE AT ALL TIMES.

* IN ORDER TO MAINTAIN SECURITY TO THE FRSA TREATMENT PLANT AND HOUSEHOLD HAZARDOUS WASTE SITE, TEMPORARY FENCE MAY BE REQUIRED DEPENDING ON THE DURATION OF FENCE REMOVAL OPERATIONS.




Not to be used for bidding purposes

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Staging.dwg

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**CONSTRUCTION STAGE A & B**

Sheet No. 18 of 33

FOR BIDDING

Date: 7/1/2026

STAGING SEQUENCES:

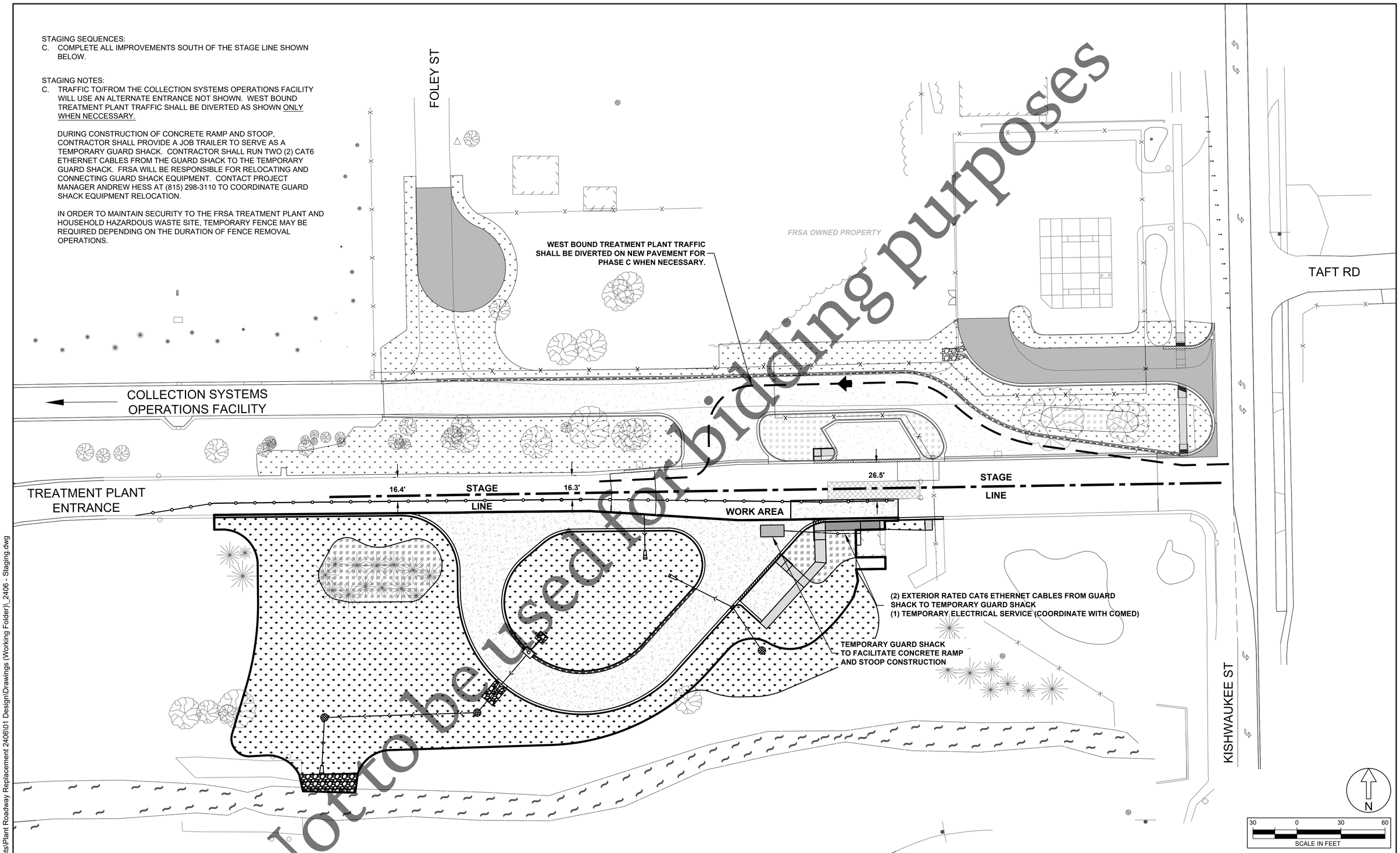
C. COMPLETE ALL IMPROVEMENTS SOUTH OF THE STAGE LINE SHOWN BELOW.

STAGING NOTES:

C. TRAFFIC TO/FROM THE COLLECTION SYSTEMS OPERATIONS FACILITY WILL USE AN ALTERNATE ENTRANCE NOT SHOWN. WEST BOUND TREATMENT PLANT TRAFFIC SHALL BE DIVERTED AS SHOWN ONLY WHEN NECCESSARY.

DURING CONSTRUCTION OF CONCRETE RAMP AND STOOP, CONTRACTOR SHALL PROVIDE A JOB TRAILER TO SERVE AS A TEMPORARY GUARD SHACK. CONTRACTOR SHALL RUN TWO (2) CAT6 ETHERNET CABLES FROM THE GUARD SHACK TO THE TEMPORARY GUARD SHACK. FRSA WILL BE RESPONSIBLE FOR RELOCATING AND CONNECTING GUARD SHACK EQUIPMENT. CONTACT PROJECT MANAGER ANDREW HESS AT (815) 298-3110 TO COORDINATE GUARD SHACK EQUIPMENT RELOCATION.

IN ORDER TO MAINTAIN SECURITY TO THE FRSA TREATMENT PLANT AND HOUSEHOLD HAZARDOUS WASTE SITE, TEMPORARY FENCE MAY BE REQUIRED DEPENDING ON THE DURATION OF FENCE REMOVAL OPERATIONS.




Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**CONSTRUCTION STAGE C**

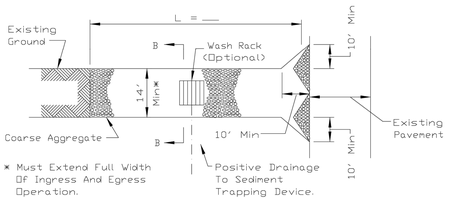
Sheet No. 19 of 33

FOR BIDDING

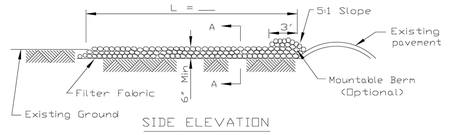
Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Staging.dwg

## STABILIZED CONSTRUCTION ENTRANCE PLAN




PLAN VIEW




SIDE ELEVATION

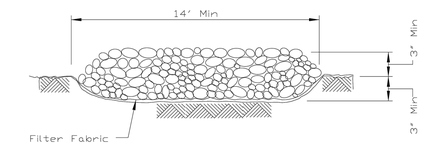
NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE
Project
Designed ____ Date
Checked ____ Date
Approved ____ Date

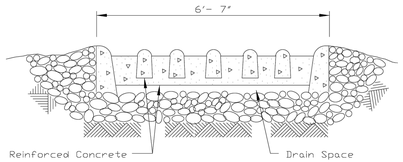
NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630
SHEET 1 OF 2
DATE 8-18-94

## STABILIZED CONSTRUCTION ENTRANCE PLAN




SECTION A-A




SECTION B-B

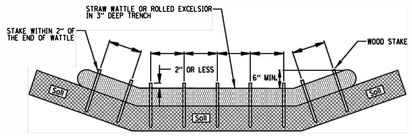
REFERENCE
Project
Designed ____ Date
Checked ____ Date
Approved ____ Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630
SHEET 2 OF 2
DATE 8-18-94

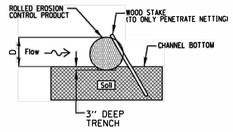
## ROLLED EROSION CONTROL PRODUCTS

**STAKING PATTERN GUIDE**




NOTES:
1. OVERLAP MINIMUM IS THE DIAMETER OF THE ROLL.
2. 4' SPACING FOR WATTLES.
3. 2' SPACING FOR ROLLED EXCELSIOR.
4. OR SPACE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

**STAKE DETAIL**




NOTES:
1. DRAWINGS ARE NOT TO SCALE.
2. ENDS OF WATTLES OR ROLLED EXCELSIOR SHALL BE TURNED AT LEAST 6" UPSLOPE.
3. RECOMMENDED STAKES ARE 1 1/8" WIDE x 1 1/8" THICK x 30" LONG.
4. STAKES SHALL NOT EXTEND ABOVE THE STRAW WATTLE MORE THAN 2".
5. SPACING: THE TOE OF THE UPSTREAM DITCH CHECK SHALL CREATE A HORIZONTAL LINE WITH THE TOP OF THE DOWNSTREAM DITCH CHECK.

REFERENCE
Project
Designed ____ Date
Checked ____ Date
Approved ____ Date

STANDARD DWG. NO. IUM-514
SHEET 1 OF 1
DATE 08-2-2019

## S.W.P.P.P. NOTES

### GENERAL NOTES

THE ESTIMATED AREA OF DISTURBANCE FOR THIS PROJECT 2.56 ACRES. A NOTICE OF INTENT (NOI) WILL BE FILED. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR THIS PROJECT. THE CONTRACTOR SHALL INSTALL A SWPPP MAILBOX IN AN ACCESSIBLE LOCATION ONSITE THAT SHALL CONTAIN THE SWPPP PLAN, ANY CHANGES TO THE SWPPP PLAN, INSPECTION REPORTS, AND ALL OTHER RELEVANT DOCUMENTS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE ILLINOIS URBAN MANUAL, CURRENT EDITION, IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, THE FOUR RIVERS SANITATION AUTHORITY (FRSA), AND THE PROJECT SPECIFICATIONS AND DETAILS.

THE EROSION CONTROL DEVICES, MATERIALS AND PROCEDURES SHOWN IN THESE PLANS ARE TO BE CONSIDERED A MINIMUM. ADDITIONAL DEVICES OR MATERIALS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. AT THE DIRECTION OF THE ENGINEER. ANY DEVICES, MATERIALS, OR PROCEDURES REQUIRED BY THE ENGINEER DUE TO THE CONTRACTOR'S ACTIONS OR NEGLIGENCE WILL BE AT NO ADDITIONAL COST TO THE FRSA.

ALL DISTURBED AREAS SHALL BE SEEDED UNLESS AGRICULTURAL OR OTHERWISE NOTED ON THE PLANS. THE CONTRACTOR IS RESTRICTED TO WORK IN TEMPORARY EASEMENTS OR WORK AREAS DELINEATED ON PLANS. THE CONTRACTOR SHALL TAKE WHATEVER ACTIONS AND MEASURES ARE DEEMED NECESSARY BY THE FRSA OR AUTHORIZED AGENCY TO ELIMINATE EXCESSIVE SILTATION OR EROSION AND TO STABILIZE THE PROJECT AREA. DISCHARGE OF HAZARDOUS SUBSTANCES INTO STORM WATER IS SUBJECT TO IEPA REPORTING AND CLEANUP REQUIREMENTS.

### CONTROL MEASURES

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE BEFORE CONSTRUCTION IN EACH AREA, AS DETERMINED BY THE ENGINEER, AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. CONSTRUCTION ACTIVITIES SHALL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE PRACTICAL. THE FOLLOWING CONTROLS WILL BE PROVIDED AS A MINIMUM FOR THE DURATION OF THIS PROJECT:

- SEDIMENT CONTROL SHALL BE PROVIDED DOWNSLOPE OF ALL STOCKPILE AREAS.
- STABILIZED CONSTRUCTION ENTRANCES MUST BE INSTALLED AS DETAILED AND WHERE REQUIRED BY THE ROADWAY AUTHORITY OR FRSA.
- INLET PROTECTION MUST BE INSTALLED FOR ALL INLETS THAT COULD BE SUBJECT TO SILTATION, AS DETERMINED BY THE ENGINEER.
- ALL ROADWAYS SHALL BE KEPT CLEAN OF DEBRIS, MUD, SOIL, AND CONSTRUCTION MATERIALS AND SHALL BE INSPECTED AT THE END OF EACH DAY AND CLEANED AS NECESSARY.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 DAYS IF THEY ARE TO REMAIN DISTURBED FOR MORE THAN 14 DAYS.

### INSPECTIONS

INSPECTIONS MUST BE COMPLETED BY A QUALIFIED PERSON EVERY 7 DAYS AND WITHIN 24 HOURS OF EACH RAIN EVENT WITH OVER 0.5" OF RAIN OR SNOWFALL EQUIVALENT. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REPAIRED AND MODIFIED AS NEEDED TO BE EFFECTIVE AND TO PREVENT EROSION AND POLLUTANTS FROM DISCHARGING FROM SITE. A REPORT SHALL BE COMPLETED WITH EACH INSPECTION, AND SHALL BE KEPT ACCESSIBLE ONSITE WITH THE S.W.P.P.P.

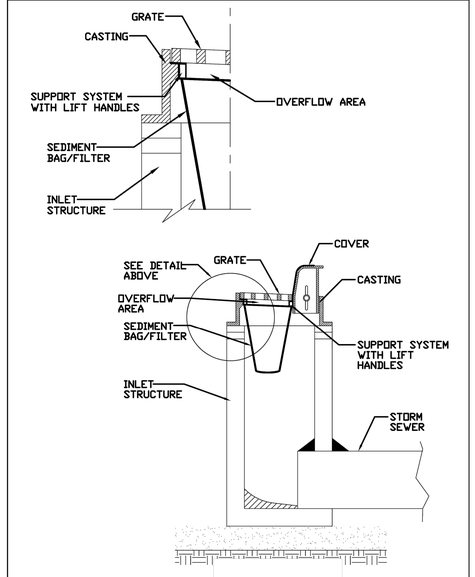
### MAINTENANCE

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR OF ALL EROSION AND SEDIMENT CONTROL DEVICES AND PROTECTIVE MEASURES AS REQUIRED TO MAINTAIN THE INTENDED FUNCTION. SEDIMENT COLLECTED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS NEEDED. ANY DEBRIS OR SILT DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES, DITCHES, ETC., THAT COULD OBSTRUCT FLOW SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES WITHIN 30 DAYS OF FINAL SITE STABILIZATION APPROVAL BY THE FRSA. THE SITE SHALL HAVE A MIN. OF 70% VEGETATIVE COVER TO BE CONSIDERED STABILIZED.

### OTHER DISCHARGES

NON STORM WATER DISCHARGES INCLUDING WASHING OF VEHICLES, CONCRETE WASH-OUT, WATER FOR DUST CONTROL, AND TRENCH DEWATERING DISCHARGES SHALL BE DIRECTED AWAY FROM UNPROTECTED, BARE, OR UNSTABILIZED SOIL AND APPROPRIATE MEASURES SHALL BE IMPLEMENTED TO PREVENT EROSION OR RUNOFF FROM THE SITE. DEWATERING DISCHARGE MUST BE INTO SILT CONTAINMENT BAGS WITH PROPERLY ENGINEERED ANIONIC POLYMER AND FABRIC PORE SIZE. UNDER NO CIRCUMSTANCE SHALL DEWATERING DISCHARGE BE ALLOWED TO FLOW DIRECTLY INTO WATERWAYS. A DEWATERING DISCHARGE PLAN SHALL BE SUBMITTED TO THE FRSA FOR APPROVAL.

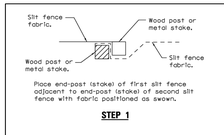
## INLET PROTECTION - PAVED AREAS DROP-IN PROTECTION




REFERENCE
Project
Designed ____ Date
Checked ____ Date
Approved ____ Date

STANDARD DWG. NO. IUM-561D
SHEET 1 OF 1
DATE 01-11-11

## SLIT FENCE



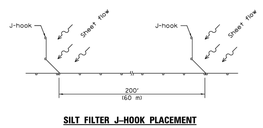

Place end-post (stake) of first slit fence adjacent to end-post (stake) of second slit fence with fabric positioned as sewn.

**STEP 1**

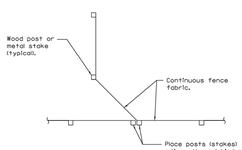
Rotate posts (stakes) together 180° clockwise and drive both posts (stakes) 18 (450) into ground.

**STEP 2**

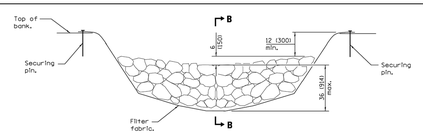
**ATTACHING TWO SILT FILTER FENCES**
(Not applicable for J-Hooks)



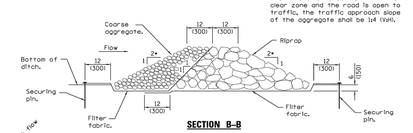

**SILT FILTER J-HOOK PLACEMENT**




**J-HOOK**



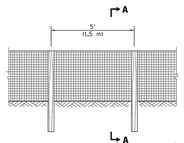

**ELEVATION**




• When the ditch check is within the clear zone and the road is open to traffic, the traffic approach slope of the aggregate shall be 1:4 (V:H).

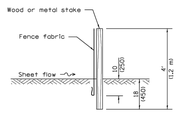
**SECTION B-B**

**AGGREGATE DITCH CHECK**

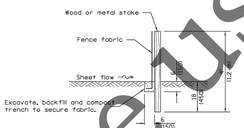



**ELEVATION**

**SILT FILTER FENCE AS A PERIMETER EROSION BARRIER**




**SLICE METHOD**




**TRENCH METHOD**

**SECTION A-A**

**GENERAL NOTES**

The installation details and dimensions shown for perimeter erosion barriers shall also apply for inlet and pipe protection.

All dimensions are in inches (millimeters) unless otherwise shown.

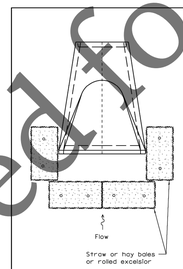
| DATE | REVISIONS |
|---|---|
| 1-1-13 | Corrected notation for flowline (E) on SEDIMENT BASIN ELEVATION. |
| 1-1-12 | Omitted hay/straw perimeter barrier. Added SLICE METHOD to SECTION A-A. |

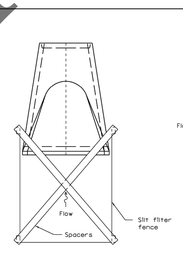
Illinois Department of Transportation
PASSED January 1, 2013
Michael Bourne
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2013
ENGINEER OF BUREAU OF DESIGN AND ENVIRONMENT
ISSUED 1-1-13

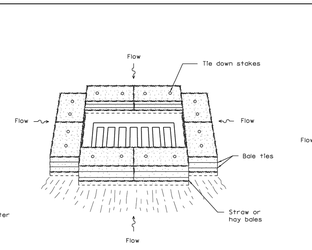
**TEMPORARY EROSION CONTROL SYSTEMS**
(Sheet 1 of 2)

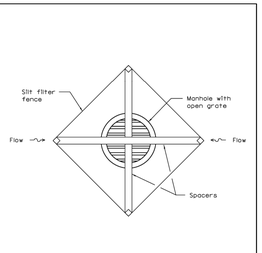
**STANDARD 280001-07**

## TEMPORARY EROSION CONTROL SYSTEMS

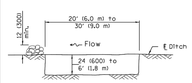


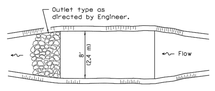




**INLET AND PIPE PROTECTION**




The performance of the basin will improve if put into a series.

**ELEVATION**

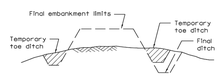



The long dimension should be parallel with the direction of the flow. Accumulated silt shall be removed anytime the basins become 75% filled.

