PRELIMINARY
NOT FOR
CONSTRUCTION

CITY OF WACO, TEXAS
12th STREET & GURLEY LANE
SIDEWALK IMPROVEMENTS

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

MAYOR
KYLE DEAVER

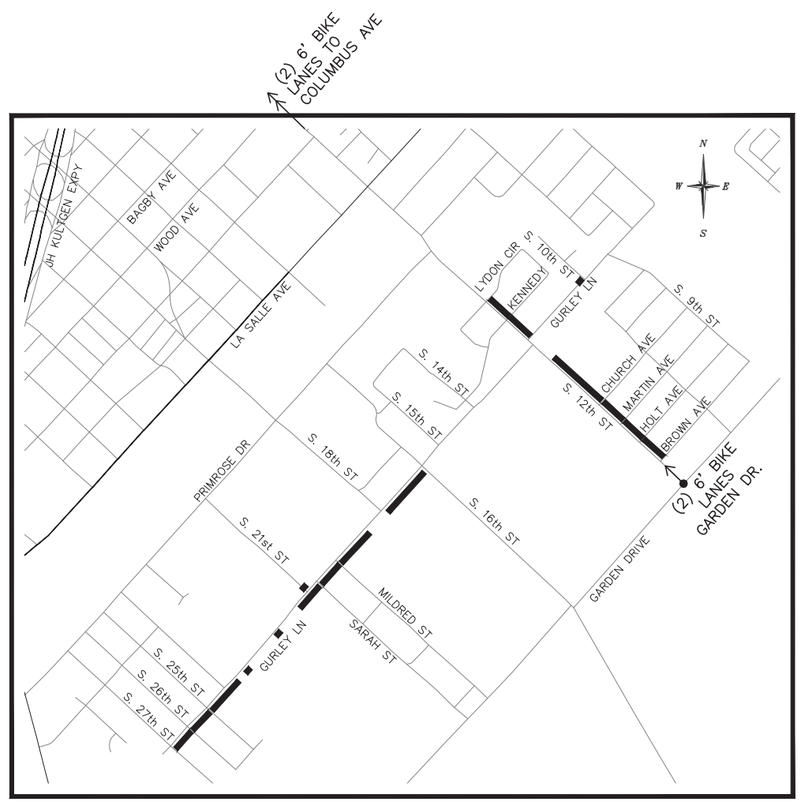
CITY COUNCIL
WILBERT AUSTIN, SR. - COUNCIL DIST. 1
ALICE RODRIGUEZ - COUNCIL DIST. 2
JOHN KINNAIRD - COUNCIL DIST. 3
DILLON MEEK - COUNCIL DIST. 4
JIM HOLMES - COUNCIL. DIST. 5

CITY MANAGER
DALE A. FISSELER, P.E.

EDWARD D. SULAK, JR., P.E. DATE

CITY ENGINEER
(RECOMMENDED FOR BIDDING) DATE

DEPARTMENT DIRECTOR
(APPROVED FOR BIDDING) DATE



PROJECT LOCATION MAP
Scale: 1:800

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BSP engineers
F - 7587
4800 LAKEWOOD DR., STE. 2
WACO, TEXAS 76710
(254) 756–1610

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85602
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4–17–2017

Texas811
Know what's below.
Call before you dig.

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL MAKE AN EXAMINATION OF THE PROJECT SITE AND COMPLETELY FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF THE WORK TO BE ACCOMPLISHED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY WORK MADE NECESSARY BY UNUSUAL CONDITIONS OR OBSTACLES ENCOUNTERED DURING THE PROGRESS OF THE WORK, WHICH CONDITIONS OR OBSTACLES ARE READILY APPARENT UPON A VISIT TO THE SITE. IF THERE ARE ANY QUESTIONS IN THIS REGARD OR IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO SUBMISSION OF BIDS.

2. THE CONTRACTOR SHALL CONTACT ALL LOCAL UTILITY COMPANIES AND ANY OTHER UTILITY COMPANY THAT SERVES THE AREA AT LEAST 72 HOURS PRIOR TO CONSTRUCTION TO VERIFY LOCATIONS OF EXISTING UTILITY LINES. THE FOLLOWING ARE THE TELEPHONE NUMBERS OF THE ENTITIES MOST LIKELY TO BE AFFECTED:

TEXAS ONE CALL	DIAL 811
ONCOR	1-254-770-6210
CITY OF WACO, TEXAS	1-254-750-6621
TIME WARNER CABLE	1-254-776-1141
AT&T	1-800-252-1133
ATMOS ENERGY	1-254-662-7466
SOUTHWESTERN BELL	1-800-869-8344

3. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES LOCATED WITHIN THE VICINITY OF ANY WORK. IF THE EXISTING UTILITIES ARE IN ANY WAY DIFFERENT FROM WHAT IS SHOWN ON THE DRAWINGS, THEN IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER AND THE PROJECT ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO FIX DAMAGES TO EXISTING UTILITIES DURING CONSTRUCTION.

4. CONTRACTOR SHALL MAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING UTILITIES. IF ANY DAMAGE OCCURS TO EXISTING UTILITIES, DAMAGE IS TO BE REPAIRED IMMEDIATELY TO AT LEAST PREEXISTING CONDITION AT NO ADDITIONAL COST TO THE OWNER.

5. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. WHEN UNLOCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING OR A BREAK IN THE LINE OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED, CONTRACTOR IS TO COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICE IN OPERATION.

6. ALL BARRICADES AND SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

7. WHERE NEW CONSTRUCTION TIES TO EXISTING FACILITIES, THE PROPER SAW CUT AND CONNECTION SHALL BE MADE USING GOOD WORKMANSHIP AND PROPER TRANSITION TECHNIQUES TO BE APPROVED BY THE ENGINEER.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS SO AS TO MEET OR EXCEED PROJECT'S SPECIFICATIONS, STATE, AND CITY CODES AND ORDINANCES.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING AND OBTAINING PERMITS FROM THE CITY, STATE, OR OTHER REGULATORY AGENCIES TO PERFORM WORK.

10. ALL DEMOLITION AND EXCAVATED MATERIALS SHALL BE LEGALLY DISPOSED OF OFF THE SITE, UNLESS OTHERWISE INSTRUCTED BY THE OWNER OR BY THE OWNER'S REPRESENTATIVE.

11. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER'S PROJECT REPRESENTATIVE 48 HOURS BEFORE CONSTRUCTION COMMENCES.

12. ALL CONSTRUCTION OPERATIONS TO BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). COPIES OF THE OSHA STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE OBTAINED FROM OSHA, 903 SAN JACINTO, AUSTIN, TEXAS.

13. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ALL JOB SITE SAFETY, MANAGEMENT OF JOB SITE PERSONNEL, SUPERVISION OF THE USE OF JOB SITE EQUIPMENT, AND DIRECTION OF ALL CONSTRUCTION PROCEDURES, METHODS, AND ELEMENTS REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

14. CONTRACTOR TO MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE CITY.

15. BLASTING IS NOT PERMITTED ON THIS PROJECT.

16. CONTRACTOR SHALL TRANSITION NEW UTILITY CONSTRUCTION SO AS TO MINIMIZE DAMAGE TO EXISTING VEGETATION, PLANTER BEDS, UTILITIES, SIDEWALKS, AND ROADWAYS. TRANSITIONS SHALL BE APPROVED BY OWNER OR ENGINEER.

17. THE CONTRACTOR SHALL PROTECT ALL SANITARY SERVICES AND MAINTAIN SERVICE THROUGHOUT THE DURATION OF CONSTRUCTION. IN THE EVENT THAT A SERVICE IS DAMAGED DURING CONSTRUCTION THE CONTRACTOR SHALL REPAIR THE SERVICE AT NO ADDITIONAL COST TO THE OWNER.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL AREAS DISTURBED BY CONSTRUCTION FOR A PERIOD EQUAL TO, BUT NOT EXCEEDING, 12 MONTHS.

19. ALL ADDITIONAL PIPING NEEDED TO PROVIDE/ENSURE TEMPORARY POTABLE WATER SERVICES SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

20. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REESTABLISH AND RESTORE EXISTING VEGETATION AND LANDSCAPING DISTURBED BY CONSTRUCTION.

21. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE EXCESS SPOILS AND MATERIAL DISTURBED OR REQUIRED BY CONSTRUCTION.

22. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED BY THE CONTRACTOR THAT ARE NOT A PART OF THIS CONTRACT ARE TO BE REPAIRED BY THE CONTRACTOR TO AT LEAST THE PREEXISTING CONDITION, AT HIS EXPENSE, BEFORE ACCEPTANCE OF THE WORK.

23. CONSTRUCTION SPOILS OR MATERIALS TO BE USED FOR PROPOSED CONSTRUCTION, SHALL NOT BE STOCKPILED OR STORED WITHIN THE 100 YEAR FLOOD PLAIN.

GENERAL CONSTRUCTION DOCUMENTATION NOTES

1. ENGINEER SHALL NOT AT ANY TIME SUPERVISE, DIRECT, CONTROL, OR HAVE AUTHORITY OVER ANY CONTRACTOR'S WORK, NOR SHALL ENGINEER HAVE AUTHORITY OVER OR BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION SELECTED OR USED BY ANY CONTRACTOR, OR THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO, FOR SECURITY OR SAFETY AT THE PROJECT SITE, NOR FOR ANY FAILURE OF A CONTRACTOR TO COMPLY WITH LAWS AND REGULATIONS APPLICABLE TO SUCH CONTRACTOR'S FURNISHING AND PERFORMING OF ITS WORK.

2. ENGINEER NEITHER GUARANTEES THE PERFORMANCE OF ANY CONTRACTOR NOR ASSUMES RESPONSIBILITY FOR ANY CONTRACTOR'S FAILURE TO FURNISH AND PERFORM ITS WORK IN ACCORDANCE WITH THE CONTRACT BETWEEN OWNER AND SUCH CONTRACTOR. ENGINEER IS NOT RESPONSIBLE FOR VARIATIONS BETWEEN ACTUAL CONSTRUCTION BIDS OR COSTS AND ENGINEER'S OPINIONS OR ESTIMATES REGARDING CONSTRUCTION COSTS.

3. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ERRORS OR OMISSIONS OF ANY CONTRACTOR, SUBCONTRACTOR, SUPPLIER, ITSELF OR OF ANY OF THEIR AGENTS OR EMPLOYEES AT THE PROJECT SITE. NEITHER ENGINEER NOR OWNER SHALL BE LIABLE OR FISCALLY RESPONSIBLE FOR ANY PLAN INTERPRETATION OR FOR ANY DECISION MADE REGARDING THE CONSTRUCTION CONTRACT DOCUMENTS OR ANY APPLICATION, INTERPRETATION, OR CLARIFICATION THEREOF OTHER THAN THOSE MADE BY ENGINEER. NO CHANGES TO THE CONTRACT AMOUNT, CONTRACT SCOPE OR QUANTITY SHALL BE PERMITTED EXCEPT THOSE AS REVIEWED AND APPROVED BY ENGINEER.

4. THE GENERAL CONDITIONS FOR THIS CONSTRUCTION PROJECT AND ASSOCIATED CONTRACT DOCUMENTS ARE THE STANDARD GENERAL CONDITIONS AS PREPARED BY THE ENGINEER. THIS PROJECT SHALL ALSO BE SUBJECT TO THE SPECIAL PROVISIONS AND SUPPLEMENTAL CONDITIONS AS PREPARED BY ENGINEER.