**PLAN**

**SEDIMENT BASIN**

**TYPICAL CUT CROSS-SECTION**




**TYPICAL FILL CROSS-SECTION**

**TEMPORARY DITCHES FOR CUT & FILL SECTIONS**

Illinois Department of Transportation
PASSED January 1, 2013
Michael Bourne
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2013
ENGINEER OF BUREAU OF DESIGN AND ENVIRONMENT
ISSUED 1-1-13

**TEMPORARY EROSION CONTROL SYSTEMS**
(Sheet 2 of 2)

**STANDARD 280001-07**

Not to be used for bidding Purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

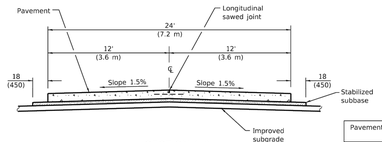
**SWPPP DETAILS & NOTES**

Sheet No. 20 of 33

FOR BIDDING

Date: 7/1/2026

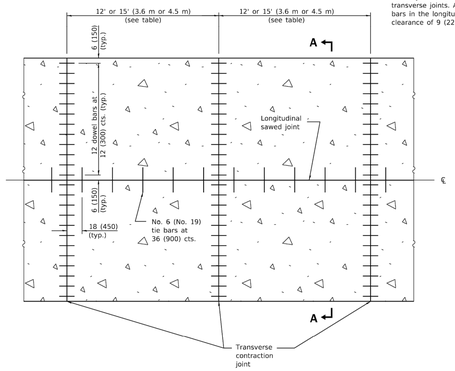
file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Erosion Control.dwg



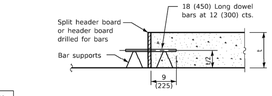

**SECTION A-A**
(TYPICAL 2-LANE WITH SHOULDERS)

| Pavement Thickness | Spacing of Transverse Contraction Joints |
|---|---|
| Less than 10 (250) | 12' (3.6 m) * |
| 10 (250) and greater | 15' (4.5 m) * |

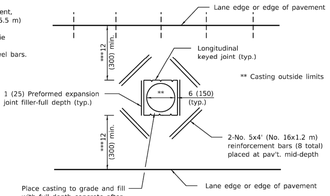
* When placed adjacent to existing PCC pavement, use a spacing between 12' (3.6 m) and 18' (5.5 m) so the joints are in prolongation with existing transverse joints. Also adjust the spacing of tie bars in the longitudinal joint(s) to maintain a clearance of 9 (225) from the end of the dowel bars.




**PAVEMENT PLAN**




**TRANSVERSE CONSTRUCTION JOINT**




*** When the 12 (300) minimum cannot be achieved, the transverse joints shall be extended to either the longitudinal joint or edge of pavement.

**DETAIL OF ADDED REINFORCEMENT FOR PAVEMENT BLOCKS-OUTS**

**GENERAL NOTES**

See Standard 420001 for details of joints not shown.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
APPROVED January 1, 2022
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2022
ENGINEER OF DESIGN AND ENVIRONMENT
SHEET 1 OF 2

| DATE | REVISIONS |
|---|---|
| 1-1-22 | Revised spacing of transverse contraction joints and header board callout. |
| 1-1-18 | Changed spacing of tie bars to 36 (900). |

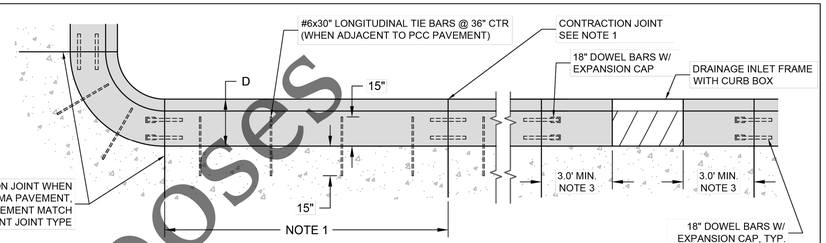
**24' (7.2 m) JOINTED PCC PAVEMENT**

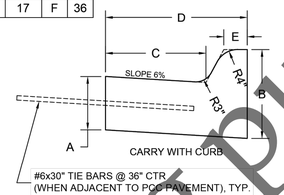
**STANDARD 420101-07**

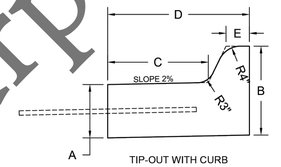
NOTES:
1. SPACING OF CONTRACTION JOINTS SHALL MATCH ADJACENT PCC PAVEMENT, OR SHALL BE 25 FT MAX. FOR ADJACENT HMA PAVEMENT.
2. LONGITUDINAL TIE BARS ARE SHOWN, BUT ARE ONLY APPLICABLE WHEN ADJACENT TO PCC PAVEMENT. LONGITUDINAL TIE BARS SHALL BE IN ACCORDANCE WITH LONGITUDINAL CONSTRUCTION JOINT SHOWN ON IDOT STANDARD 420001.
3. THIS DIMENSION SHALL BE ADJUSTED TO ALIGN WITH ADJACENT PCC PAVEMENT JOINTS.

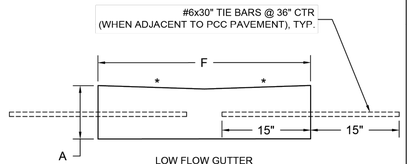
TABLE OF DIMENSIONS
(INCHES)

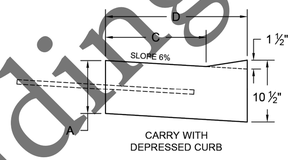
| | | | |
|---|---|---|---|
| A | 9 | D | 24 |
| B | 15 | E | 4 |
| C | 17 | F | 36 |

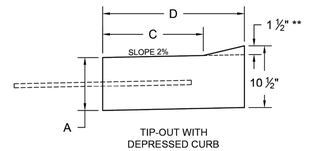


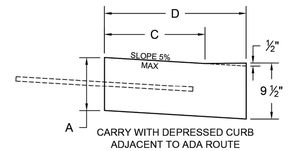



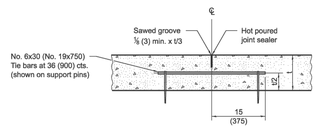




Four Rivers Sanitation Authority

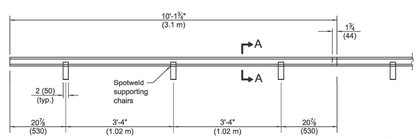
FRSA TREATMENT PLANT
COMBINATION CONCRETE CURB & GUTTER TYPE M6.18, MODIFIED
CONCRETE GUTTER, LOW FLOW

(NOT TO SCALE)

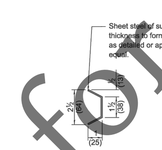
rev. 6/1/26



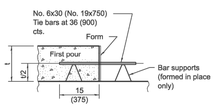

**LONGITUDINAL SAWED JOINT**



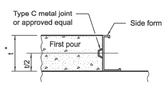

**TYPE C METAL JOINT**



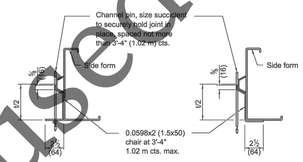

**SECTION A-A**




**LONGITUDINAL CONSTRUCTION JOINT**
(TIE BAR FORMED IN PLACE OR MECHANICALLY INSERTED)

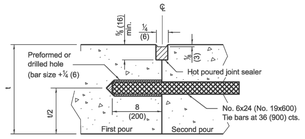



**LONGITUDINAL KEYED JOINT**
* 8 (203) min. pavement thickness for keyed joints.

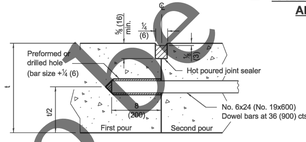



**SUPPORTING CHAIR ALTERNATE**

**SUPPORTING CHAIR ALTERNATE**




**LONGITUDINAL CONSTRUCTION JOINT**
(TIE BAR GROUTED IN PLACE)




**MODIFIED LONGITUDINAL CONSTRUCTION JOINT**
(DOWEL BAR GROUTED IN PLACE)

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

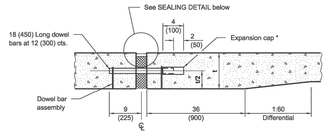
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
APPROVED January 1, 2026
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2026
ENGINEER OF DESIGN AND ENVIRONMENT
SHEET 1 OF 2

| DATE | REVISIONS |
|---|---|
| 1-1-26 | Added Modified LCJ detail and hatching to tie bar in LCJ detail. |
| 1-1-22 | Revised DOWEL BAR TABLE on Sheet 2. |

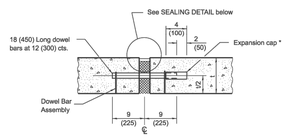
**PAVEMENT JOINTS**
(Sheet 1 of 2)

**STANDARD 420001-11**

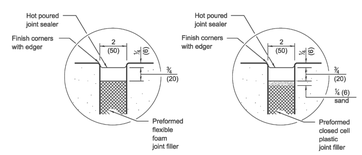



**TRANSVERSE EXPANSION JOINT**
(FOR PAVEMENTS WITH UNEQUAL THICKNESS)

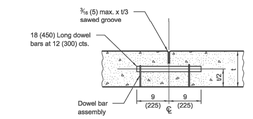
* Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.



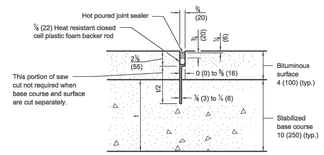

**TRANSVERSE EXPANSION JOINT**
(FOR PAVEMENTS WITH EQUAL THICKNESS)




**SEALING DETAIL**




**TRANSVERSE CONTRACTION JOINT**




**TRANSVERSE CONTRACTION JOINT**
(FOR CAM, CFA AND LFA BASE COURSE MIXTURES)

| DOWEL BAR TABLE | |
|---|---|
| PAVEMENT THICKNESS | DOWEL BAR DIAMETER |
| 10 (250) and greater | 1½ (38) |
| 8.01 (201) thru 9.99 (249) | 1¼ (32) |
| 8 (200) and less | 1 (25) |

Illinois Department of Transportation
APPROVED January 1, 2026
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2026
ENGINEER OF DESIGN AND ENVIRONMENT
SHEET 2 OF 2

**PAVEMENT JOINTS**
(Sheet 2 of 2)

**STANDARD 420001-11**

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

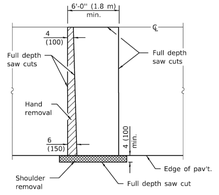
**PROJECT DETAILS 1**

Sheet No. 21 of 33

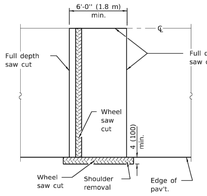
FOR BIDDING

Date: 7/1/2026

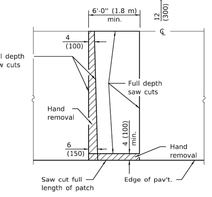
file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg



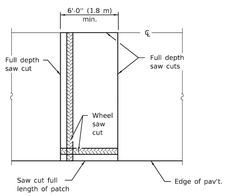

**PAVEMENT SAWING DETAIL**
(HMA SHOULDER)



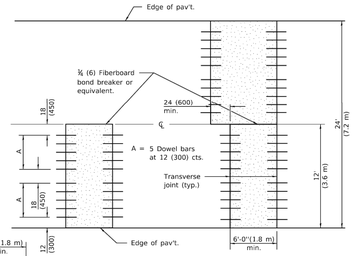

**ALTERNATE SAWING DETAIL**
(HMA SHOULDER)



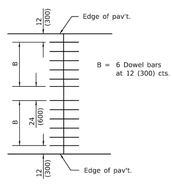

**PAVEMENT SAWING DETAIL**
(PCC SHOULDER)



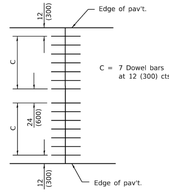

**ALTERNATE SAWING DETAIL**
(PCC SHOULDER)



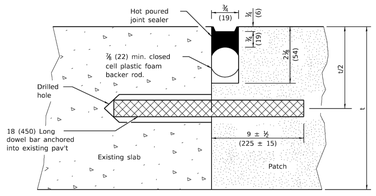

**12' (3.6 m) WIDE LANES**



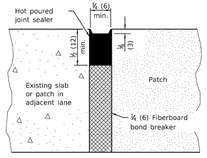

**14' (4.2 m) WIDE RAMP**




**16' (4.8 m) WIDE RAMP**




**TRANSVERSE JOINT**




**CENTERLINE JOINT**

| DOWEL BAR TABLE | | |
|---|---|---|
| PAVEMENT THICKNESS | DOWEL BAR DIAMETER | HOLE DIAMETER |
| 10 (250) or greater | 1½ (38) | 1⅝ (41) |
| 8 (200) thru 9.99 (249) | 1¼ (32) | 1⅜ (35) |
| Less than 8 (200) | 1 (25) | 1⅜ (29) |

**GENERAL NOTES**

The transverse joints for Class B patches shall align with joints or cracks in the adjacent lane whenever possible.

See Standard 420701 for details of welded wire reinforcement.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

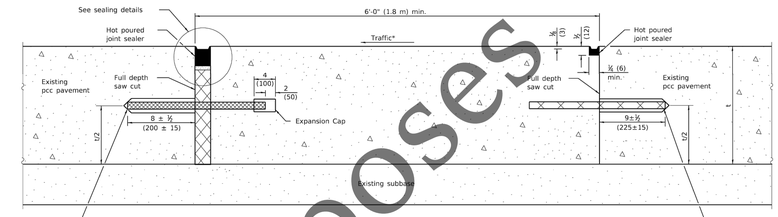
PASSED January 1, 2019 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
BDE 2406 (1-1-19)

| DATE | REVISIONS |
|---|---|
| 1-1-19 | Revised reference to Standard 420701 in General Notes. |
| 1-1-18 | Revised DOWEL BAR TABLE. |
| | |
| | |

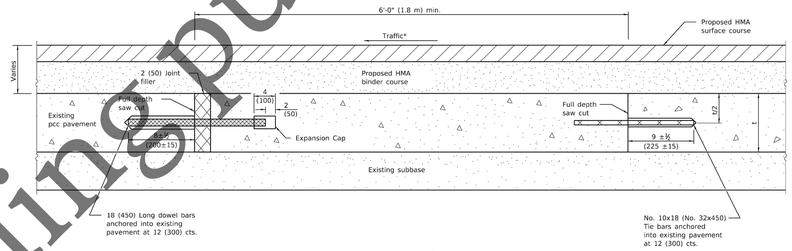
**CLASS B PATCHES**
(Sheet 1 of 2)

**STANDARD 442101-09**

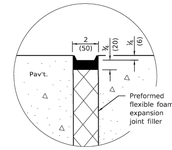
**TRANSVERSE EXPANSION JOINTS**



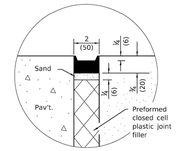

**METHOD I**
(Without Resurfacing)




**METHOD II**
(With Resurfacing)




**SEALING DETAIL**




**SEALING DETAIL**

**NOTE**

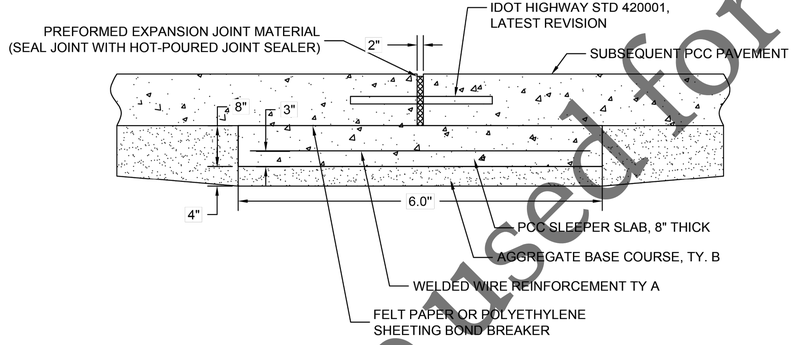
* When re-establishing a transverse expansion joint on a two-lane, two-way road, reverse the orientation of the dowel bars with respect to traffic for one of the patches such that the joint will be continuous across both lanes.

Illinois Department of Transportation

PASSED January 1, 2019 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
BDE 2406 (1-1-19)

**CLASS B PATCHES**
(Sheet 2 of 2)

**STANDARD 442101-09**



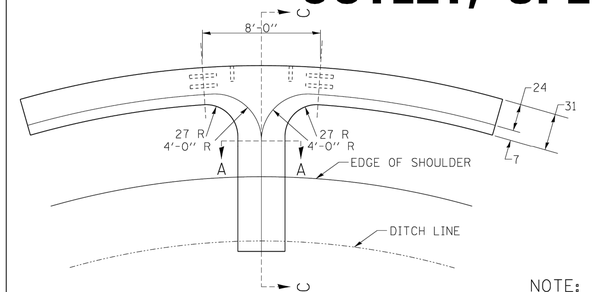

NOTES:
1. THE PCC SLEEPER SLAB SHALL EXTEND FROM BACK OF CURB TO BACK OF CURB, BE 8 INCHES THICK & 6 FEET LONG.
2. THE PCC SLEEPER SLAB SHALL BE CONSTRUCTED ON A 4 INCH THICK AGGREGATE BASE.
3. WELDED WIRE REINFORCEMENT SHALL BE PLACED MID-DEPTH.
4. BOND BREAKER SHALL BE A SINGLE LAYER OF FELT PAPER OR 2 LAYERS OF 6 MIL POLYETHYLENE SHEETING.
5. A 2 INCH PREFORMED FIBER EXPANSION JOINT SHALL BE PLACED ACCORDING TO THE JOINTING PLAN AND SHALL BE SEALED WITH HOT POURED JOINT SEALER.
6. WHEN STAGING IS REQUIRED, THE WELDED WIRE REINFORCEMENT SHALL BE OVERLAPPED BY 24 INCHES AND TIED BEFORE POURING THE NEXT STAGE.

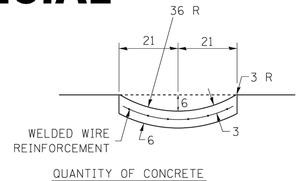
Four Rivers Sanitation Authority

FRSA TREATMENT PLANT
SEPARATION JOINT WITH SLEEPER SLAB DETAIL
(NOT TO SCALE)

rev. 6/10/25

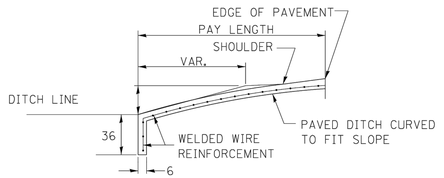
# CURB AND GUTTER OUTLET, SPECIAL




QUANTITY OF CONCRETE
SECTION A-A = 0.07 CU.YD./FT.
8' SECTION OF CURB & GUTTER UP TO SECTION A-A = 0.75 CU.YD.

SECTION A-A




SECTION C-C

NOTE:

CLASS SI CONCRETE SHALL BE USED THROUGHOUT. CURB AND GUTTER OUTLET SHALL BE TIED TO PAVEMENT SLAB WITH 2 TIE BARS, 30 LONG - 30 CENTERS. OUTLET SHALL BE TIED TO CURB AND GUTTER AT CONTRACTION JOINTS AS SHOWN. GUTTER OUTLET AND PAVED DITCH SHALL BE REINFORCED WITH WELDED WIRE REINFORCEMENT HAVING A WEIGHT OF AT LEAST 58 lbs/100 sq. ft. WITH 6 x 6 MESH, NO. 4 WIRE. COST TO BE INCLUDED IN THE UNIT PRICE PER CUBIC YARD FOR CLASS SI CONCRETE (OUTLET).

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

| REVISED - 1-05-16 | REGION 2 / DISTRICT 2 STANDARD | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|---|
| REVISED - 9-30-11 | | | | | | |
| REVISED - | | | | CONTRACT NO. | | |
| REVISED - | SCALE: 1.0000 ' / in. SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

**CURB AND GUTTER OUTLET, SPECIAL** 18.4

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

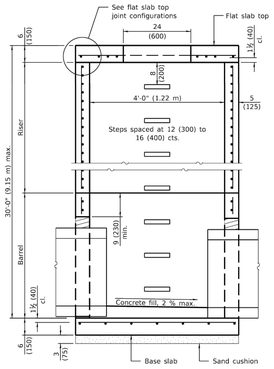
**PROJECT DETAILS 2**

Sheet No. 22 of 33

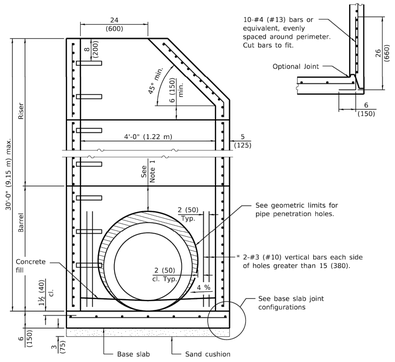
FOR BIDDING

Date: 7/1/2026

file: i:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg

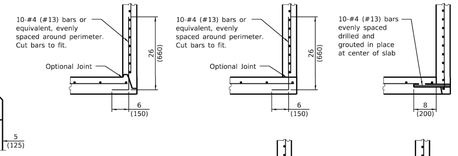



**SECTION PARALLEL TO PIPE**
(Without conical top riser)

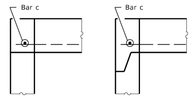



**SECTION PERPENDICULAR TO PIPE**
(With conical top riser)

* As an alternate, the barrel wall reinforcement may be reduced to riser wall reinforcement with #3 (#10) bars placed around the pipe penetration holes as shown. This option may be utilized when the pipe penetration holes are formed as opposed to cored.




**BASE SLAB JOINT CONFIGURATIONS**




**FLAT SLAB TOP JOINT CONFIGURATIONS**
(Shown at access hole)

**GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**

Note 1: A minimum of 9 (230) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 24 (600).

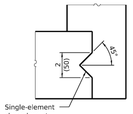
Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).

Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.

Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.

Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).

Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.




**SHEAR KEY GEOMETRY**
(Reinforcement not shown for clarity)

**GENERAL NOTES**

The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

See Standard 602701 for details of manhole steps.

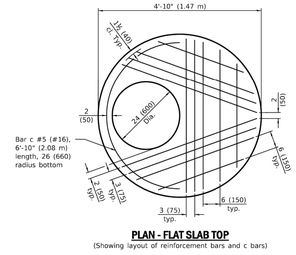
All dimensions are in inches (millimeters) unless otherwise noted.

| DATE | REVISIONS |
|---|---|
| 1-1-21 | Revised Note 1 and lifting hole |
| | general note. |
| | |
| 3-1-19 | Moved wall reinforcement from |
| | inside face to middle. |
| | |

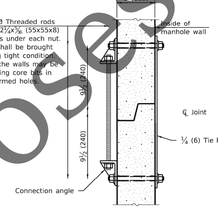
**PRECAST MANHOLE TYPE A**
**4' (1.22 m) DIAMETER**
(Sheet 1 of 2)

**STANDARD 602401-07**

Illinois Department of Transportation
PASSED January 1, 2021 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2021 — ENGINEER OF DESIGN AND ENVIRONMENT
BDEEP&P 1-1-21




**PLAN - FLAT SLAB TOP**
(Showing layout of reinforcement bars and c bars)




**JOINT SPLICE**

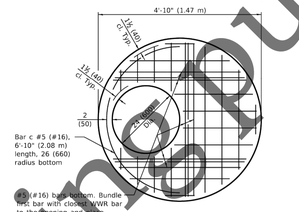
**FLAT SLAB TOP REINFORCEMENT**

| Location | WWR (each direction) | | Rebar | | |
|---|---|---|---|---|---|
| | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) | Bar Size |
| Bottom Mat | ** 0.62 sq. in./ft. (1312 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | | #5 (#16) |

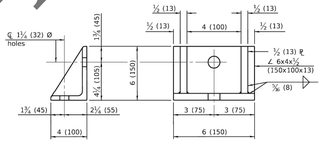
** Only one layer of WWR permitted to avoid congestion.

**WALL REINFORCEMENT**

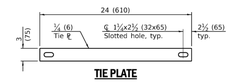
| Location | Orientation | WWR or Rebar | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| Riser | Circumferential | 0.12 sq. in./ft. (254 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 8 (200) |
| Barrel | Circumferential | 0.12 sq. in./ft. (254 sq. mm/m) | 6 (150) |
| | Vertical | 0.16 sq. in./ft. (339 sq. mm/m) | 4 (100) |




**PLAN - FLAT SLAB TOP**
(Showing layout of welded wire reinforcement and c bars)



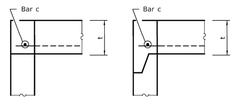

**CONNECTION ANGLE**



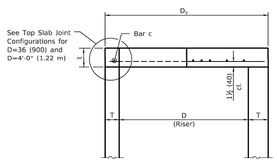

**TIE PLATE**

**PRECAST MANHOLE TYPE A**
**4' (1.22 m) DIAMETER**
(Sheet 2 of 2)

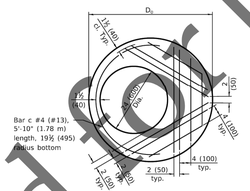
**STANDARD 602401-07**



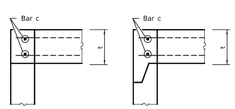

**FLAT SLAB TOP JOINT CONFIGURATIONS**
**FOR D = 36 (900) AND D = 4'-0" (1.22 m)**
(Shown at access hole)



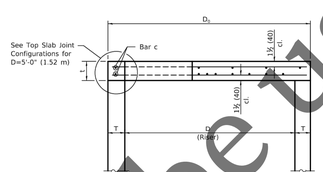

**SECTION THRU FLAT SLAB TOP**
**FOR D = 36 (900) AND D = 4'-0" (1.22 m)**



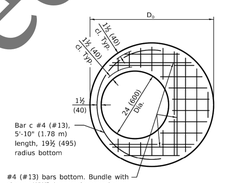

**PLAN - FLAT SLAB TOP FOR D = 36 (900)**
(Showing layout of reinforcement bars and c bars)




**FLAT SLAB TOP JOINT CONFIGURATIONS**
**D = 5'-0" (1.52 m)**
(Shown at access hole)




**SECTION THRU FLAT SLAB TOP**
**FOR D = 5'-0" (1.52 m)**




**PLAN - FLAT SLAB TOP FOR D = 36 (900)**
(Showing layout of welded wire reinforcement and c bars)

**TABLE**

| D | T | $D_0$ (min.) | t |
|---|---|---|---|
| 36 (900) | See applicable Standard | 42 (1070) | 6 (150) |
| 4'-0" (1.2 m) | | 48 (1220) | 6 (150) |
| 5'-0" (1.5 m) | | 60 (1520) | 8 (200) |

**GENERAL NOTES**

The flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602016, or 602306 at the option of the Contractor or when field conditions prohibit the use of tapered tops.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

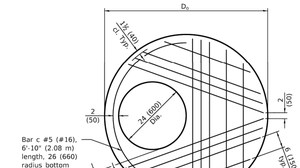
All dimensions are in inches (millimeters) unless otherwise shown.

| DATE | REVISIONS |
|---|---|
| 1-1-19 | Expanded / refined reinforcement |
| | options. |
| | |
| 1-1-18 | Revised for compliance with |
| | LRFD. |
| | |

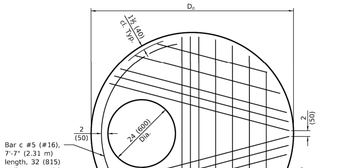
**PRECAST REINFORCED CONCRETE FLAT SLAB TOP**
(Sheet 1 of 2)

**STANDARD 602601-06**

Illinois Department of Transportation
PASSED January 1, 2019 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
BDEEP&P 1-1-19




**PLAN - FLAT SLAB TOP FOR D = 4'-0" (1.22 m)**
(Showing layout of reinforcement bars and c bars)




**PLAN - FLAT SLAB TOP FOR D = 5'-0" (1.52 m)**
(Showing layout of bottom reinforcement bars and c bars)

**FLAT SLAB TOP REINFORCEMENT FOR D = 36 (900)**

| Location | WWR (each direction) | | Rebar | | |
|---|---|---|---|---|---|
| | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) | Bar Size |
| Bottom Mat | * 0.60 sq. in./ft. (1270 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | | #4 (#13) |

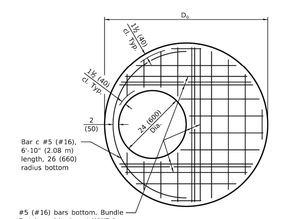
**FLAT SLAB TOP REINFORCEMENT FOR D = 4'-0" (1.22 m)**

| Location | WWR (each direction) | | Rebar | | |
|---|---|---|---|---|---|
| | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) | Bar Size |
| Bottom Mat | * 0.62 sq. in./ft. (1312 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | | #5 (#16) |

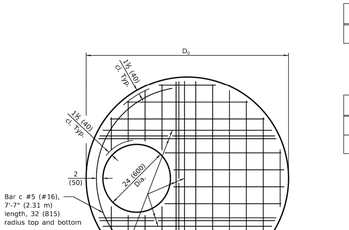
**FLAT SLAB TOP REINFORCEMENT FOR D = 5'-0" (1.52 m)**

| Location | WWR (each direction) | | Rebar (each direction except as noted) | | |
|---|---|---|---|---|---|
| | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) | Bar Size |
| Top Mat | 0.11 sq. in./ft. (233 sq. mm/m) | 18 (450) | 0.11 sq. in./ft. (233 sq. mm/m) | 18 (450) | #3 or #4 (#10) (#13) |
| Bottom Mat | * 0.40 sq. in./ft. (847 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | | #4 (#13) |

* Only one layer of WWR permitted to avoid congestion.




**PLAN - FLAT SLAB TOP FOR D = 4'-0" (1.22 m)**
(Showing layout of welded wire reinforcement and c bars)




**PLAN - FLAT SLAB TOP FOR D = 5'-0" (1.52 m)**
(Showing layout of welded wire reinforcement and c bars)

**PRECAST REINFORCED CONCRETE FLAT SLAB TOP**
(Sheet 2 of 2)

**STANDARD 602601-06**

Illinois Department of Transportation
PASSED January 1, 2019 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
BDEEP&P 1-1-19

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PROJECT DETAILS 3**

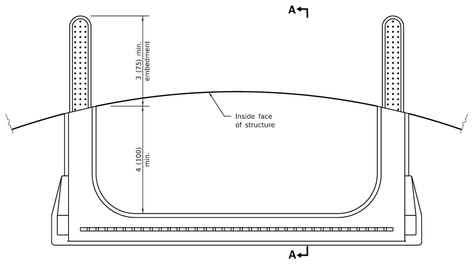
Sheet No. 23 of 33

FOR BIDDING

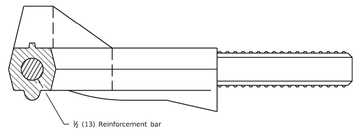
Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg

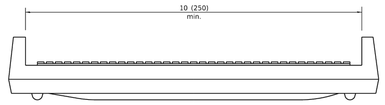
**PLASTIC STEPS**




PLAN VIEW




SECTION A-A




ELEVATION VIEW

Illinois Department of Transportation

PASSED January 1, 2009
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT

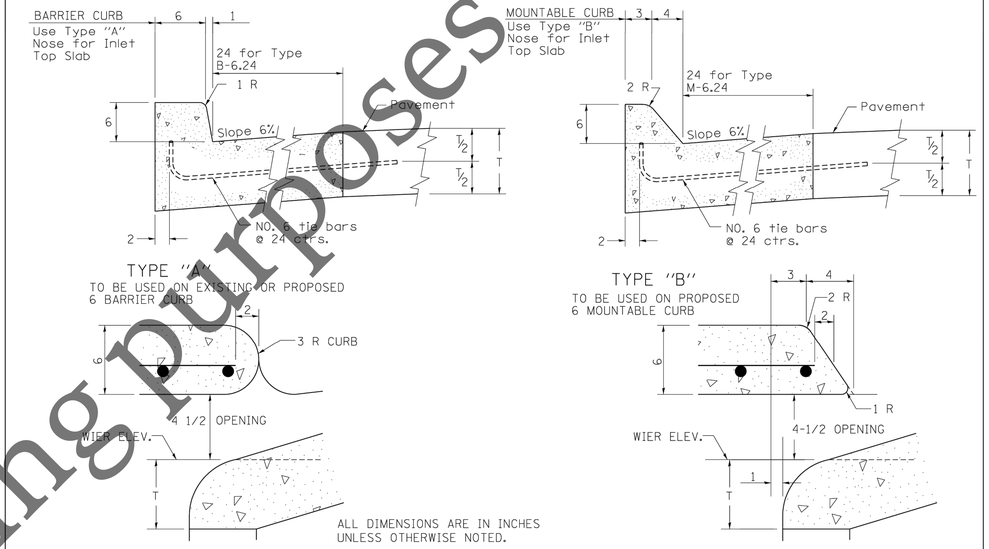
BDE 5.1.07

**MANHOLE STEPS**

(Sheet 2 of 2)

**STANDARD 602701-02**

# NOSE TYPE FOR INLET TOP SLAB

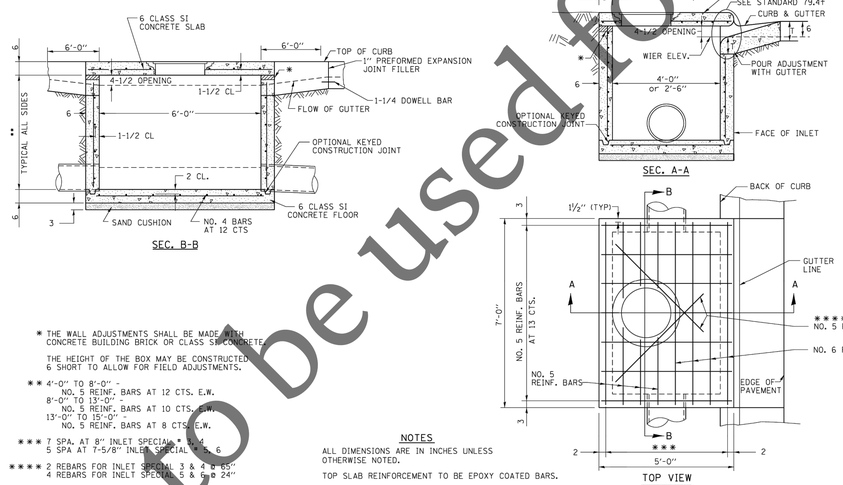



ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

| REVISED - 4-14-15 | REGION 2 / DISTRICT 2 STANDARD | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|---|
| REVISED - 10-05-11 | | | | | | |
| REVISED - | | | | CONTRACT NO. | | |
| REVISED - | SCALE: 1.0000 ' / in. SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

**NOSE TYPE FOR INLET TOP SLAB** **79.4f**

# INLETS, SPECIAL, NO. 3, 4, 5, 6 REINFORCEMENT DETAIL




* THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS SI CONCRETE.
THE HEIGHT OF THE BOX MAY BE CONSTRUCTED 6 SHORT TO ALLOW FOR FIELD ADJUSTMENTS.

** 4'-0" TO 8'-0" - NO. 5 REINF. BARS AT 12 CTS. E.W.
8'-0" TO 13'-0" - NO. 5 REINF. BARS AT 10 CTS. E.W.
13'-0" TO 15'-0" - NO. 5 REINF. BARS AT 8 CTS. E.W.

*** 7 SPA. AT 8" INLET SPECIAL 3 & 4
5 SPA AT 7-5/8" INLET SPECIAL 5 & 6

**** 2 REBARS FOR INLET SPECIAL 3 & 4 @ 65"
4 REBARS FOR INLET SPECIAL 5 & 6 @ 24"

NOTES

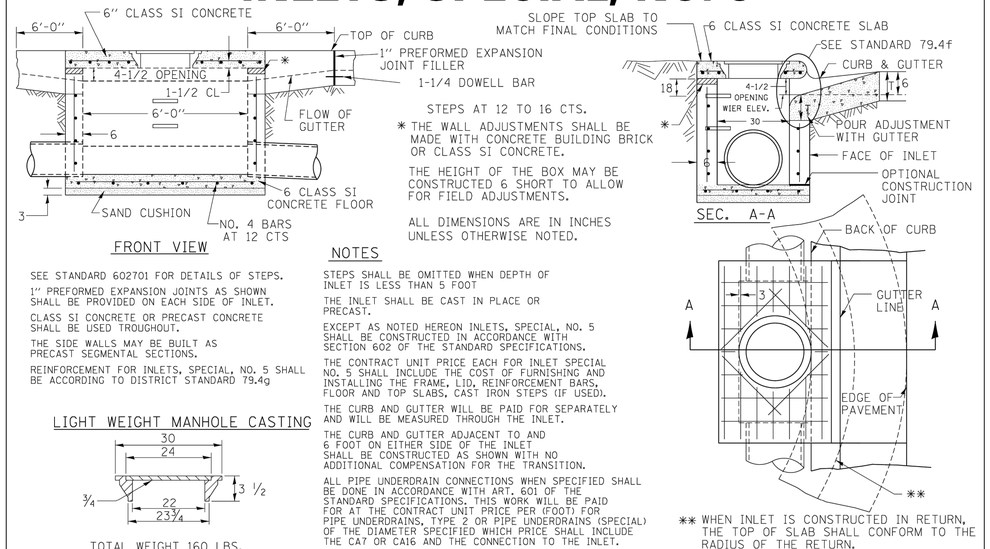
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

TOP SLAB REINFORCEMENT TO BE EPOXY COATED BARS.

| REVISED - 4-13-16 | REGION 2 / DISTRICT 2 STANDARD | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|---|
| REVISED - 8-27-13 | | | | | | |
| REVISED - 10-05-11 | | | | CONTRACT NO. | | |
| REVISED - | SCALE: 1.0000 ' / in. SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

**INLETS, SPECIAL, NO. 3, 4, 5, 6 REINFORCEMENT DETAIL** **79.4g**

# INLETS, SPECIAL, NO. 5




STEPS AT 12 TO 16 CTS.

* THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS SI CONCRETE.

THE HEIGHT OF THE BOX MAY BE CONSTRUCTED 6 SHORT TO ALLOW FOR FIELD ADJUSTMENTS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

NOTES

SEE STANDARD 602701 FOR DETAILS OF STEPS.

1" PREFORMED EXPANSION JOINTS AS SHOWN SHALL BE PROVIDED ON EACH SIDE OF INLET.

CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT.

THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTAL SECTIONS.

REINFORCEMENT FOR INLETS, SPECIAL, NO. 5 SHALL BE ACCORDING TO DISTRICT STANDARD 79.4g

STEPS SHALL BE OMITTED WHEN DEPTH OF INLET IS LESS THAN 5 FOOT

THE INLET SHALL BE CAST IN PLACE OR PRECAST.

EXCEPT AS NOTED HEREON INLETS, SPECIAL, NO. 5 SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.

THE CONTRACT UNIT PRICE EACH FOR INLET SPECIAL NO. 5 SHALL INCLUDE THE COST OF FURNISHING AND INSTALLING THE FRAME, LID, REINFORCEMENT BARS, FLOOR AND TOP SLABS, CAST IRON STEPS (IF USED).

THE CURB AND GUTTER WILL BE PAID FOR SEPARATELY AND WILL BE MEASURED THROUGH THE INLET.

THE CURB AND GUTTER ADJACENT TO AND 6 FOOT ON EITHER SIDE OF THE INLET SHALL BE CONSTRUCTED AS SHOWN WITH NO ADDITIONAL COMPENSATION FOR THE TRANSITION.

ALL PIPE UNDERDRAIN CONNECTIONS WHEN SPECIFIED SHALL BE DONE IN ACCORDANCE WITH ART. 601 OF THE STANDARD SPECIFICATIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER (FOOT) FOR PIPE UNDERDRAINS, TYPE 2 OR PIPE UNDERDRAINS (SPECIAL) OF THE DIAMETER SPECIFIED WHICH PRICE SHALL INCLUDE THE CA7 OR CA16 AND THE CONNECTION TO THE INLET.

LIGHT WEIGHT MANHOLE CASTING




TOTAL WEIGHT 160 LBS.

** WHEN INLET IS CONSTRUCTED IN RETURN, THE TOP OF SLAB SHALL CONFORM TO THE RADIUS OF THE RETURN.

| REVISED - 1-05-16 | REGION 2 / DISTRICT 2 STANDARD | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|---|
| REVISED - 8-27-13 | | | | | | |
| REVISED - 10-04-11 | | | | CONTRACT NO. | | |
| REVISED - | SCALE: 1.0000 ' / in. SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

**INLETS, SPECIAL, NO. 5** **79.4b**

Not to be used for bidding purposes

file: i:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

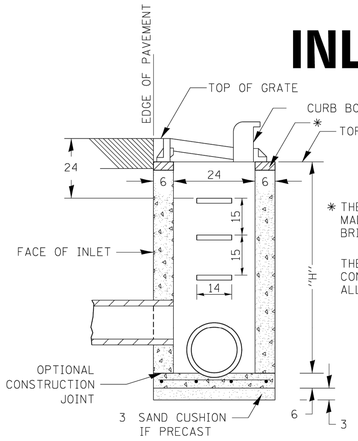
**PROJECT DETAILS 4**

Sheet No. 24 of 33

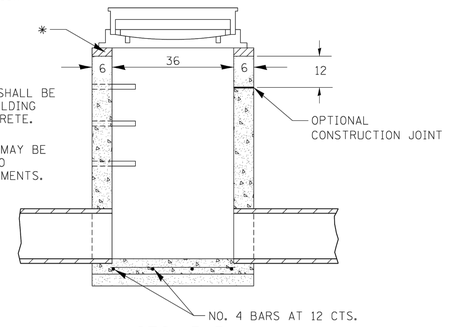
FOR BIDDING

Date: 7/1/2026

# INLETS, SPECIAL




SEC. A-A




SEC. B-B

* THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS SI CONCRETE.

THE HEIGHT OF THE BOX MAY BE CONSTRUCTED 6 SHORT TO ALLOW FOR FIELD ADJUSTMENTS.

NOTES

SEE STANDARD 602701 FOR DETAILS OF STEPS.

EXCEPT AS NOTED HEREON INLET SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.

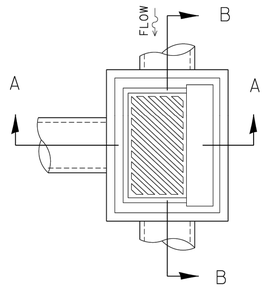
THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTED SECTIONS.