GENERAL SURVEY NOTES

1. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO RECHECK THE EXISTING TOPOGRAPHIC INFORMATION FOR THE ENTIRE PROJECT AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING OF CONSTRUCTION.

2. CONTRACTOR SHALL LOCATE, PROTECT AND MAINTAIN BENCHMARKS, MONUMENTS AND CONTROL POINTS. RE-ESTABLISHMENT OF DISTURBED OR DESTROYED ITEMS SHALL BE ACCOMPLISHED BY A TEXAS REGISTERED PROFESSIONAL LAND SURVEYOR AT NO COST TO THE OWNER.

PROJECT TRAVERSE STATIONS

Station	Easting	Northing	Elevation
TS-1	3300438.992'	10535757.794'	402.948'
TS-2	3299952.565'	10535320.352'	402.820'
TS-3	3299628.125'	10534874.063'	406.560'
TS-4	3299231.396'	10534365.460'	412.459'
TS-5	3298689.179'	10533846.874'	422.208'
TS-6	3298051.773'	10533154.539'	424.183'
TS-7	3297724.501'	10532721.207'	423.798'
TS-8	3296873.470'	10531793.185'	426.271'
TS-9	3296328.399'	10531136.038'	430.132'
TS-10	3299216.818'	10535171.028'	406.257'
TS-11	3300177.590'	10534294.978'	405.683'
TS-12	3300658.885'	10533921.499'	406.531'
TS-13	3301157.196'	10533389.749'	410.638'
TS-14	3296562.844'	10531452.247'	427.550'

PROJECT BENCHMARK

Name	Point Elevation
BM-1	427.550'

Description:
Star cut into northern most corner of concrete curb inlet on the north side of Gurley St.

Revisions

Date:	Remarks:

CITY OF WACO
12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS
Waco, Texas

4/17/2017

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GENERAL CONSTRUCTION NOTES AND SURVEY CONTROL DATA

BSP engineers
F - 7587

Project No:
162347.00

STORM WATER POLLUTION PREVENTION NOTES:

1. PRIOR TO CONSTRUCTION, MAKE CERTAIN THE NOTICE OF INTENT (N01) OR CONSTRUCTION SITE NOTICE (CSN) HAS BEEN FILED AND POSTED ONSITE FOR PUBLIC VIEWING AND THE TPDES REPORT AND SWPPP ARE AVAILABLE AT THE TRAILER.

2. INSTALL STORM WATER POLLUTION PREVENTION CONTROLS PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, EXCAVATION).

3. THE PLACEMENT OF STORM WATER POLLUTION PREVENTION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED STORM WATER POLLUTION PREVENTION CONTROL PLAN.

4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR AND ENGINEER AFTER INSTALLATION OF THE STORM WATER POLLUTION PREVENTION CONTROLS AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK.

5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE ENGINEER AS APPROPRIATE. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE STORM WATER POLLUTION PREVENTION CONTROL PLAN MAY BE REQUIRED BY THE ENGINEER DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.

6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT INTERVALS OF AT LEAST ONCE EVERY TWO (2) WEEKS, AND IMMEDIATELY AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON (S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.

7. PRIOR TO FINAL ACCEPTANCE THE THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND RE-VEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF PROPERLY.

8. WHERE SILT FENCE CANNOT BE PROPERLY INSTALLED USE TRIANGULAR FILTRATION DIKE OR HAY BALES.

9. SOIL DISTURBANCES SHALL BE MINIMIZED BY EXPOSING ONLY THE SMALLEST PRACTICAL AREA OF LAND REQUIRED FOR THE CLEARING AND GRADE ACTIVITY AND FOR THE CONSTRUCTION ACTIVITY, FOR THE SHORTEST PRACTICAL PERIOD OF TIME.

10. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND EXCEPT AS PROVIDED BELOW, WILL BE INITIATED NO MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

11. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN TWENTY ONE (21) DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.

12. TRAFFIC LEAVING THE CONSTRUCTION SITE WILL EXIT THROUGH A STABILIZED CONSTRUCTION EXIT AS LOCATED ON THE PLANS. WHEN SOILS HAVE COLLECTED ON THE STABILIZED VEHICULAR EXIT TO AN EXTENT WHICH REDUCES ITS INTENDED EFFECTIVENESS, THE SURFACE WILL BE CLEANED AND RE-ESTABLISHED FOR THE INTENDED PURPOSE.

13. MUD/DIRT INADVERTENTLY TRACKED OFF-SITE AND ONTO PUBLIC STREETS SHALL BE REMOVED IMMEDIATELY.

14. PERMANENT EROSION CONTROL:

ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:

(A) A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND BETWEEN THE CURB AND RIGHT-OF-WAY LINE.

(B) THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS UNLESS SPECIFIED OTHERWISE BY THE PROJECT'S LANDSCAPE PLAN:

BROADCAST SEEDING:
I. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 2 POUNDS PER 1000 SF OF UN-HULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
II. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 2 POUNDS PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.

(C) FERTILIZER SHALL BE A PELLETED OR GRANULAR SLOW RELEASE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1 POUND PER 1000 SF.

(D) MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF.

HYDRAULIC SEEDING:

I. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 1 POUND PER 1000 SF OF UN-HULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
II. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 1 POUND PER 1000 SF WITH A PURITY OF 9% WITH 85% GERMINATION.

(E) FERTILIZER SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1.5 POUNDS PER 1000 SF.

(F) MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF, WITH SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1000 SF.

(G) THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS RAINFALL OCCURRENCES OF 1/2 INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.

(H) RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

(I) SEEDING SHALL APPLY TO ALL AREAS WITHIN DISTURBED PROJECT AREA NOT COVERED BY PAVEMENT OR BUILDING PAD.

(J) TWO SEEDINGS SHOULD OCCUR DURING PROJECT. FIRST SHOULD OCCUR WITHIN 14 DAYS AFTER PONDS AND GRADED AND SECOND BY FINAL PUNCH LIST.

15. THE EPA GENERAL PERMIT REQUIRES THAT A TEMPORARY OR PERMANENT SEDIMENT BASIN BE INSTALLED IN ANY DRAINAGE LOCATION WHERE MORE THAN 10 ACRES IN THE UPSTREAM DRAINAGE ARE DISTURBED AT ONE TIME. THE SEDIMENT BASIN MUST PROVIDE AT LEAST 3,600 CUBIC FEET OF STORAGE FOR EVERY ACRE IF LAND, WHICH IT DRAINS.

16. NOTE 14 SHALL APPLY TO ALL AREAS WITHIN THE PROJECT AREA NOT COVERED BY PAVEMENT, BUILDING PAD, OR IDENTIFIED TO BE SODDED/SEEDED ON LANDSCAPE PLANS. THIS INCLUDES AREAS DISTURBED OUTSIDE PROPERTY IN ROW'S.

Revisions

Date:	Remarks:

CITY OF WACO
12th STREET & GURLEY LANE
SIDEWALK IMPROVEMENTS
Waco, Texas

4/17/2017

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STORM WATER POLLUTION PREVENTION NOTES

BSP engineers
F - 7587

Project No:
162347.00

PROJECT LAYOUT SIDEWALK IMPROVEMENTS

scale: 1:300

PROJECT LAYOUT

Revisions

Date: Remarks:

BSP engineers F - 7587

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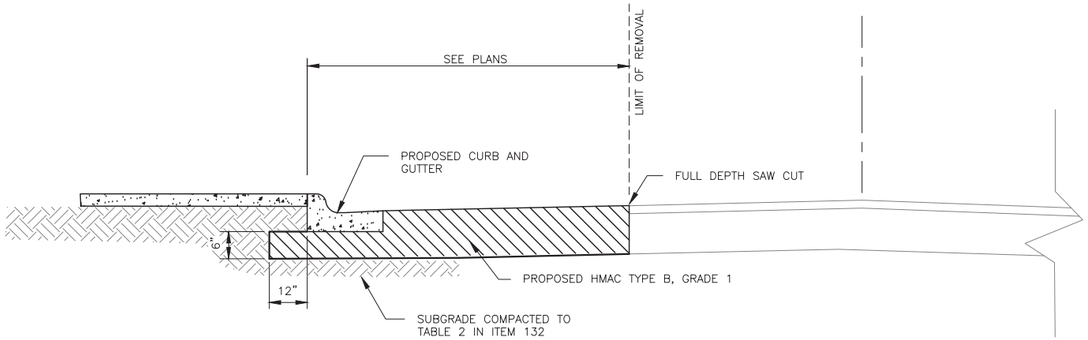
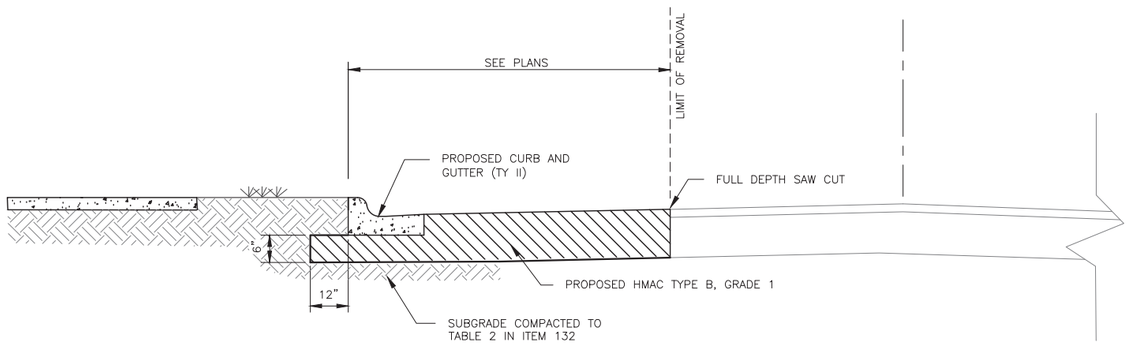


ROAD REPAIR "A"

SCALE: NTS



ROAD REPAIR "B"

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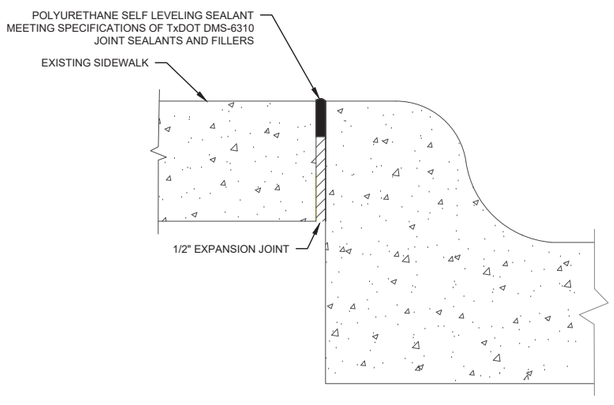

EXPANSION JOINT REPAIR DETAIL

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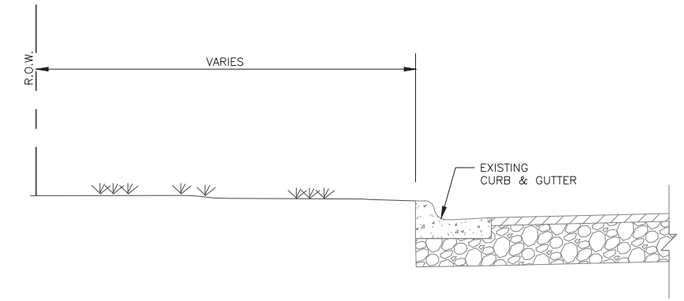