ALL VOIDS AROUND PIPE ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.

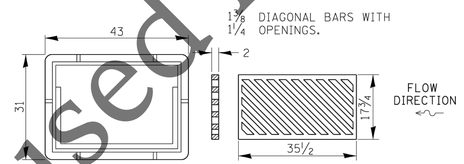
WEIGHT OF CAST IRON FRAME & GRATE = 530 lbs. ± . STEPS SHALL BE OMITTED WHEN DEPTH OF "H" IS LESS THAN 5 ft.

CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH ARTICLES 504.01 THRU 504.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4,000 psi AFTER 28 DAYS.

THE CONTRACT UNIT PRICE EACH FOR INLETS, SPECIAL SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE CAST IRON STEPS (IF USED), THE PRECAST FLOOR SLABS, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.

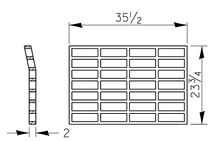



## DETAIL OF FRAME & GRATE

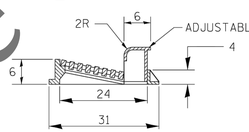



PLAN OF FRAME

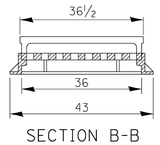
PLAN OF GRATE




PLAN OF GRATE *




SECTION A-A




SECTION B-B

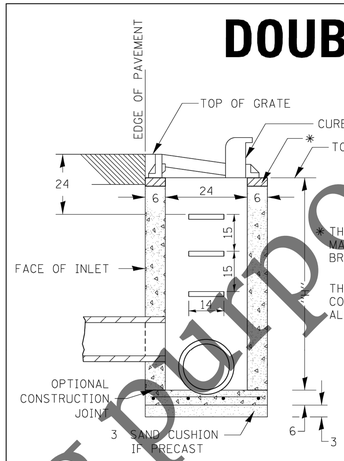
* THIS GRATE TO BE USED WITHOUT CURB BOX WHEN INLET IS IN DRIVEWAY.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

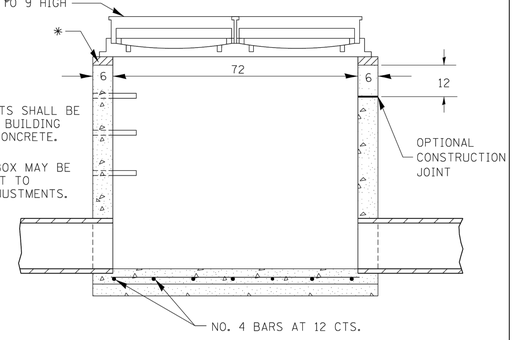
| REVISED - 1-05-16 | REGION 2 / DISTRICT 2 STANDARD | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|---|
| REVISED - 6-27-14 | | | | | | |
| REVISED - 10-13-11 | | | | CONTRACT NO. | | |
| REVISED - | SCALE: 1.0000 '' / in. SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

**INLETS, SPECIAL** 10.2

# DOUBLE INLET, SPECIAL




SEC. A-A




SEC. B-B

* THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS SI CONCRETE.

THE HEIGHT OF THE BOX MAY BE CONSTRUCTED 6 SHORT TO ALLOW FOR FIELD ADJUSTMENTS.

NOTES

SEE STANDARD 602701 FOR DETAILS OF STEPS.

EXCEPT AS NOTED HEREON DOUBLE INLET SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.

THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTED SECTIONS.

ALL VOIDS AROUND PIPE ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.

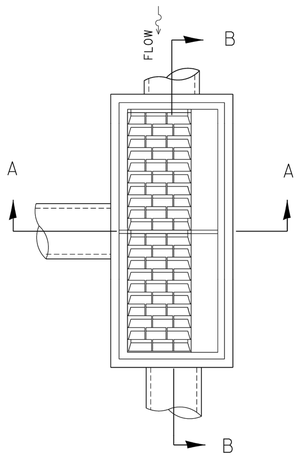
R-3295-2 DOUBLE UNIT OR EQUIVALENT.

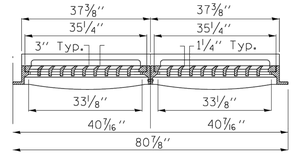
STEPS SHALL BE OMITTED WHEN DEPTH OF "H" IS LESS THAN 5 FOOT.

CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH ARTICLES 504.01 THRU 504.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4,000 psi AFTER 28 DAYS.

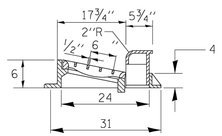
CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. THE CONTRACT UNIT PRICE EACH FOR INLET SPECIAL SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE STEPS (IF USED), THE PRECAST FLOOR SLABS, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.

## DETAIL OF FRAME & GRATE




SECTION B-B




SECTION A-A

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

| REVISED - 1-05-16 | REGION 2 / DISTRICT 2 STANDARD | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|---|
| REVISED - 7-16-15 | | | | | | |
| REVISED - 10-13-11 | | | | CONTRACT NO. | | |
| REVISED - | SCALE: 1.0000 '' / in. SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

**DOUBLE INLET, SPECIAL** 12.2

bidding purposes
Not to be used for

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
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| | | | |

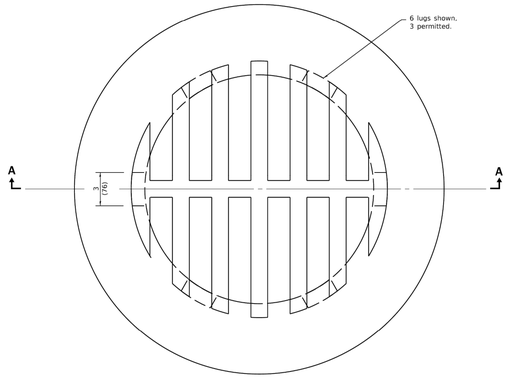
**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PROJECT DETAILS 5**

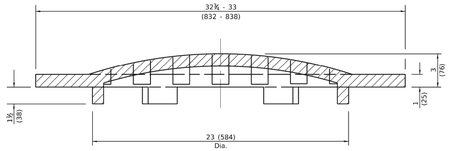
Sheet No. 25 of 33

FOR BIDDING

Date: 7/1/2026




CAST GRATE




SECTION A-A

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

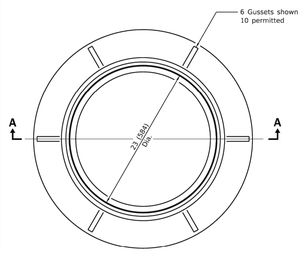
PASSED January 1, 2015
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

BOARD 1-1-15

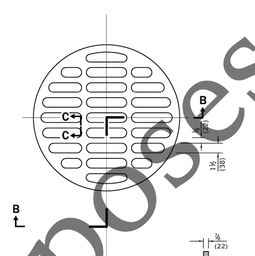
| DATE | REVISIONS |
|---|---|
| 1-1-15 | Revised dimensions. |
| | |
| | |
| 1-1-09 | Switched units to English (metric). |
| | |
| | |

# GRATE TYPE 8

STANDARD 604036-03

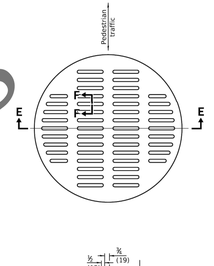



CAST FRAME

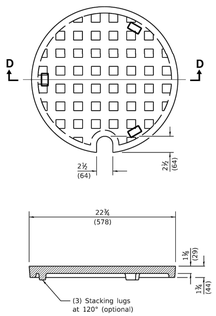



SECTION B-B

CAST OPEN LID



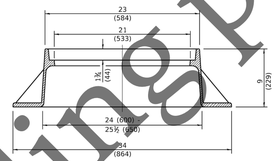

ADA COMPLIANT CAST OPEN LID




SECTION D-D

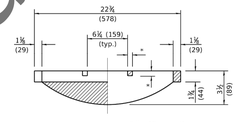
CAST CLOSED LID

Gray Iron Lid



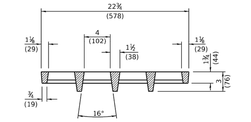

SECTION A-A

Gray Iron




* ⅜ (19) min. (typ.)

SECTION B-B




SECTION E-E

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

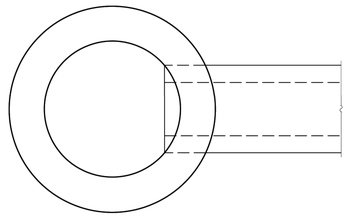
APPROVED January 1, 2020
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2020
ENGINEER OF DESIGN AND ENVIRONMENT

BOARD 1-1-20

| DATE | REVISIONS |
|---|---|
| 1-1-20 | Revised dimension in Section B-B of cast open lid. |
| 1-1-15 | Revised dimensioning of frame. Added ADA compliant open lid. |
| 1-1-09 | Switched units to English (metric). |

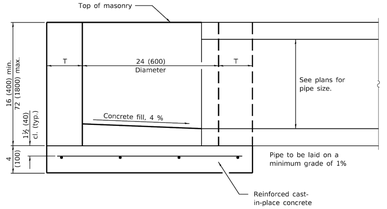
# FRAME AND LIDS TYPE 1

STANDARD 604001-05

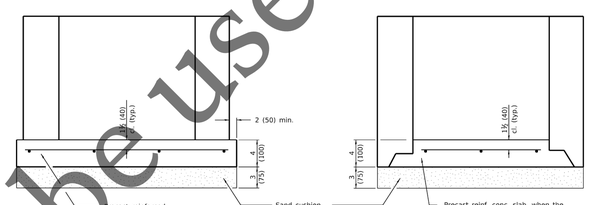


PLAN

| ALTERNATE MATERIALS FOR WALLS | T |
|---|---|
| BRICK MASONRY | 8 (200) |
| CAST-IN-PLACE CONCRETE | 6 (150) |
| CONCRETE MASONRY UNIT | 5 (125) |
| PRECAST REINFORCED CONCRETE SECTION | 7 (175) |




ELEVATION




ALTERNATE METHODS

## GENERAL NOTES

Bottom slabs shall be reinforced with a minimum of 0.24 sq. in./ft. (510 sq. mm/m) in both directions with a maximum spacing of 10 (250).

Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2014
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2014
ENGINEER OF DESIGN AND ENVIRONMENT

BOARD 1-1-14

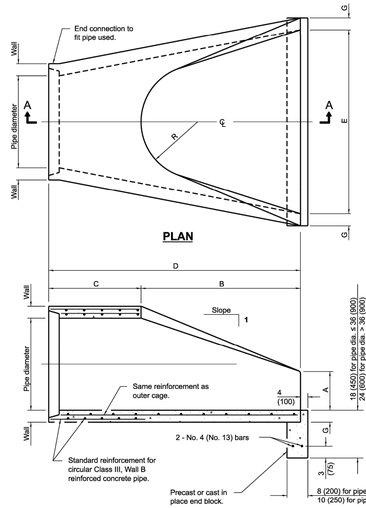
| DATE | REVISIONS |
|---|---|
| 1-1-14 | Increased height to 72 (1800) maximum. |
| | |
| 1-1-11 | Detailed rein. in slabs. |
| | Added max. limit to height. |
| | Added general notes. |

# INLET - TYPE A

STANDARD 602301-04

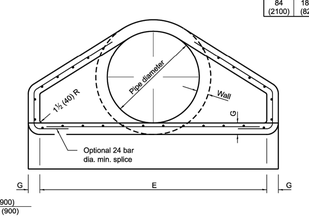
| PIPE DIA. | APPROX. QTY. lbs. (kg) | WALL | A | B | C | D | E | G | R | APPROX. SLOPE |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 (300) | 530 (240) | 2 (51) | 4 (102) | 24 (610) | 4'-0⅞" (1.241 m) | 6'-0⅝" (1.851 m) | 24 (610) | 2 (51) | 9 (229) | 1:2.4 |
| 15 (375) | 740 (335) | 2¼ (57) | 6 (152) | 27 (686) | 3'-10" (1.168 m) | 6'-1" (1.854 m) | 30 (762) | 2¼ (57) | 11 (280) | 1:2.4 |
| 18 (450) | 990 (450) | 2½ (64) | 9 (229) | 27 (686) | 3'-10" (1.168 m) | 6'-1" (1.854 m) | 36 (914) | 2½ (64) | 12 (305) | 1:2.4 |
| 21 (525) | 1280 (580) | 2¾ (70) | 9 (229) | 35 (889) | 38 (965) | 6'-1" (1.854 m) | 3'-6" (1.067 m) | 2¾ (70) | 13 (330) | 1:2.4 |
| 24 (600) | 1520 (690) | 3 (76) | 9½ (241) | 3'-2½" (1.105 m) | 30 (762) | 6'-1½" (1.867 m) | 4'-0" (1.219 m) | 3 (76) | 14 (356) | 1:2.5 |
| 27 (675) | 1930 (875) | 3¼ (83) | 10½ (267) | 4'-0" (1.219 m) | 25½ (648) | 6'-1½" (1.867 m) | 4'-6" (1.372 m) | 3¼ (83) | 14½ (368) | 1:2.4 |
| 30 (750) | 2190 (995) | 3½ (89) | 12 (305) | 4'-6" (1.375 m) | 19⅝ (502) | 6'-1½" (1.874 m) | 5'-0" (1.524 m) | 3½ (89) | 15 (381) | 1:2.5 |
| 33 (825) | 3200 (1450) | 3¾ (95) | 13½ (343) | 4'-10⅝" (1.486 m) | 39¼ (997) | 8'-1½" (2.483 m) | 5'-6" (1.676 m) | 3¾ (95) | 17½ (445) | 1:2.5 |
| 36 (900) | 4100 (1860) | 4 (102) | 15 (381) | 5'-3" (1.6 m) | 34⅜ (883) | 8'-1⅜" (2.483 m) | 6'-0" (1.829 m) | 4 (102) | 20 (508) | 1:2.5 |
| 42 (1050) | 5380 (2440) | 4½ (114) | 21 (533) | 6'-3" (1.6 m) | 35 (889) | 8'-2" (2.489 m) | 6'-6" (1.981 m) | 4½ (114) | 22 (559) | 1:2.5 |
| 48 (1200) | 6550 (2970) | 5 (127) | 24 (610) | 6'-6" (1.829 m) | 28 (660) | 8'-2" (2.489 m) | 7'-0" (2.134 m) | 5 (127) | 22 (559) | 1:2.5 |
| 54 (1350) | 8240 (3740) | 5½ (140) | 27 (686) | 5'-5" (1.651 m) | 35 (889) | 8'-4" (2.54 m) | 7'-6" (2.286 m) | 5½ (140) | 24 (610) | 1:2.0 |
| 60 (1500) | 8730 (3960) | 6 (152) | 35 (889) | 6'-0" (1.524 m) | 39 (991) | 8'-3" (2.515 m) | 8'-0" (2.438 m) | 5 (127) | * | 1:1.9 |
| 66 (1650) | 10710 (4860) | 6½ (165) | 30 (762) | 6'-0" (1.829 m) | 27 (686) | 8'-3" (2.515 m) | 8'-6" (2.591 m) | 5½ (140) | * | 1:1.7 |
| 72 (1800) | 12520 (5680) | 7 (178) | 36 (914) | 6'-6" (1.981 m) | 21 (533) | 8'-3" (2.514 m) | 9'-0" (2.743 m) | 6 (152 | * | 1:1.8 |
| 78 (1950) | 14770 (6700) | 7½ (191) | 36 (914) | 7'-6" (2.286 m) | 21 (533) | 9'-3" (2.819 m) | 9'-6" (2.896 m) | 6½ (165) | * | 1:1.8 |
| 84 (2100) | 18160 (8240) | 8 (203) | 36 (914) | 7'-6½" (2.299 m) | 21 (533) | 9'-3½" (2.832 m) | 10'-0" (3.048 m) | 6½ (165) | * | 1:1.6 |

* Radius as furnished by manufacturer




PLAN

SECTION A-A




END VIEW

## GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

APPROVED January 1, 2011
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED January 1, 2011
ENGINEER OF DESIGN AND ENVIRONMENT

BOARD 1-1-11

| DATE | REVISIONS |
|---|---|
| 1-1-11 | Clarified ref. to pipe dia. on Section A-A. Changed 'inner' to 'outer' cage. ref. |
| 1-1-09 | Switched units to English (metric). |
| | |
| | |

# PRECAST REINFORCED CONCRETE FLARED END SECTION

STANDARD 542301-03

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

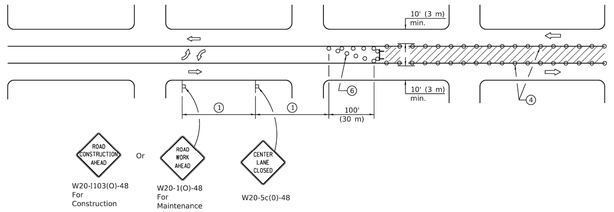
**PROJECT DETAILS 6**

Sheet No. 26 of 33

FOR BIDDING

Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg




## CASE I

(Signs required for both directions)

| SIGN SPACING | |
|---|---|
| Posted Speed | Sign Spacing |
| 55 | 500' (150 m) |
| 50-45 | 350' (100 m) |
| <45 | 200' (60 m) |

## SYMBOLS

- Work area
- Barricade or drum with flashing light
- Flagger with traffic control sign
- Cone, drum or barricade
- Sign on portable or permanent support
- Type III barricade with flashing lights

1. Refer to SIGN SPACING TABLE for distances.
2. Required for speeds > 40 mph (70 km/h).
3. Required if work exceeds 500' (164 m) or 1 block.
4. Cones at 25' (8 m) centers for 250' (75 m) on approach. Additional cones may be placed at 50' (15 m) centers. When drums or type I or II barricades are used, the interval between devices may be doubled.
5. For approved sideroad closures.
6. Cones, drums or barricades at 20' (6 m) centers in taper.
7. Use flagger sign only when flagger is present.

## GENERAL NOTES

This Standard is used to close one lane of an urban, two lane, two way roadway with a bidirectional turn lane.

Case I applies when no workers are present. When workers are present, two lanes shall be closed and traffic control shall be according to Standard 701501.

Calculate L as follows:

| SPEED LIMIT | FORMULAS English | (Metric) |
|---|---|---|
| 40 mph (70 km/h) or less: | $L=\frac{WS^2}{60}$ | $L=\frac{WS^2}{150}$ |
| 45 mph (80 km/h) or greater: | L=(W)(S) | L=0.65(W)(S) |

W = Width of offset in feet (meters).

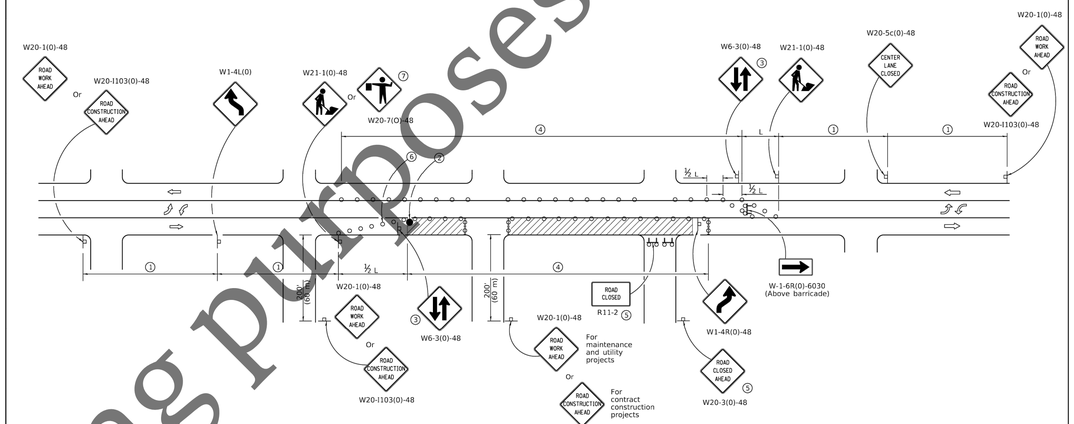
S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

| DATE | REVISIONS |
|---|---|
| 1-1-19 | Revised to allow cones at night. |
| | |
| | |
| 1-1-18 | Corrected sign number for |
| | TWO WAY TRAFFIC sign for |
| | CASE II. |

Illinois Department of Transportation
APPROVED January 1, 2019 — ENGINEER OF SAFETY PROG. AND ENGINEERING
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
STANDARD 701501-04

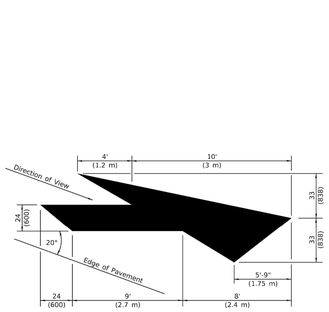
**URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE**
(Sheet 1 of 2)
**STANDARD 701502-09**



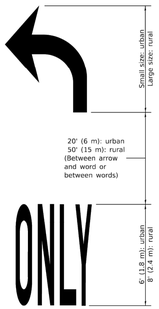

## CASE II

Illinois Department of Transportation
APPROVED January 1, 2019 — ENGINEER OF SAFETY PROG. AND ENGINEERING
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
STANDARD 701501-04

**URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE**
(Sheet 2 of 2)
**STANDARD 701502-09**

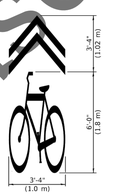



**LANE-REDUCTION ARROW**
Right lane-reduction arrow shown.
Use mirror image for left lane.

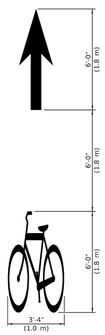



**WORD AND ARROW LAYOUT**

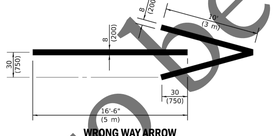
**INTERNATIONAL SYMBOL OF ACCESSIBILITY**




**SHARED LANE SYMBOL**



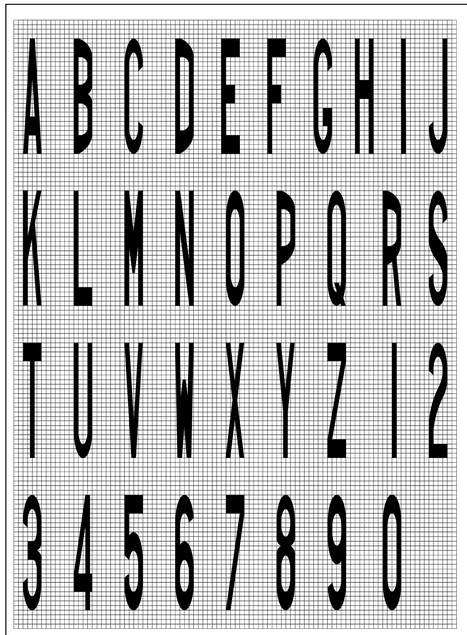

**BIKE SYMBOL**
(Arrow is optional.)

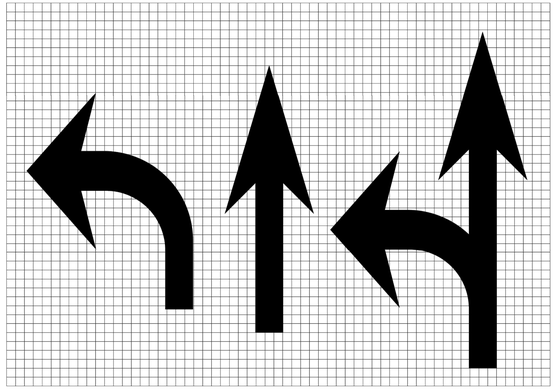



**WRONG WAY ARROW**

Illinois Department of Transportation
PASSED January 1, 2015 — ENGINEER OF OPERATIONS
APPROVED January 1, 2015 — ENGINEER OF DESIGN AND ENVIRONMENT
STANDARD 781.01

**TYPICAL PAVEMENT MARKINGS**
(Sheet 3 of 3)
**STANDARD 780001-05**



| Legend Height | Arrow Size | a |
|---|---|---|
| 6' (1.8 m) | Small | 2.9 (74) |
| 8' (2.4 m) | Large | 3.8 (96) |

The space between adjacent letters or numerals should be approximately 3 (75) for 6' (1.8 m) legend and 4 (100) for 8' (2.4 m) legend.

**LETTER AND ARROW GRID SCALE**

Illinois Department of Transportation
PASSED January 1, 2015 — ENGINEER OF OPERATIONS
APPROVED January 1, 2015 — ENGINEER OF DESIGN AND ENVIRONMENT
STANDARD 781.01

**TYPICAL PAVEMENT MARKINGS**
(Sheet 2 of 3)
**STANDARD 780001-05**

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

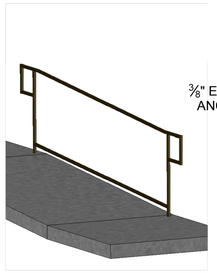
**PROJECT DETAILS 7**

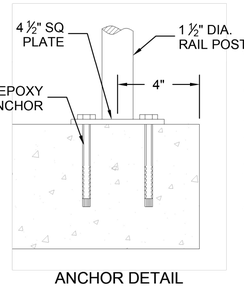
Sheet No. 27 of 33

FOR BIDDING

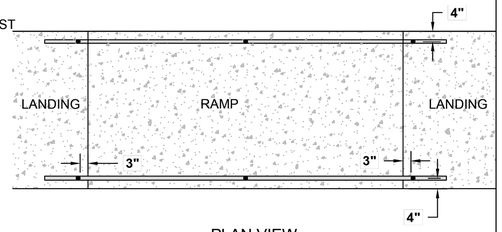
Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg

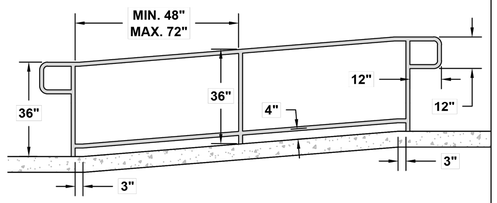





ANCHOR DETAIL




PLAN VIEW




ELEVATION VIEW

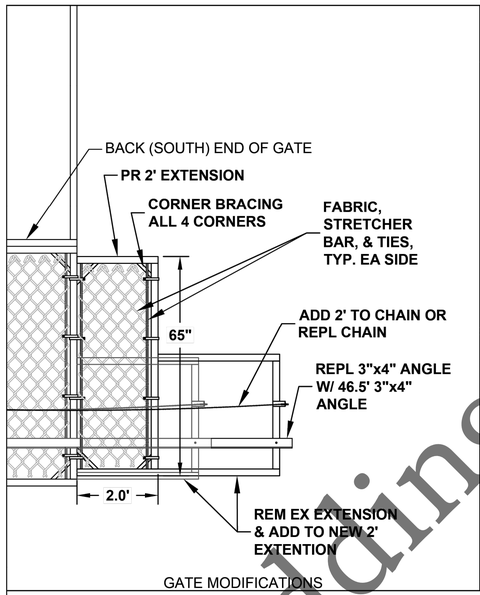
NOTES:
1. PIPE HANDRAIL AND ALL HARDWARE & APPURTENANCES SHALL BE GALVANIZED STEEL PRIMED WITH AMERCOAT 68 HS EPOXY PRIMER.
2. FINISH PAINT SHALL BE DARK BRONZE TO MATCH SW 7675 SEALSKIN. A COLOR SAMPLE WILL BE REQUIRED, TO BE APPROVED BY THE ENGINEER. HANDRAILS SHALL MATCH EXISTING HANDRAILS ON-SITE IN MATERIAL, COLOR, AND DIMENSIONS.
3. POSTS & RAILS SHALL BE 1 ½" DIA.
4. TOP OF HANDRAILS SHALL BE 36" AFT OF WALKING SURFACE. ENDS SHALL EXTEND 12" AND RETURN TO POST.
5. THE CLEAR SPACE BETWEEN HANDRAILS AND ANY WALL OR OBJECT (INCLUDING BALUSTERS) SHALL BE 1 ½".

Four Rivers Sanitation Authority

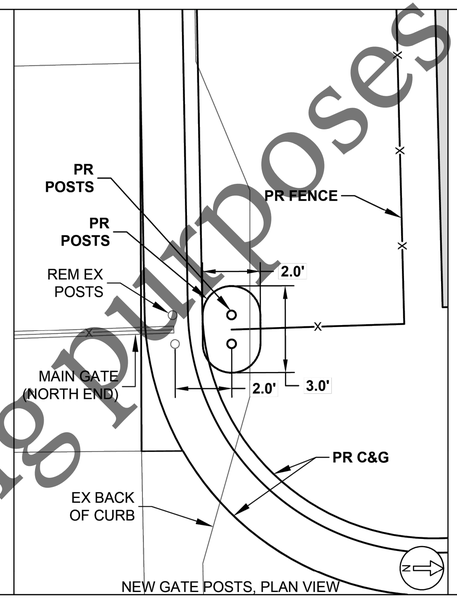
FRSA TREATMENT PLANT
PIPE HANDRAIL FOR ACCESSIBILITY RAMP DETAIL

(NOT TO SCALE)

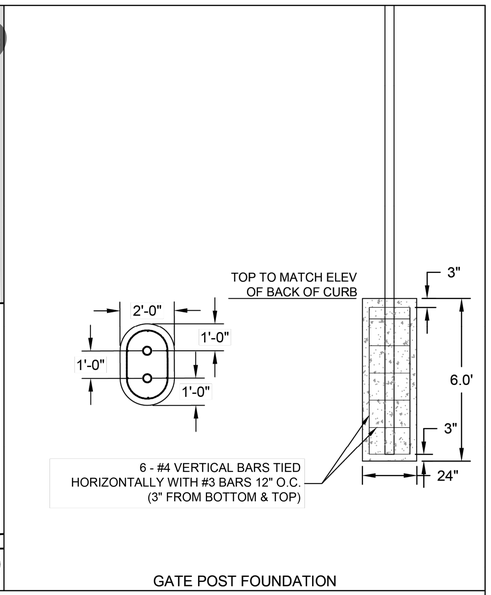
rev. 5/28/25




GATE MODIFICATIONS




NEW GATE POSTS, PLAN VIEW

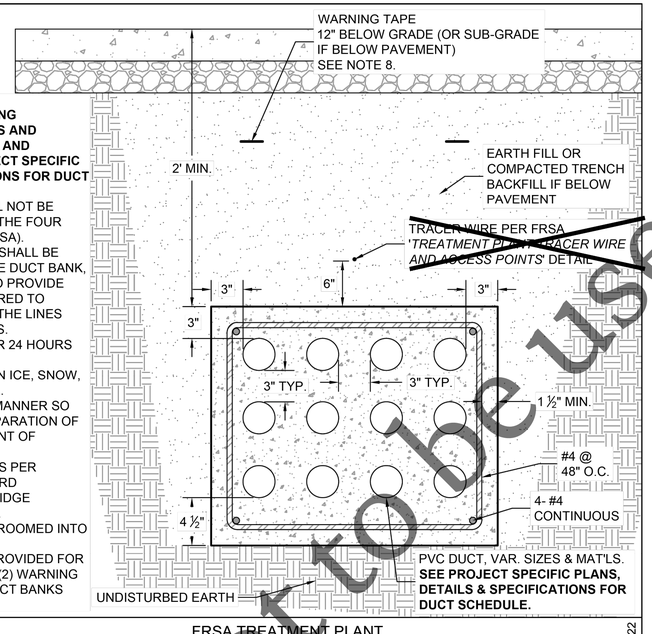



GATE POST FOUNDATION

Four Rivers Sanitation Authority

MODIFY EXISTING GATE DETAIL

(NOT TO SCALE)



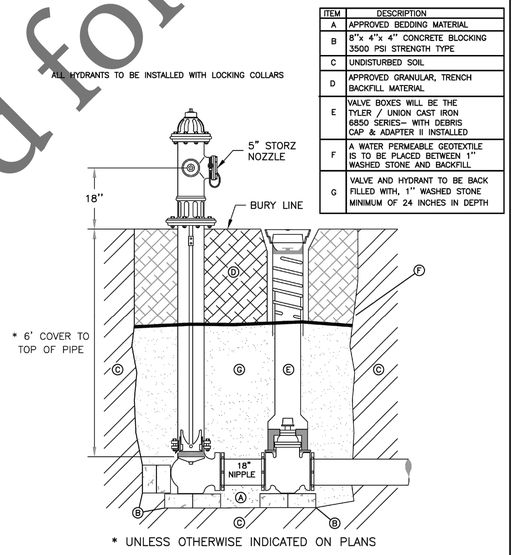

NOTES:
1. **THIS IS A GENERAL DETAIL DEPICTING CONCRETE DUCT BANK DIMENSIONS AND MATERIALS. PVC CONDUITS, SIZES, AND MATERIALS WILL VARY. SEE PROJECT SPECIFIC PLANS, DETAILS, AND SPECIFICATIONS FOR DUCT SCHEDULE.**
2. EARTHEN CONCRETE FORMING WILL NOT BE PERMITTED UNLESS APPROVED BY THE FOUR RIVERS SANITATION AUTHORITY (FRSA).
3. WOOD OR MANUFACTURED FORMS SHALL BE PROVIDED THE FULL LENGTH OF THE DUCT BANK, AND SHALL BE BRACED AND TIED TO PROVIDE THE STRUCTURAL CAPACITY REQUIRED TO PRODUCE FINISHED CONCRETE TO THE LINES AND GRADES SHOWN ON THE PLANS.
4. FORMS SHALL REMAIN IN PLACE FOR 24 HOURS OR AS DIRECTED BY THE FRSA.
5. NO CONCRETE SHALL BE PLACED ON ICE, SNOW, OR FROZEN FOUNDATION MATERIAL.
6. CONCRETE SHALL BE PLACED IN A MANNER SO AS TO AVOID SEGREGATION OR SEPARATION OF AGGREGATES OR THE DISPLACEMENT OF REINFORCEMENT.
7. CONCRETE SHALL BE IDOT CLASS DS PER SECTION 1020 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
8. CONCRETE SHALL HAVE RED DYE BROOMED INTO TOP OF DUCT BANK.
9. ONE (1) WARNING TAPE SHALL BE PROVIDED FOR DUCT BANKS UP TO 24" WIDE. TWO (2) WARNING TAPES SHALL BE PROVIDED FOR DUCT BANKS GREATER THAN 24" WIDE.

Four Rivers Sanitation Authority

FRSA TREATMENT PLANT
CONCRETE DUCT BANK DETAIL

(NOT TO SCALE)

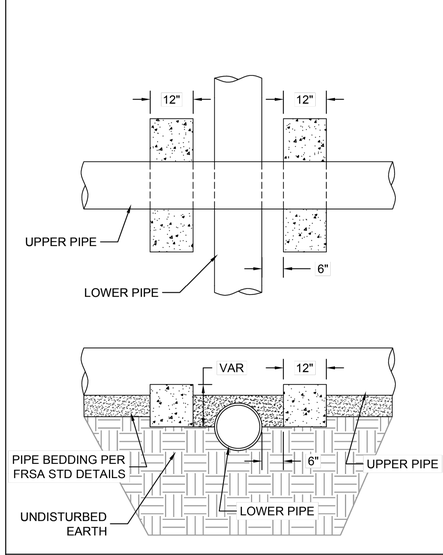
rev. 9/20/22




| ITEM | DESCRIPTION |
|---|---|
| A | APPROVED BEDDING MATERIAL |
| B | 8"x 4"x 4" CONCRETE BLOCKING 3500 PSI STRENGTH TYPE |
| C | UNDISTURBED SOIL |
| D | APPROVED GRANULAR, TRENCH BACKFILL MATERIAL |
| E | VALVE BOXES WILL BE THE TYLER / UNION CAST IRON 6850 SERIES– WITH DEBRIS CAP & ADAPTER II INSTALLED |
| F | A WATER PERMEABLE GEOTEXTILE IS TO BE PLACED BETWEEN 1" WASHED STONE AND BACKFILL |
| G | VALVE AND HYDRANT TO BE BACK FILLED WITH, 1" WASHED STONE MINIMUM OF 24 INCHES IN DEPTH |

CITY OF ROCKFORD
FIRE HYDRANT COMPLETE
N.T.S.

DTL–FH 2017




NOTES:
1. EXCAVATION SHALL BE MADE TO THE SPRING LINE OF THE LOWER PIPE. CONCRETE CRADLES SHALL BE FORMED & PLACED ON EACH SIDE OF THE LOWER PIPE ON UNDISTURBED EARTH WHILE MAINTAINING 6" CLEARANCE. CRADLES SHALL BE 12" WIDE AND SHALL VARY IN HEIGHT (FROM THE SPRING LINE OF THE LOWER PIPE TO 1/4 DIAMETER OF THE UPPER PIPE).
2. THE VOID BENEATH THE UPPER PIPE SHALL BE FILLED AND CONSOLIDATED WITH PIPE BEDDING STONE.
3. EARTHEN CONCRETE FORMING WILL NOT BE PERMITTED UNLESS APPROVED BY THE FOUR RIVERS SANITATION AUTHORITY (FRSA).
4. WOOD OR MANUFACTURED FORMS SHALL BE PROVIDED FOR THE FULL LENGTH OF THE CONCRETE CRADLE, AND SHALL BE BRACED AND TIED TO PROVIDE THE STRUCTURAL CAPACITY REQUIRED TO PRODUCE FINISHED CONCRETE TO THE LINES AND GRADES SHOWN ON THE PLANS.
5. FORMS SHALL REMAIN IN PLACE FOR 24 HOURS OR AS DIRECTED BY THE FRSA.
6. NO CONCRETE SHALL BE PLACED ON ICE, SNOW, OR FROZEN FOUNDATION MATERIAL.
7. CONCRETE SHALL BE PLACED IN A MANNER SO AS TO AVOID THE SEGREGATION OR SEPARATION OF AGGREGATES.
8. CONCRETE SHALL BE IDOT CLASS DS ACCORDING TO SECTION 1020 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

Four Rivers Sanitation Authority

CONCRETE CRADLE FOR SANITARY SEWER

(NOT TO SCALE)

rev. 7/1/25

Not to be used for bidding purposes

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Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |

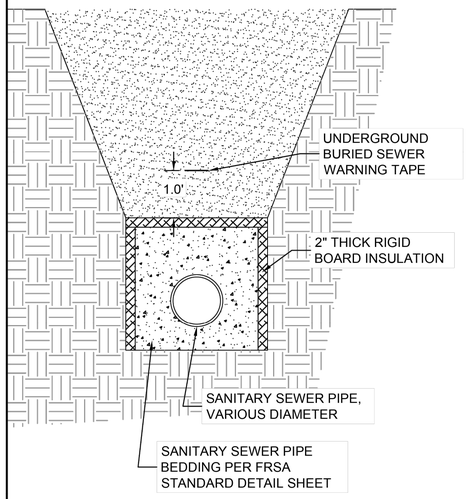
**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PROJECT DETAILS 8**

Sheet No. 28 of 33

FOR BIDDING

Date: 7/1/2026



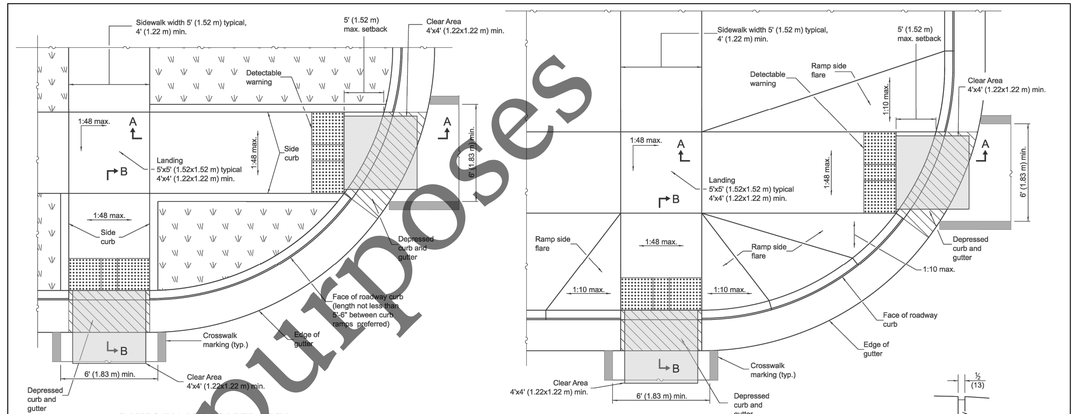

NOTES:

1. SANITARY SEWERS/FORCEMAINS SHALL BE CAREFULLY EXPOSED.
2. SANITARY SEWER PIPE BEDDING SHALL BE ENCOMPASSED ABOVE AND ON EACH SIDE WITH 2 INCH THICK POLYSTYRENE FOAM BOARD INSULATION HAVING AN INSULATION VALUE OF R-20. INSULATION BOARD SHALL BE PLACED FIRMLY AGAINST THE TRENCH WALL FROM 1 FOOT ABOVE THE PIPE TO 6 INCHES BELOW THE PIPE.
3. PIPE BEDDING MATERIAL SHALL BE PLACED AGAINST THE INSULATION BOARD TO HOLD IT IN PLACE. THE PIPE SHALL BE BEDDED AND HAUNCHED IN LIFTS, WITH ALL VOIDS SURROUNDING THE PIPE ELIMINATED. PIPE BEDDING SHALL BE PER FRSA STANDARD DETAILS.
4. AN UNDERGROUND BURIED SEWER WARNING TAPE SHALL BE PLACED ALONG THE SEWER/FORCEMAIN ALIGNMENT, 1 FOOT ABOVE THE INSULATION.