EXISTING SECTION

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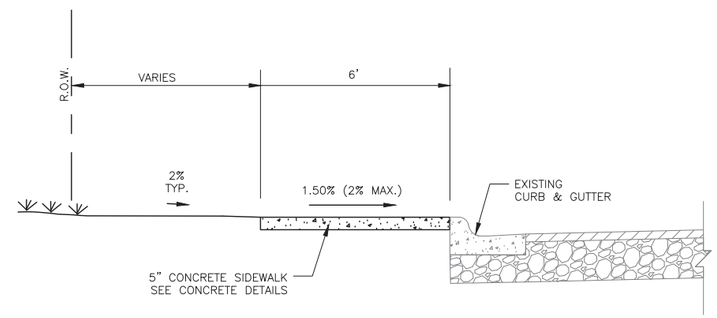

TYPICAL SECTION "A"

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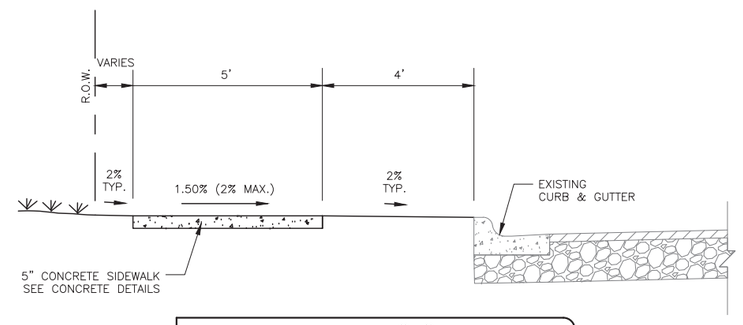

TYPICAL SECTION "B"

SCALE: NTS

Revisions

Date: Remarks:

TYPICAL SECTIONS

CITY OF WACO

12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS

Waco, Texas

4/17/2017

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Project No: 162347.00

4

CITY OF WACO

12th STREET & GURLEY LANE
SIDEWALK IMPROVEMENTS

Waco, Texas

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QUANTITY SUMMARY

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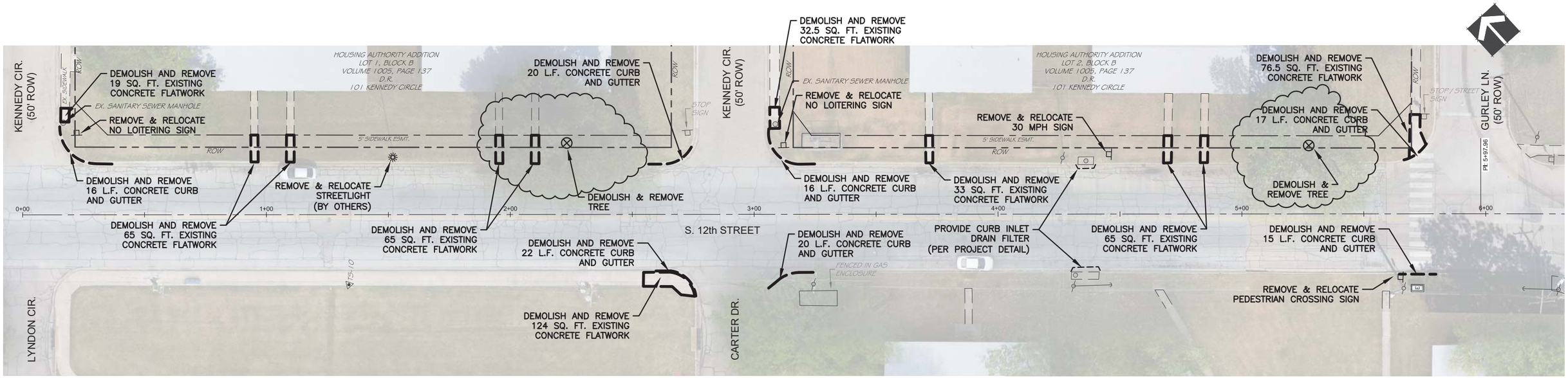

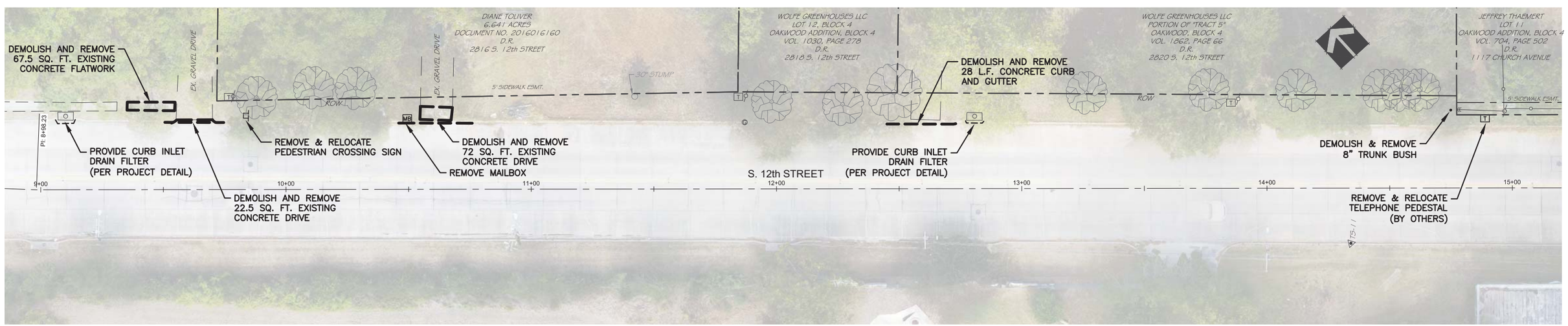

NOTES:

1. ALL SIGNS TO BE RELOCATED PER SIDEWALK PLAN SHEETS.

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REMOVAL PLAN S. 12th STREET - SHEET 1 OF 2

Revisions

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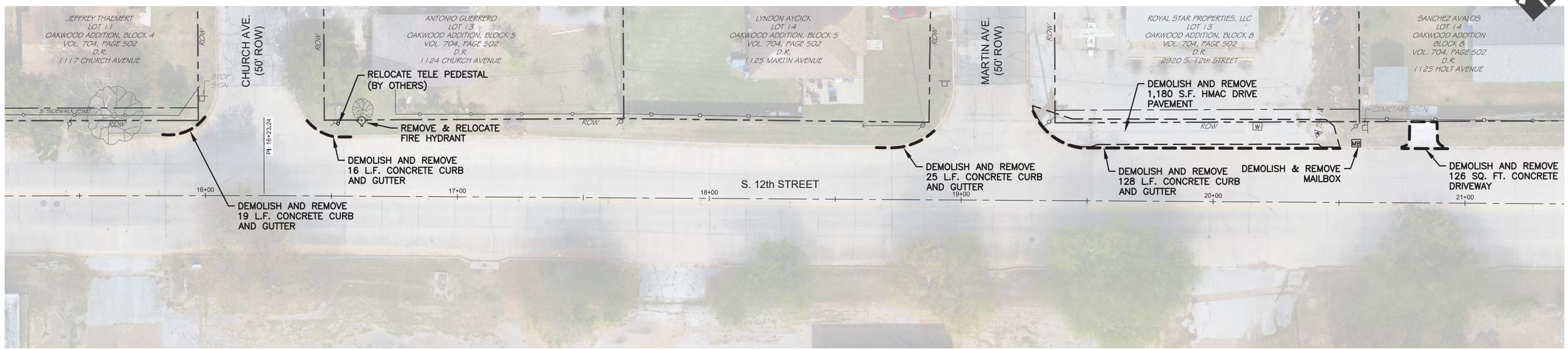
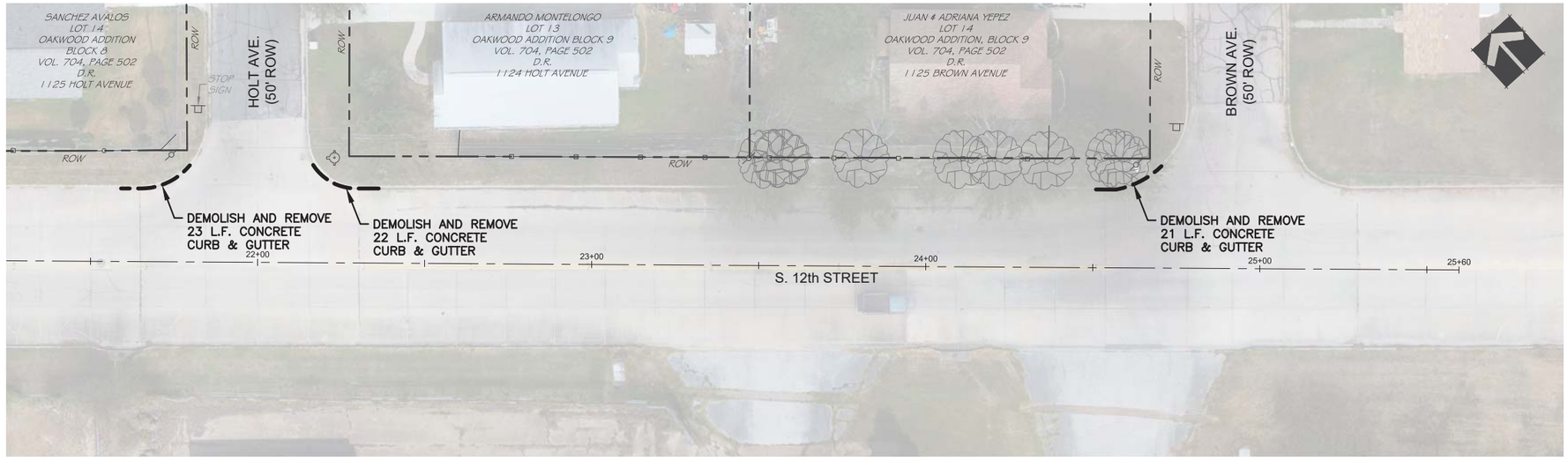
CITY OF WACO

12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS

Waco, Texas

Project No: 162347.00





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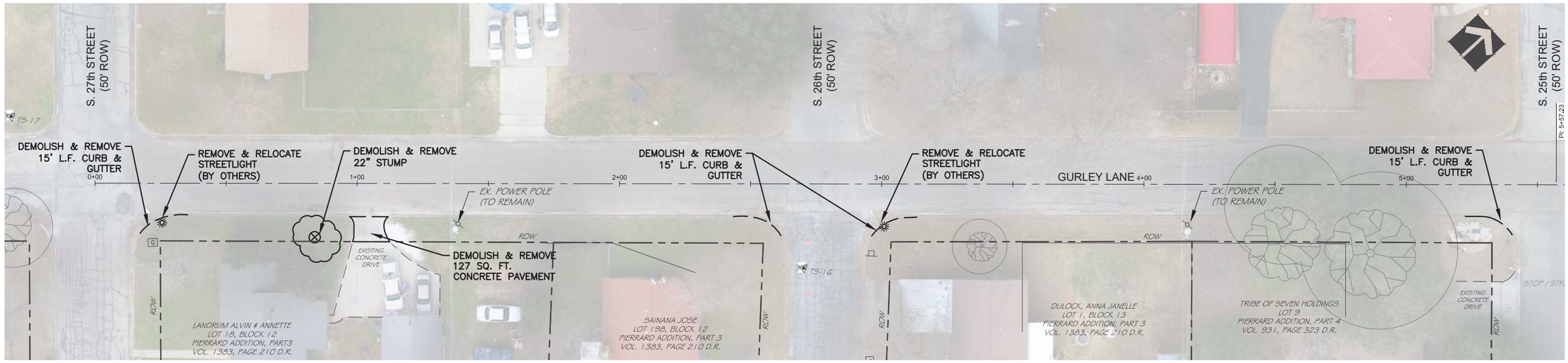

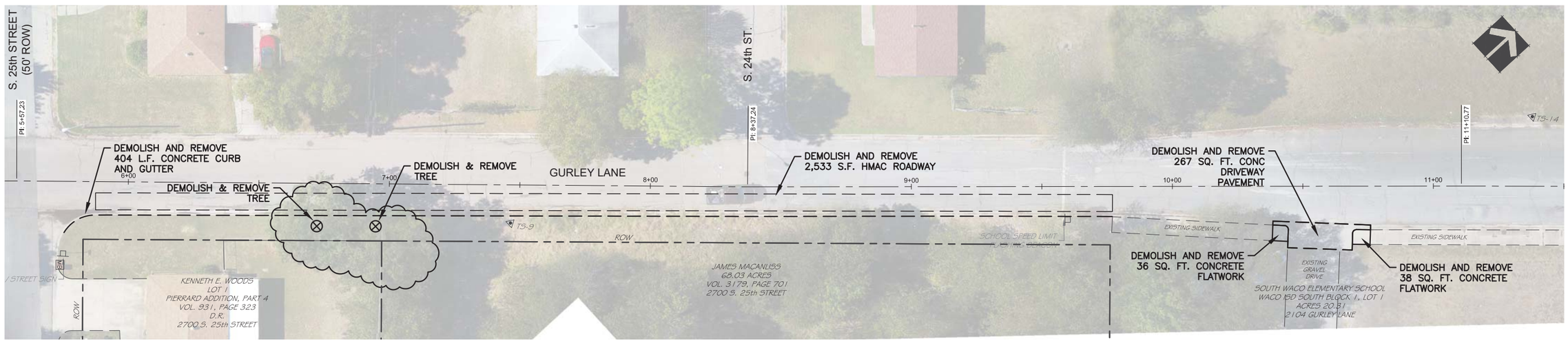

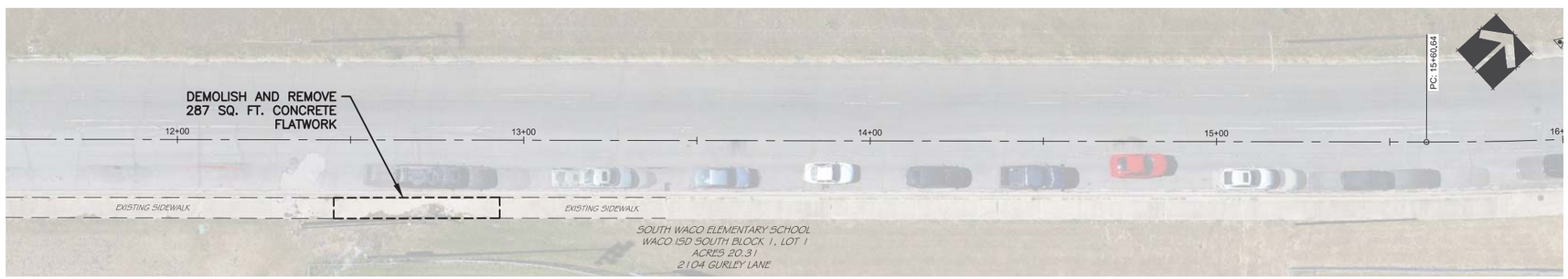

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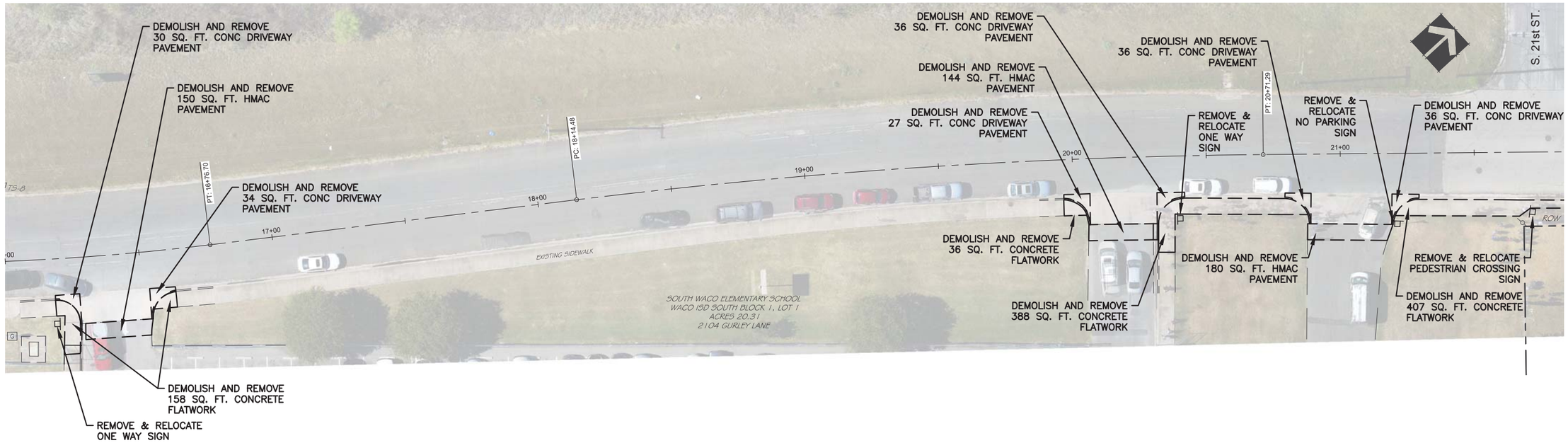