Four Rivers Sanitation Authority

INSULATING SANITARY SEWERS/FORCEMAINS

(NOT TO SCALE)




Illinois Department of Transportation
APPROVED January 1, 2025
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2025
ENGINEER OF DESIGN AND ENVIRONMENT
BDE 801 (1-1-12)

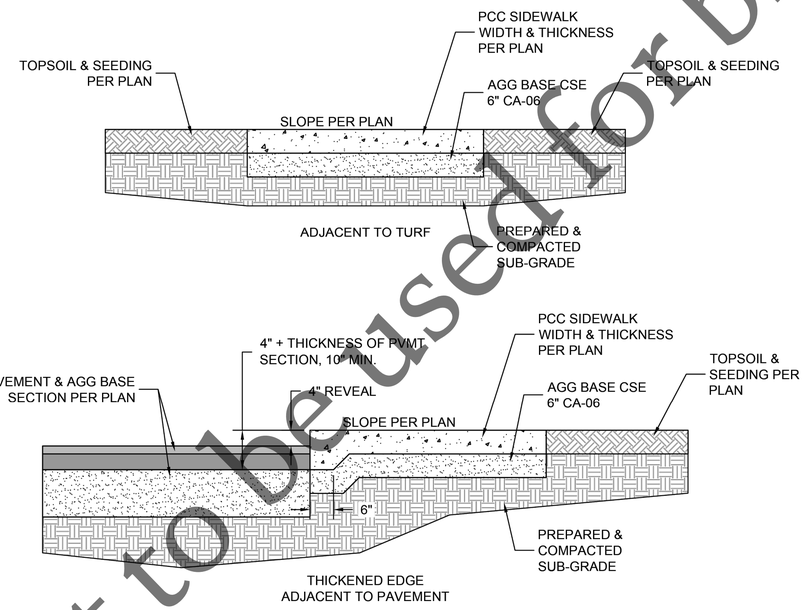
See Sheet 2 for GENERAL NOTES.

| DATE | REVISIONS |
|---|---|
| 1-1-25 | Indicated "Clear Area" Location and updated cross-slopes. |
| 1-1-19 | Removed "15-foot rule", added "Blended transitions" and placement tolerances for detectable warnings. |

**PERPENDICULAR CURB RAMPS FOR SIDEWALKS**

(Sheet 1 of 2)

**STANDARD 424001-12**

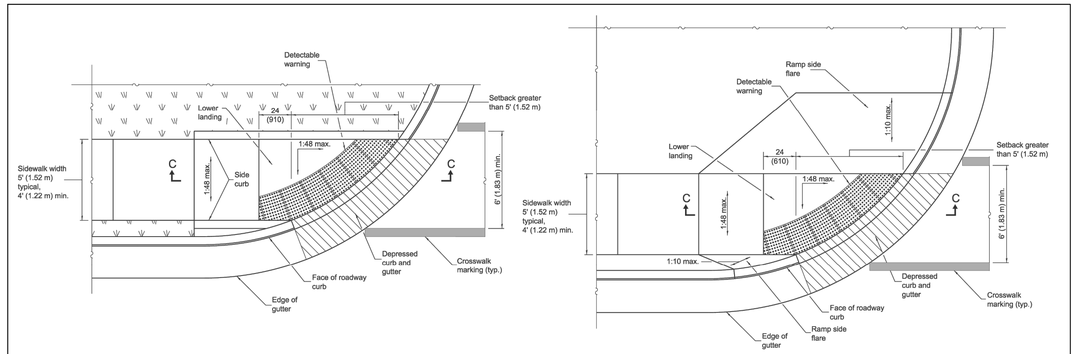



Four Rivers Sanitation Authority

FRSA TREATMENT PLANT
PCC SIDEWALKS

(NOT TO SCALE)

rev. 4/3/25




**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:48 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
APPROVED January 1, 2025
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2025
ENGINEER OF DESIGN AND ENVIRONMENT
BDE 801 (1-1-12)

**PERPENDICULAR CURB RAMPS FOR SIDEWALKS**

(Sheet 2 of 2)

**STANDARD 424001-12**

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Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |

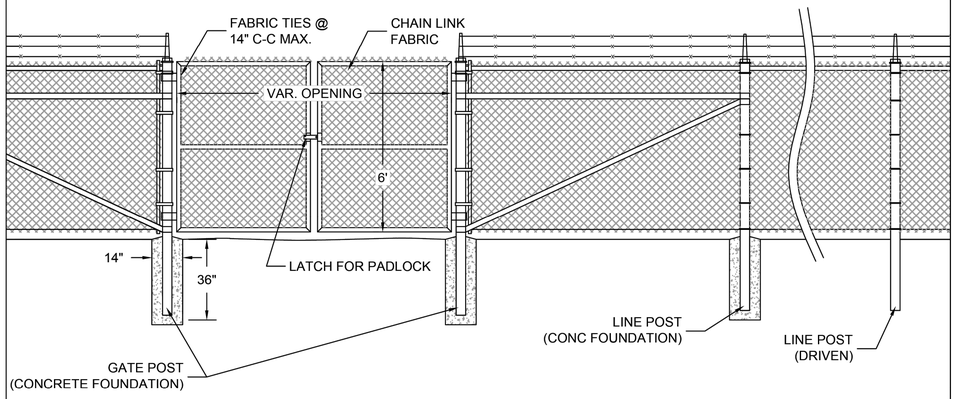
**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PROJECT DETAILS 9**

Sheet No. 29 of 33

FOR BIDDING

Date: 7/1/2026



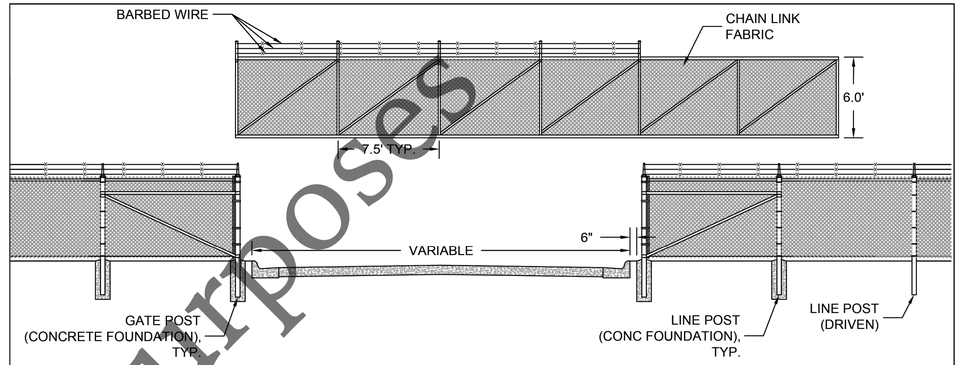

NOTES:
1. FENCE AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE FRSA *'TREATMENT PLANT PERIMETER FENCE DETAIL'*.
2. POST & GATE PIPE SHALL BE SS40 STEEL PIPE PER ASTM F1043, GROUP IC, TYPE D INTERNAL COATING, TYPE B EXTERNAL COATING.
4. GATE POSTS SHALL BE 4" NOMINAL DIA. (4.00" ACTUAL O.D.) WITH PIPE WALL THICKESS OF 0.16". TERMINAL POST CONCRETE FOUNDATIONS SHALL BE 6" CLEAR OF BACK OF CURB OR EDGE OF PAVEMENT.
5. GATE PIPE SHALL BE 1 ⅝" NOMINAL DIA. (1.66" ACTUAL O.D.) WITH PIPE WALL THICKNESS OF 0.111".

Four Rivers Sanitation Authority

FRSA TREATMENT PLANT
PERIMETER FENCE SWINGING GATES DETAIL

(NOT TO SCALE)

rev. 8/29/24



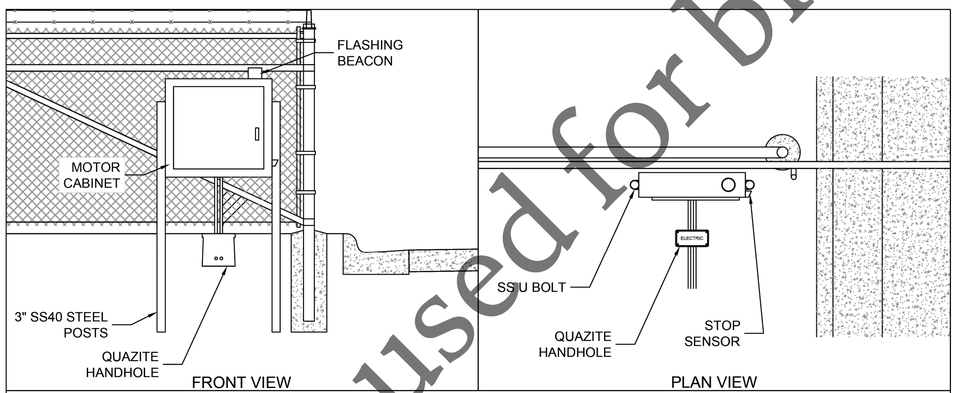

NOTES:
1. FENCE AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE FRSA *'TREATMENT PLANT PERIMETER FENCE DETAIL'*, EXCEPT WHERE MODIFIED.
3. POST & GATE PIPE SHALL BE SS40 STEEL PIPE PER ASTM F1043, GROUP IC, TYPE D INTERNAL COATING, TYPE B EXTERNAL COATING.
4. GATE POSTS SHALL BE 4" NOMINAL DIA. (4.00" ACTUAL O.D.) WITH PIPE WALL THICKESS OF 0.16". TERMINAL POST CONCRETE FOUNDATIONS SHALL BE 6" CLEAR OF BACK OF CURB OR EDGE OF PAVEMENT.
5. TOP & BOTTOM GATE RAILS SHALL BE 2 ½" NOMINAL DIA. (2.375" ACTUAL O.D.) WITH PIPE WALL THICKNESS OF 0.13".
6. SIDE GATE RAILS SHALL BE 2" NOMINAL DIA. (1.90" ACTUAL O.D.) WITH PIPE WALL THICKNESS OF 0.12".
7. GATE BRACE PIPE SHALL BE 1 ⅝" NOMINAL DIA. (1.66" ACTUAL O.D.) WITH PIPE WALL THICKNESS OF 0.111".
8. GATE LENGTH IS VARIABLE DEPENDING ON THE OPENING WIDTH AND SHALL BE DESIGNED ACCORDINGLY.
9. ALL GATES SHALL BE DESIGNED & MANUFACTURED PER MANUFACTURERS RECOMMENDATIONS FOR STRENGTH & RIGIDITY. ALL GATES HAVING AN OPENING GREATER THAN 30' SHALL BE ALUMINUM CANTILEVER TRACK TYPE.

Four Rivers Sanitation Authority

FRSA TREATMENT PLANT
PERIMETER FENCE ROLLING GATES DETAIL

(NOT TO SCALE)

rev. 8/30/22



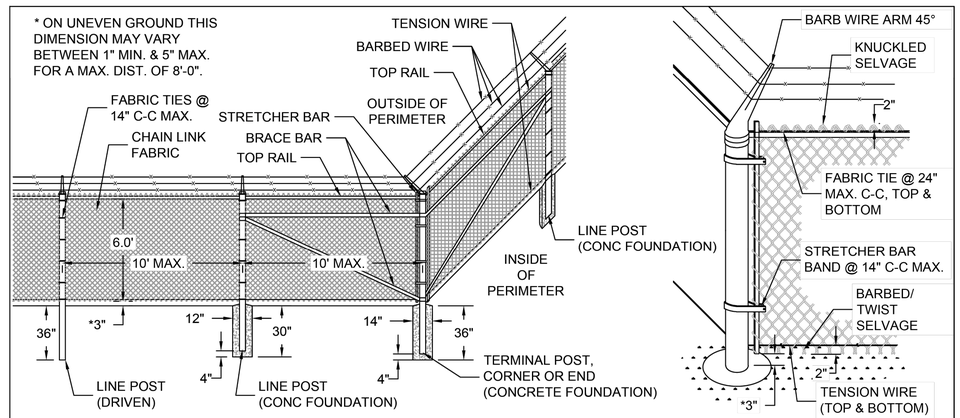

NOTES:
1. MOTOR CABINET SHALL BE SECURED WITH 2 SS U BOLT CLAMPS ON EACH POST. POSTS SHALL BE 3" DIA. SS40 STEEL PIPE PER ASTM F1043, GROUP IC, TYPE D INTERNAL COATING, TYPE B EXTERNAL COATING.
2. ELECTRIC & FIBER SUPPLY SHALL BE VIA (2) 2 INCH CONDUITS SUPPLIED TO A HANDHOLE WHICH SHALL BE PLACED IN FRONT OF THE CABINET. CONDUITS SHALL RUN OUT THE BACK OF THE HANDHOLE AND 90° BEND UP TO THE BOTTOM OF THE CABINET.

Four Rivers Sanitation Authority

FRSA TREATMENT PLANT
PERIMETER FENCE ROLLING GATE OPERATOR DETAIL

(NOT TO SCALE)

rev. 9/16/24




NOTES:
1. ALL POSTS, CHAIN LINK FABRIC, HARDWARE, BARB WIRE, AND OTHER FENCE APPURTENANCES SHALL BE ALUMINIZED STEEL.
2. ALL POSTS & RIALS SHALL BE SS40 STEEL PIPE PER ASTM F1043, GROUP IC, TYPE D INTERNAL COATING, TYPE B EXTERNAL COATING.
3. TERMINAL POSTS SHALL BE 3" NOMINAL DIA. (2.875" ACTUAL O.D.) WITH PIPE WALL THICKNESS OF 0.16". TERMINAL POSTS SHALL HAVE A CONCRETE FOUNDATION AS SHOWN.
4. LINE POSTS SHALL BE 2 ½" NOMINAL DIA. (2.375" ACTUAL O.D.) WITH PIPE WALL THICKNESS OF 0.13". LINE POSTS ATTACHED TO A BRACE BAR SHALL HAVE A CONCRETE FOUNDATION AS SHOWN.
5. TOP RAILS SHALL BE 1 ⅝" NOMINAL DIA. (1.66" ACTUAL O.D.) WITH PIPE WALL THICKNESS OF 0.111".
6. CHAIN LINK FABRIC SHALL BE 9 GAUGE WITH 2 INCH MESH. FABRIC SHALL BE ALUMINIZED BEFORE WEAVE WITH A 0.40 OZ/SF COATING MEETING ASTM A491.
7. BARBED WIRE ARMS SHALL BE GALVANIZED, COMMERCIAL GRADE 45° ANGLE ARMS, WITH SLOTS FOR 3 RUNS OF BARBED WIRE.
8. BARBED WIRE SHALL BE FOUR-POINT, 12.5 GAUGE, WITH ALUMINIZED COATING OF 0.30 OZ/SF PER ASTM A585.
9. FABRIC TIES SHALL BE 9 GAUGE ALUMINUM BANDS OR WIRE.
10. TENSION WIRE SHALL BE 7 GAUGE ALUMINUM COATED COIL SPRING WIRE PER ASTM A824.
11. WHEN A FENCE LINE HAS A CHANGE IN DIRECTION OF 15° OR MORE, A TERMINAL (CORNER) POST IS REQUIRED.

Four Rivers Sanitation Authority

FRSA TREATMENT PLANT
PERIMETER FENCE DETAIL

(NOT TO SCALE)

rev. 8/30/22

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
| | | | |
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| | | | |

**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

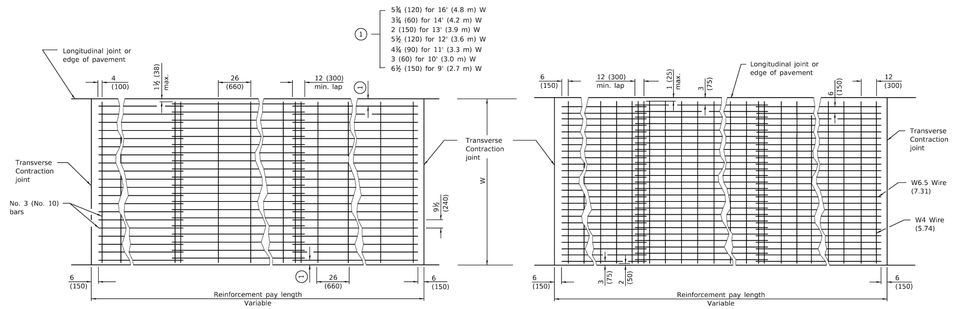
**PROJECT DETAILS 10**

Sheet No.
30 of 33

FOR BIDDING

Date:
7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg




Approximately 63 lbs./100 sq. ft. (3.07 kg/m²)

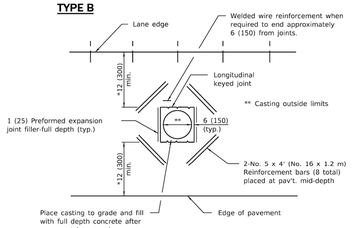
When clipped bar mats are used, each bar intersection shall be clipped with W1.7 (3.74) wire.

**TYPE B**

Approximately 63 lbs./100 sq. ft. (3.07 kg/m²)

**TYPE A**

* When the 12 (300) minimum cannot be achieved, the transverse joints shall be extended to either the longitudinal joint or edge of pavement.




**DETAIL OF ADDED REINFORCEMENT FOR PAVEMENT BLOCKS-OUTS**

**GENERAL NOTES**

Pavement block-outs shall be at least 24 (600) from contraction joints.

Welded wire reinforcement which is lapped longitudinallyshall have a minimum lap of 6 (150).

Welded wire reinforcement may be positioned with the transverse wires on top or bottom of the longitudinal wires.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED April 1, 2016 — ENGINEER OF POLICY AND PROCEDURES

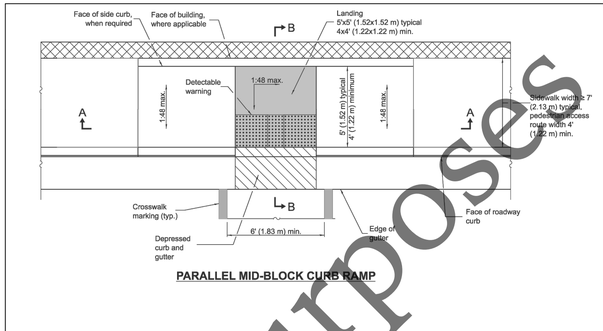
APPROVED April 1, 2016 — ENGINEER OF DESIGN AND ENVIRONMENT

BDE/BCD 1-1-16

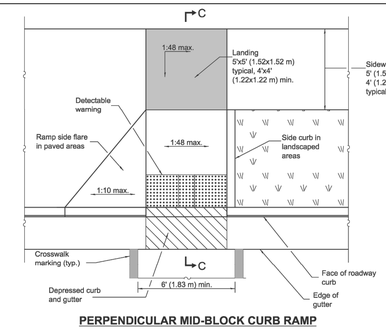
| DATE | REVISIONS |
|---|---|
| 4-1-16 | Changed terminology to |
| | 'welded wire reinforcement'. |
| | Renamed standard. |
| 1-1-08 | Switched units to |
| | English (metric). |

**PAVEMENT WELDED WIRE REINFORCEMENT**

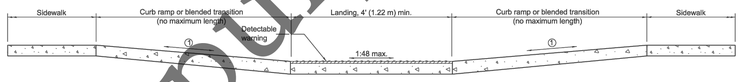
**STANDARD 420701-03**




**PARALLEL MID-BLOCK CURB RAMP**



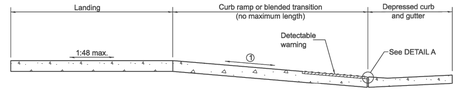

**PERPENDICULAR MID-BLOCK CURB RAMP**



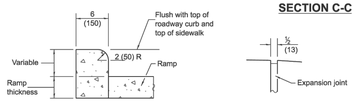

**SECTION A-A**

① The running slope of a curb ramp shall be 1:12 max. The running slope of a blended transition shall be 1:20 max.

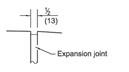
**SECTION B-B**




**SECTION C-C**




**SIDE CURB DETAIL**




**DETAIL A**

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:48 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in. width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

APPROVED January 1, 2025 — ENGINEER OF POLICY AND PROCEDURES

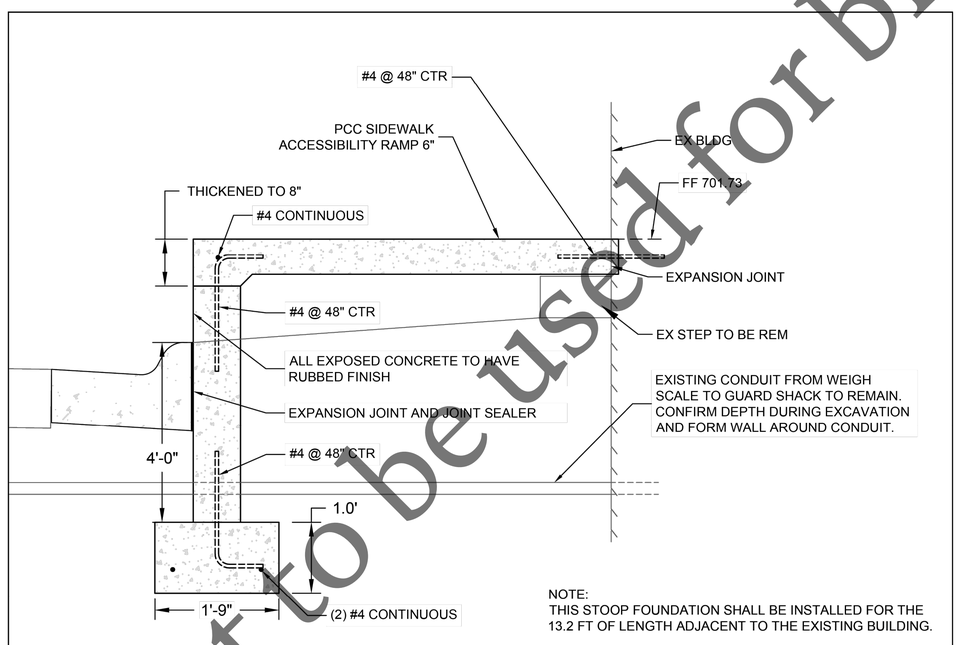
APPROVED January 1, 2025 — ENGINEER OF DESIGN AND ENVIRONMENT

BDE/BCD 1-1-12

| DATE | REVISIONS |
|---|---|
| 1-1-25 | Revised turning space with landing |
| | and updated cross-slope. |
| 1-1-19 | Removed upper landing, added |
| | blended transitions and detectable |
| | warning tolerances. |

**MID-BLOCK CURB RAMPS FOR SIDEWALKS**

**STANDARD 424016-06**



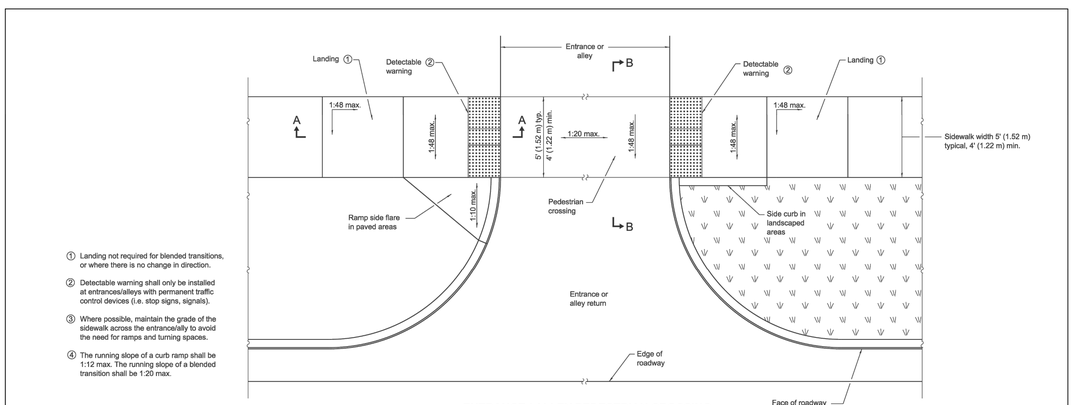

NOTE:
THIS STOOP FOUNDATION SHALL BE INSTALLED FOR THE 13.2 FT OF LENGTH ADJACENT TO THE EXISTING BUILDING.

ACCESSIBILITY RAMP STOOP FOUNDATION

(NOT TO SCALE)

Four Rivers Sanitation Authority

rev. 4/30/26



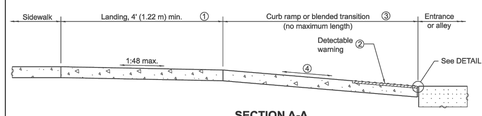

① Landing not required for blended transitions, or where there is no change in direction.

② Detectable warning shall only be installed at entrances/alleys with permanent traffic control devices (i.e. stop signs, signals).

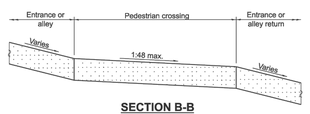
③ Where possible, maintain the grade of the sidewalk across the entrance/ally to avoid the need for ramps and turning spaces.

④ The running slope of a curb ramp shall be 1:12 max. The running slope of a blended transition shall be 1:20 max.

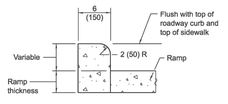
**ENTRANCE / ALLEY PEDESTRIAN CROSSING**




**SECTION A-A**




**SECTION B-B**




**SIDE CURB DETAIL**

**DETAIL A**

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:48 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

APPROVED January 1, 2025 — ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2025 — ENGINEER OF DESIGN AND ENVIRONMENT

BDE/BCD 1-1-12

| DATE | REVISIONS |
|---|---|
| 1-1-25 | Modified Section A-A notes and |
| | updated cross slopes. |
| 1-1-19 | Added blended transitions and |
| | placement tolerances for |
| | detectable warnings. |

**ENTRANCE / ALLEY PEDESTRIAN CROSSINGS**

**STANDARD 424026-04**

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
| | | | |
| | | | |
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| | | | |

**PLANT ROADWAY IMPROVEMENTS**

**CAPITAL PROJECT 2406**

**PROJECT DETAILS 11**

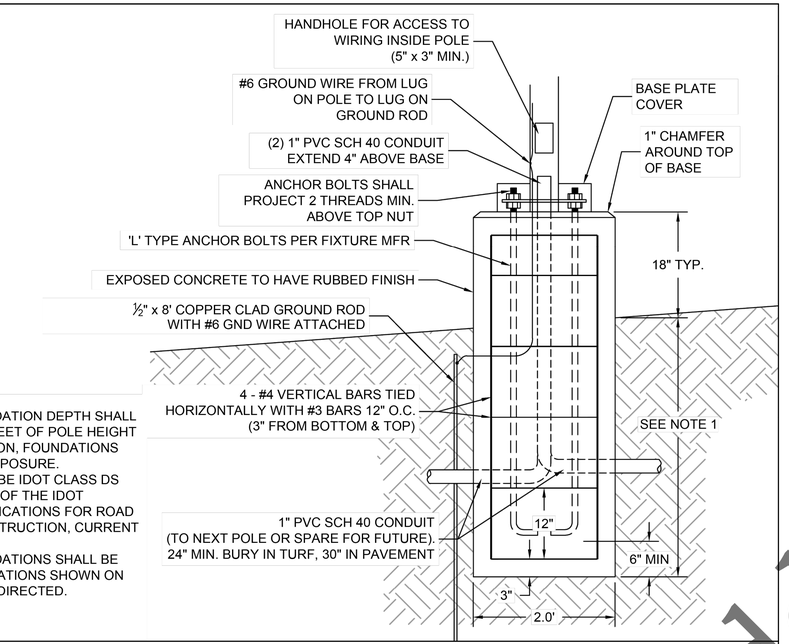
Sheet No. 31 of 33

FOR BIDDING

Date: 7/1/2026

file: I:\District Projects\Plant Roadway Replacement 2406\01 Design\Drawings (Working Folder)_2406 - Standard Sheets & Details.dwg

Not to be used for bidding purposes




NOTES:

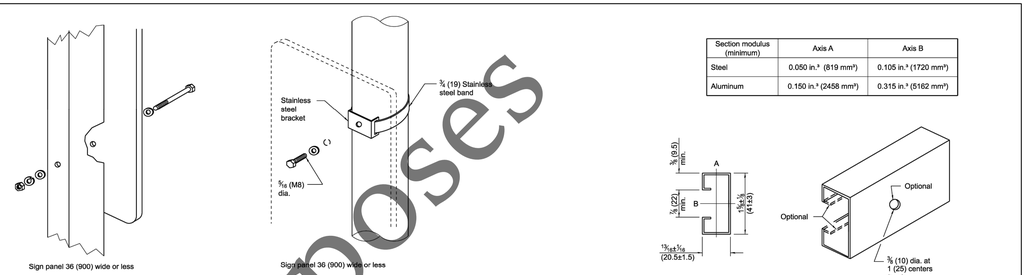
1. LIGHT POLE FOUNDATION DEPTH SHALL BE 1 FOOT PER 5 FEET OF POLE HEIGHT (5' MIN.). IN ADDITION, FOUNDATIONS SHALL HAVE 18" EXPOSURE.
2. CONCRETE SHALL BE IDOT CLASS DS PER SECTION 1020 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
3. LIGHT POLE FOUNDATIONS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED.

Four Rivers Sanitation Authority

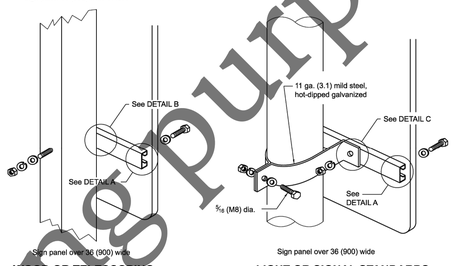
## FRSA TREATMENT PLANT LIGHT POLE FOUNDATION DETAIL

(NOT TO SCALE)

rev. 5/19/26

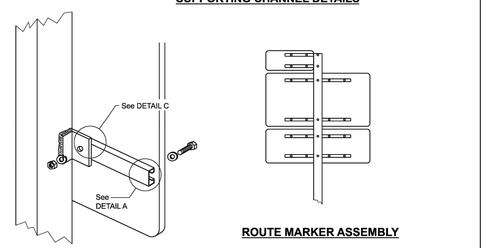



**SUPPORTING CHANNEL DETAILS**



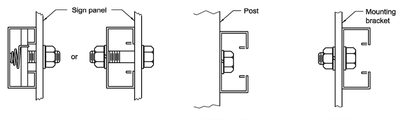

**WOOD OR TELESCOPING STEEL POSTS**

**LIGHT OR SIGNAL STANDARDS**




**BREAKAWAY STEEL TUBING POSTS**
(All sign panel sizes)

**ROUTE MARKER ASSEMBLY**




**DETAIL A** **DETAIL B** **DETAIL C**

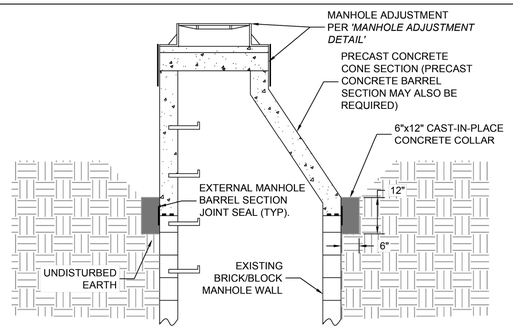
Illinois Department of Transportation
APPROVED January 1, 2009
ENGINEER OF OPERATIONS
APPROVED January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

All dimensions are in inches (millimeters) unless otherwise shown.

| DATE | REVISIONS |
|---|---|
| 1-1-09 | Switched units to English (metric). |
| | |
| | |
| 1-1-97 | Renum. Standard 2319-6. |
| | |
| | |

**SIGN PANEL MOUNTING DETAILS**

**STANDARD 720001-01**




NOTES:

1. REMOVAL OF EX. CONE & MANHOLE WALL SHALL STOP AT A COURSE OF EX. BRICK OR BLOCK WHICH IS 90% MIN. INTACT AND WHICH OBTAINS THE FULL INSIDE DIAMETER OF THE MANHOLE.
2. A LEVELING BED OF NON SHRINK HYDRAULIC CEMENT SHALL BE PLACED ON THE HORIZONTAL SURFACE OF THE EX. MANHOLE WALL TO PREPARE A SURFACE FOR THE NEW MANHOLE BARREL OR CONE SECTION.
3. THE NEW PRECAST BARREL OR CONE SECTION SHALL NOT HAVE A SHIPLAP, AND SHALL BE PLACED ON TWO BEADS OF 1" WIDE BITUMINOUS MATERIAL, WHICH SHALL BE PLACED ON THE LEVELING BED OF HYDRAULIC CEMENT AFTER IT HAS FULLY CURED.
4. A BARREL SECTION JOINT SEAL SHALL BE CENTERED ON THE RECONSTRUCTION JOINT.
5. A 6" WIDE x 12" TALL CAST-IN-PLACE CONCRETE COLLAR SHALL BE PLACED AROUND THE RECONSTRUCTION JOINT, CENTERED ON THE JOINT.

Four Rivers Sanitation Authority

## MANHOLE RECONSTRUCT DETAIL

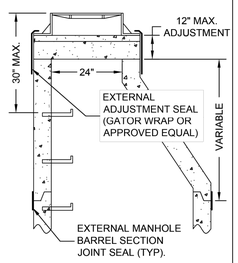
(FOR BRICK/BLOCK MANHOLES)
*MANHOLE ADJUSTMENT DETAIL* SHALL APPLY
(NOT TO SCALE)

rev. 7/2020

NOTES:

1. MANHOLE FRAMES & LIDS SHALL BE PER THE TABLE BELOW.
2. FOR MANHOLES CONNECTED TO MAINS 18" DIAMETER OR LARGER, OR FOR MANHOLES LOCATED IN FLOOD PRONE AREAS, FRAMES & LIDS SHALL BE THE BOLT DOWN TYPE.
3. ALLOWABLE TYPES OF ADJUSTING RINGS INCLUDE PRECAST CONCRETE (4" HEIGHT MIN.), & EXPANDED POLYPROPYLENE (EPP). THESE CAN BE USED IN CONJUNCTION WITH EACH OTHER, EXCEPT THAT A PRECAST RING SHALL NOT BE PLACED OVER AN EPP RING.
4. FOR PRECAST ADJUSTING RINGS, ALL ADJUSTING RING JOINTS AS WELL AS THE FRAME TO ADJUSTING RING JOINT SHALL BE SEALED WITH TWO 1" BEADS OF PRE-FORMED RUBBER BUTYL JOINT SEALANT. WHEN A FRAME REQUIRES PITCHING, EPP TAPER RINGS SHALL BE USED PER NOTE 3.
5. FOR EPP ADJUSTING RINGS, RINGS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. WHEN A FRAME REQUIRES PITCHING, THE TOP RING SHALL BE A TAPERED ADJUSTMENT RING PER MANUFACTURER'S INSTRUCTIONS.
6. NO TARRING OR GROUTING IS ALLOWED ON THE INSIDE OF MANHOLE OR ADJUSTMENT JOINTS.
7. MAXIMUM MANHOLE ADJUSTMENT IS 12". MINIMUM ADJUSTMENT IS 4" UNLESS OFF-ROAD OR IN CURB & GUTTER ROADWAY.
8. MANHOLE FRAMES SHALL BE SET ¼" MIN. TO ⅜" MAX. BELOW PAVED SURFACES, AND AT FINAL GRADE IN TURF AREAS.
9. WHEN ADJUSTING EXISTING MANHOLES, THE ENTIRE EXISTING ADJUSTMENT SHALL BE REMOVED AND REPLACED.
10. THE COMBINATION OF NEW ADJUSTING RINGS SHALL BE SUCH THAT THE MINIMUM NUMBER OF RINGS POSSIBLE ARE USED.
11. FLAT-TOPS ARE NOT PERMITTED ON 4' OR 5' DIA. MANHOLES.
12. REPLACEMENT OF EXISTING BARREL SECTIONS MAY BE REQUIRED TO MEET THE ABOVE REQUIREMENTS.
13. MANHOLE ADJUSTMENT INSERT RISER RINGS ARE NOT APPROVED FOR USE.

| APPROVED FRAME & LID TABLE | | | | |
|---|---|---|---|---|
| TYPE | NEENAH FRAME | NEENAH LID | EAST JORDAN FRAME | EAST JORDAN LID |
| REGULAR | 1670-2004 | R-1670-0358 | 00111711 | 00111731 |
| LOW PROFILE | 1670-2008 | R-1670-0358 | --- | --- |
| BOLT DOWN | 1915JT08 | | --- | --- |

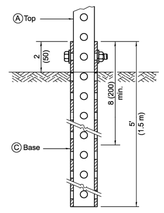



Four Rivers Sanitation Authority

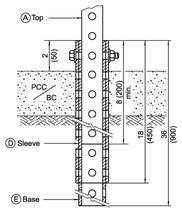
## FRSA SANITARY MANHOLE ADJUSTMENT DETAIL

(FOR ADJUSTMENT OF BOTH NEW & EXISTING MANHOLES)

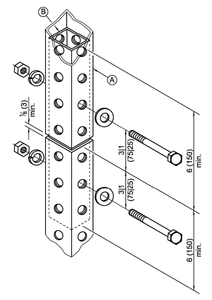
(NOT TO SCALE)




**GROUND MOUNT DETAIL**




**PAVEMENT MOUNT DETAIL**




**SPLICE DETAIL**

| | |
|---|---|
| A | 2 x 2 x var. (51 x 51 var.) |
| B | 1⅞ x 1⅞ x 12 (44 x 44 x 300) |
| C | 2¼ x 2¼ x 60 (57 x 57 x 1500) |
| D | 2½ x 2½ x 18 (64 x 64 x 450) |
| E | 2¼ x 2¼ x 36 (57 x 57 x 900) |

**GENERAL NOTES**

All bolts ⅜ (M10) hex head zinc or cadmium plated.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
APPROVED January 1, 2009
ENGINEER OF OPERATIONS
APPROVED January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-07

| DATE | REVISIONS |
|---|---|
| 1-1-09 | Switched units to English (metric). |
| | |
| | |
| 1-1-07 | New Standard. Used to be part |
| | of Standard 72006. |
| | |

**TELESCOPING STEEL SIGN SUPPORT**

**STANDARD 728001-01**

Not to be used for bidding purposes

Four Rivers Sanitation Authority

| No. | DATE | REVISION | INT. |
|---|---|---|---|
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**PLANT ROADWAY IMPROVEMENTS**
**CAPITAL PROJECT 2406**

**PROJECT DETAILS 12**

Sheet No. 32 of 33

FOR BIDDING

Date: 7/1/2026

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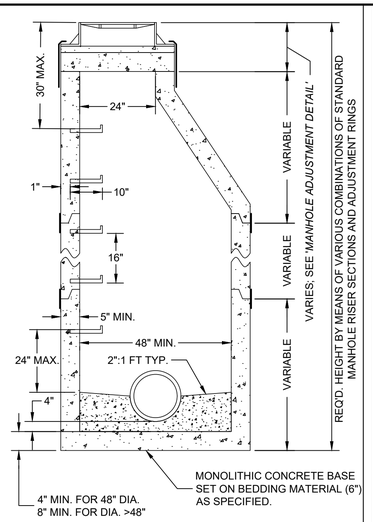
NOTES:
1. THE MAX. DROP FROM THE INVERT OF ANY PIPE TO THE CONCRETE CHANNEL UNDER THAT PIPE SHALL BE 8".
2. MANHOLES LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE MARKED WITH A STEEL FENCE POST AS DIRECTED.
3. ALL NEW MANHOLES SHALL BE VACUUM TESTED PER A.S.T.M. C-1244 PRIOR TO ACCEPTANCE.
4. ALL BARREL JOINTS SHALL BE SEALED WITH 3 ½" x ⅜" PRE-FORMED RUBBER BUTYL JOINT SEALANT ON THE LOWER SHIPLAP.
5. ALL BARREL JOINTS SHALL BE SEALED WITH AN EXTERNAL BARREL SEAL CENTERED ON THE JOINT (MAR MAC MACWRAP, OR APPROVED EQUAL)
6. MANHOLE STRUCTURE SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE MANHOLE RISER SECTIONS IN ACCORDANCE WITH A.S.T.M. C478-90 OR THE LATEST DESIGNATION.
7. PRECAST FLAT TOPS ARE NOT APPROVED FOR USE.
8. SEE '*MANHOLE ADJUSTMENT DETAIL*' FOR ADJUSTMENT REQUIREMENTS.
9. PIPE CONNECTIONS TO NEW MANHOLES SHALL BE MADE BY MEANS OF EITHER RUBBER GASKET SEAL (A-LOK OR APPROVED EQUAL) CONFORMING TO ASTM C-923 CAST INTEGRALLY IN MANHOLE WALL, OR RUBBER GASKET SEAL AND STAINLESS STEEL CLAMP (PSX SERIES SIX OR APPROVED EQUAL) CONFORMING TO ASTM C-923. FOR PIPE CONNECTIONS WITH A DEPTH OF >20 FT., A RUBBER GASKET SEAL (A-LOK OR APPROVED EQUAL) CONFORMING TO ASTM C-923 CAST INTEGRALLY IN MANHOLE WALL SHALL BE USED.
10. PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY MEANS OF CORE DRILLING MANHOLE WALL AND INSTALLING RUBBER GASKET SEAL AND STAINLESS STEEL CLAMP (PSX SERIES SIX OR APPROVED EQUAL) CONFORMING TO ASTM C-923.
11. THE MAXIMUM DISTANCE FROM ANY INLET PIPE INVERT TO THE OUTLET PIPE INVERT SHALL BE 2'. DISTANCES GREATER THAN 2' WILL REQUIRE AN INSIDE DROP CONNECTION PER *'INSIDE DROP CONNECTION DETAIL'*.
12. MANHOLE STEPS SHALL BE NEENAH R-1982-F OR M.A. IND. PS-1 OR APPROVED EQUAL INSTALLED AT 16" CENTERS, ORIENTED ABOVE THE OUTLET PIPE UNLESS OTHERWISE SPECIFIED. FOR MANHOLES WITH INSIDE DROP ASSEMBLIES, STEPS IN THE MANHOLE BASE SECTION SHALL BE INSTALLED IN THE FIELD AND NOT CAST IN PLACE. IN THIS CASE, THE ORIENTATION OF THE CONE SHALL BE AS DIRECTED BY FRSA.




13. THE TOP HALF OF INLET & OUTLET PIPES ≤12" DIA. SHALL BE CUT FLUSH WITH THE MANHOLE WALL. HYDRAULIC CEMENT (XYPEX PATCH N PLUG OR APPROVED EQUAL) SHALL BE PLACED IN THE ENTIRE VOID BETWEEN ALL PIPES AND MANHOLE OPENINGS.

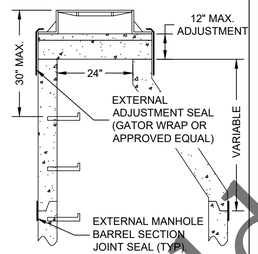
## STANDARD MANHOLE DETAIL
('*MANHOLE ADJUSTMENT DETAIL*' SHALL APPLY)

rev. 4/1/26

NOTES:
1. MANHOLE FRAMES & LIDS SHALL BE PER THE TABLE BELOW.
2. FOR MANHOLES CONNECTED TO MAINS 18" DIAMETER OR LARGER, OR FOR MANHOLES LOCATED IN FLOOD PRONE AREAS, FRAMES & LIDS SHALL BE THE BOLT DOWN TYPE.
3. ALLOWABLE TYPES OF ADJUSTING RINGS INCLUDE PRECAST CONCRETE (4" HEIGHT MIN.), & EXPANDED POLYPROPYLENE (EPP). THESE CAN BE USED IN CONJUNCTION WITH EACH OTHER, EXCEPT THAT A PRECAST RING SHALL NOT BE PLACED OVER AN EPP RING.
4. FOR PRECAST ADJUSTING RINGS, ALL ADJUSTING RING JOINTS AS WELL AS THE FRAME TO ADJUSTING RING JOINT SHALL BE SEALED WITH TWO 1" BEADS OF PRE-FORMED RUBBER BUTYL JOINT SEALANT. WHEN A FRAME REQUIRES PITCHING, EPP TAPER RINGS SHALL BE USED PER NOTE 5.
5. FOR EPP ADJUSTING RINGS, RINGS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. WHEN A FRAME REQUIRES PITCHING, THE TOP RING SHALL BE A TAPERED ADJUSTMENT RING PER MANUFACTURER'S INSTRUCTIONS.
6. NO TARRING OR GROUTING IS ALLOWED ON THE INSIDE OF MANHOLE OR ADJUSTMENT JOINTS.
7. MAXIMUM MANHOLE ADJUSTMENT IS 12". MINIMUM ADJUSTMENT IS 4" UNLESS OFF-ROAD OR IN CURB & GUTTER ROADWAY.
8. MANHOLE FRAMES SHALL BE SET ¼" MIN. TO ⅜" MAX. BELOW PAVED SURFACES, AND AT FINAL GRADE IN TURF AREAS.
9. WHEN ADJUSTING EXISTING MANHOLES, THE ENTIRE EXISTING ADJUSTMENT SHALL BE REMOVED AND REPLACED.
10. THE COMBINATION OF NEW ADJUSTING RINGS SHALL BE SUCH THAT THE MINIMUM NUMBER OF RINGS POSSIBLE ARE USED.
11. FLAT-TOPS ARE NOT PERMITTED ON 4' OR 5' DIA. MANHOLES.
12. REPLACEMENT OF EXISTING BARREL SECTIONS MAY BE REQUIRED TO MEET THE ABOVE REQUIREMENTS.
13. MANHOLE ADJUSTMENT INSERT RISER RINGS ARE NOT APPROVED FOR USE.

**APPROVED FRAME & LID TABLE**

| TYPE | NEENAH FRAME | NEENAH LID | EAST JORDAN FRAME | EAST JORDAN LID |
|---|---|---|---|---|
| REGULAR | 1670-2004 | R-1670-0358 | 00111711 | 00111732 |
| LOW PROFILE | 1670-2008 | R-1670-0358 | --- | --- |
| BOLT DOWN | 1915JT08 | | --- | --- |



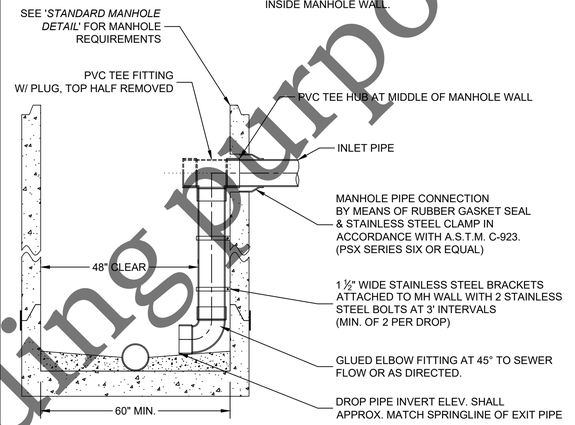

## MANHOLE ADJUSTMENT DETAIL
(FOR ADJUSTMENT OF BOTH NEW & EXISTING MANHOLES)

rev. 4/1/26

**MANHOLE & DROP PIPE SIZING TABLE**

| INLET PIPE DIA. | MANHOLE I.D. | DROP PIPE DIA. |
|---|---|---|
| 4-6 INCH | 60 INCH | 4 INCH |
| 8 INCH | 60 INCH | 8 INCH |
| 10 INCH | 60 INCH | 8 INCH |
| 12 INCH | 60 INCH | 8 INCH |
| > 12 INCH | AS DIRECTED BY FRSA | |

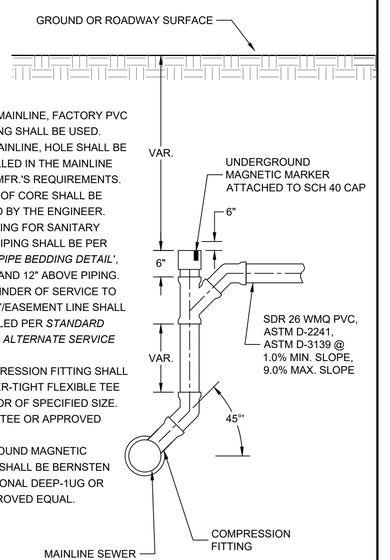
NOTES:
1. INSIDE DROP TYPE MANHOLES SHALL BE 5' MIN. INSIDE DIA.
2. ALL INSIDE DROP PIPING & FITTINGS SHALL BE PVC SCH 40 ASTM D1785 FOR ASTM D2241 INCOMING PIPE, OR SDR 35 ASTM D3034 FOR ASTM D3034 INCOMING PIPE, WITH GLUED JOINTS.
3. ATTACH EACH CLAMPING BRACKET TO THE MANHOLE WALL WITH ⅜" x 1" MIN. STAINLESS STEEL BOLTS AND EPOXY IMPREGNATED LUGS PER MFR.'S RECOMMENDATIONS.
4. THE UPSTREAM END OF THE PVC TEE FITTING SHALL BE POSITIONED AT THE MIDDLE OF THE MANHOLE WALL.
5. PVC TEE FITTING SHALL INCLUDE A PLUG. THE TOP HALF OF THE FITTING AND PLUG SHALL BE REMOVED TO THE INSIDE MANHOLE WALL.




## INSIDE DROP CONNECTION DETAIL
('*STANDARD MANHOLE DETAIL*' SHALL APPLY)

rev. 4/1/26

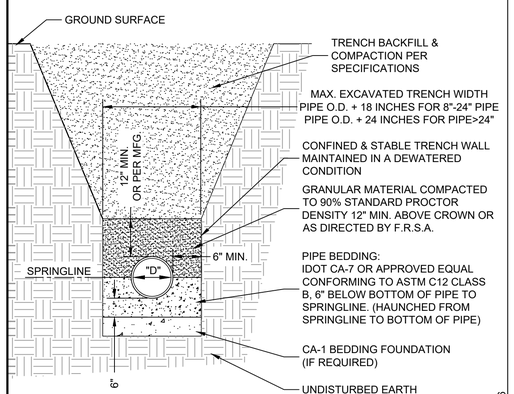
NOTES:
1. FOR NEW MAINLINE, FACTORY PVC WYE FITTING SHALL BE USED.
2. FOR EX. MAINLINE, HOLE SHALL BE CORE DRILLED IN THE MAINLINE PIPE PER MFR.'S REQUIREMENTS. LOCATION OF CORE SHALL BE APPROVED BY THE ENGINEER.
3. PIPE BEDDING FOR SANITARY SERVICE PIPING SHALL BE PER *'FLEXIBLE PIPE BEDDING DETAIL'*, 6" BELOW AND 12" ABOVE PIPING.
4. THE REMAINDER OF SERVICE TO PROPERTY/EASEMENT LINE SHALL BE INSTALLED PER *STANDARD SERVICE & ALTERNATE SERVICE DETAIL*.
5. THE COMPRESSION FITTING SHALL BE A WATER-TIGHT FLEXIBLE TEE CONNECTOR OF SPECIFIED SIZE. (INSERT-A-TEE OR APPROVED EQUAL).
6. UNDERGROUND MAGNETIC MARKERS SHALL BE BERNSTEN INTERNATIONAL DEEP-1UG OR FRSA APPROVED EQUAL.




## VERTICAL SERVICE RISER DETAIL

rev. 5/1/23

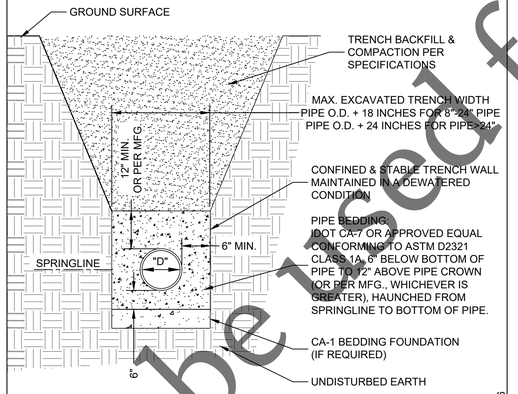
NOTES:
1. REASONABLE CARE SHALL BE USED WHEN BACKFILLING OVER SEWER. NO MATERIALS SUCH AS ROCKS OR BOULDERS SHALL BE PLACED WITHIN 24" OF THE CROWN OF THE PIPE. NO MATERIAL LARGER THAN 8" DIA. SHALL BE USED IN THE BACKFILL.
2. LOOSE MATERIAL SHALL BE REMOVED OR COMPACTED PRIOR TO PLACING PIPE BEDDING.
3. BEDDING SHALL BE WELL HAUNCHED ALONG PIPE TO ENSURE VOIDS ARE ELIMINATED.




## RIGID PIPE BEDDING DETAIL

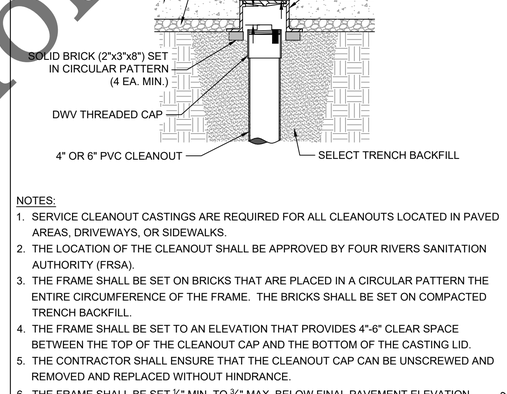
rev. 4/1/26

NOTES:
1. REASONABLE CARE SHALL BE USED WHEN BACKFILLING OVER SEWER. NO MATERIALS SUCH AS ROCKS OR BOULDERS SHALL BE PLACED WITHIN 24" OF THE CROWN OF THE PIPE. NO MATERIAL LARGER THAN 8" DIA. SHALL BE USED IN THE BACKFILL.
2. LOOSE MATERIAL TO BE REMOVED OR COMPACTED PRIOR TO PLACING PIPE BEDDING.
3. BEDDING SHALL BE WELL HAUNCHED ALONG PIPE TO ENSURE VOIDS ARE ELIMINATED.




## FLEXIBLE PIPE BEDDING DETAIL

rev. 4/1/26

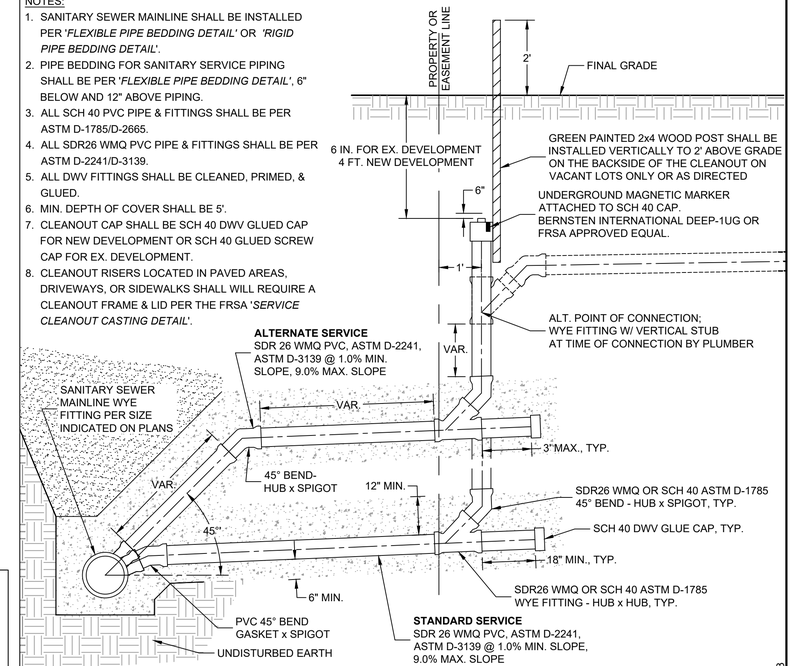



NOTES:
1. SERVICE CLEANOUT CASTINGS ARE REQUIRED FOR ALL CLEANOUTS LOCATED IN PAVED AREAS, DRIVEWAYS, OR SIDEWALKS.
2. THE LOCATION OF THE CLEANOUT SHALL BE APPROVED BY FOUR RIVERS SANITATION AUTHORITY (FRSA).
3. THE FRAME SHALL BE SET ON BRICKS THAT ARE PLACED IN A CIRCULAR PATTERN THE ENTIRE CIRCUMFERENCE OF THE FRAME. THE BRICKS SHALL BE SET ON COMPACTED TRENCH BACKFILL.
4. THE FRAME SHALL BE SET TO AN ELEVATION THAT PROVIDES 4"-6" CLEAR SPACE BETWEEN THE TOP OF THE CLEANOUT CAP AND THE BOTTOM OF THE CASTING LID.
5. THE CONTRACTOR SHALL ENSURE THAT THE CLEANOUT CAP CAN BE UNSCREWED AND REMOVED AND REPLACED WITHOUT HINDRANCE.
6. THE FRAME SHALL BE SET ¼" MIN. TO ⅜" MAX. BELOW FINAL PAVEMENT ELEVATION.

## SERVICE CLEANOUT CASTING DETAIL

rev. 6/1/22

NOTES:
1. SANITARY SEWER MAINLINE SHALL BE INSTALLED PER '*FLEXIBLE PIPE BEDDING DETAIL*' OR *'RIGID PIPE BEDDING DETAIL*'.
2. PIPE BEDDING FOR SANITARY SERVICE PIPING SHALL BE PER '*FLEXIBLE PIPE BEDDING DETAIL*', 6" BELOW AND 12" ABOVE PIPING.
3. ALL SCH 40 PVC PIPE & FITTINGS SHALL BE PER ASTM D-1785/D-2665.
4. ALL SDR26 WMQ PVC PIPE & FITTINGS SHALL BE PER ASTM D-2241/D-3139.
5. ALL DWV FITTINGS SHALL BE CLEANED, PRIMED, & GLUED.
6. MIN. DEPTH OF COVER SHALL BE 5'.
7. CLEANOUT CAP SHALL BE SCH 40 DWV GLUED CAP FOR NEW DEVELOPMENT OR SCH 40 GLUED SCREW CAP FOR EX. DEVELOPMENT.
8. CLEANOUT RISERS LOCATED IN PAVED AREAS, DRIVEWAYS, OR SIDEWALKS SHALL WILL REQUIRE A CLEANOUT FRAME & LID PER THE FRSA '*SERVICE CLEANOUT CASTING DETAIL*'.




## STANDARD SERVICE & ALTERNATE SERVICE DETAIL

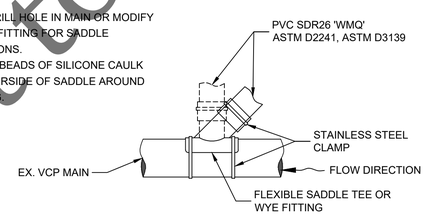
rev. 5/1/23

ACCEPTABLE SERVICE / MAIN CONNECTION TABLE

| TYPE OF MAIN | | TYPE OF CONNECTION | DETAIL |
|---|---|---|---|
| NEW, <18" DIA | | FACTORY PVC WYE | STANDARD SERVICE DETAIL * |
| NEW, ≥18" DIA | | FACTORY PVC WYE COMPRESSION FITTING | VERTICAL SERVICE RISER DETAIL |
| EXIST, <18" DIA | VCP | FLEXIBLE SADDLE | STANDARD SERVICE DETAIL * |
| | NON-VCP | COMPRESSION FITTING | |
| | ALL | CUT-IN FACTORY WYE | |
| EXIST, ≥18" DIA | ALL | COMPRESSION FITTING | VERTICAL SERVICE RISER DETAIL OR ALTERNATE SERVICE DETAIL** |

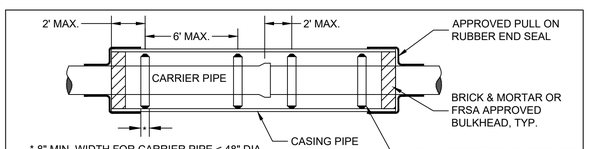
* ALL MAINS ≥13' DEEP SHALL HAVE AN ALTERNATE OR VERTICAL SERVICE RISER.
** REQUIRES FRSA APPROVAL.

NOTES:
1. CORE DRILL HOLE IN MAIN OR MODIFY EX. VCP FITTING FOR SADDLE DIMENSIONS.
2. APPLY 2 BEADS OF SILICONE CAULK TO UNDERSIDE OF SADDLE AROUND OPENING.




## FLEXIBLE SADDLE CONNECTION DETAIL

rev. 4/1/26




* 8" MIN. WIDTH FOR CARRIER PIPE < 48" DIA.
12" MIN. WIDTH FOR CARRIER PIPE ≥ 48" DIA.

NOTES:
1. CASING END SEALS & SPACERS SHALL BE AS MFD. BY CASCADE MFG., OR APPROVED EQUAL.
2. FOR FLEXIBLE CARRIER PIPE, SPACING OF SPACERS TO BE AS SHOWN, OR PER MFR.'S RECOMMENDATION.
3. FOR RIGID CARRIER PIPE, SPACING SHALL BE PER MFR.'S RECOMMENDATION.

## CASING & SPACER DETAIL

rev. 4/1/26

Not to be used for bidding purposes

01/01/2021 Revisions:
Manhole Adjustment Detail: Revised notes 1 & 2 with acceptable frames & lids. Modified notes 3, 5, & 7. Added note 8.
Rigid Pipe Bedding Detail: Revised note 2 & 3. Added note 1. Added 'Authority'.
Inside Drop Connection Detail: Revised note 6 & 7. Added note 8.
Service Cleanout Casting Detail: Added this detail.

Four Rivers Sanitation Authority

# FOUR RIVERS SANITATION AUTHORITY (FRSA) STANDARD DETAILS

(NOT TO SCALE)

3501 KISHWAUKEE ST.
ROCKFORD, ILLINOIS 61109 PH. (815) 387-7660

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ISSUE 04/01/2026