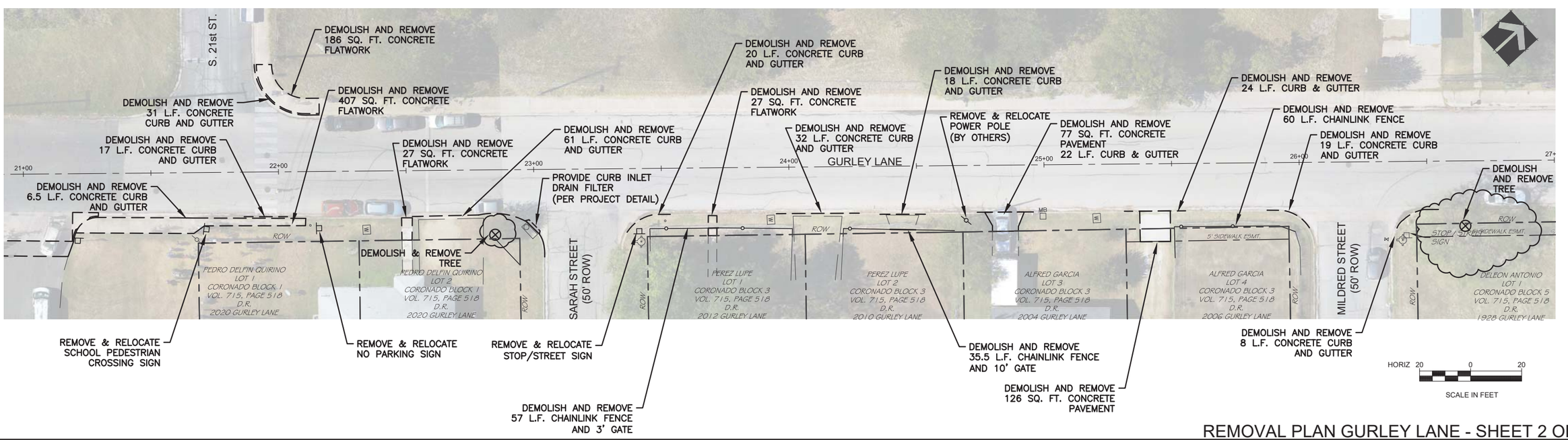

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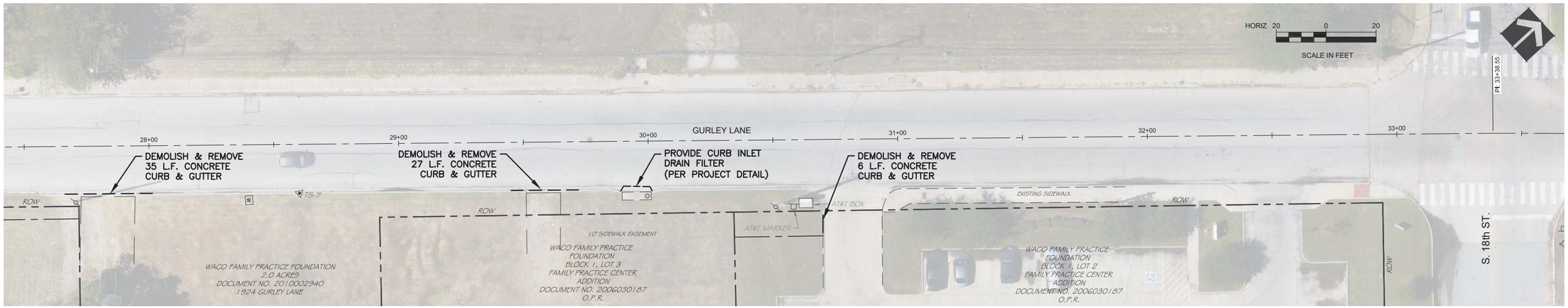

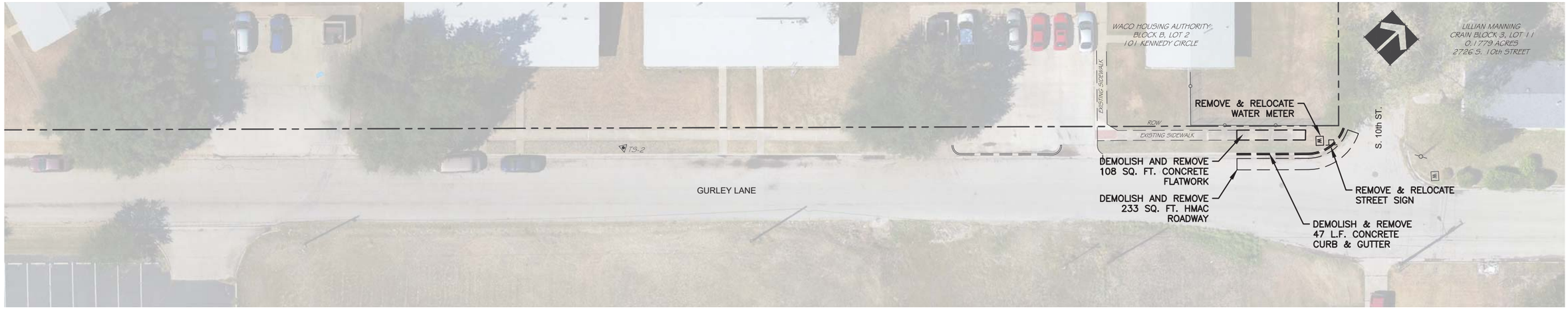

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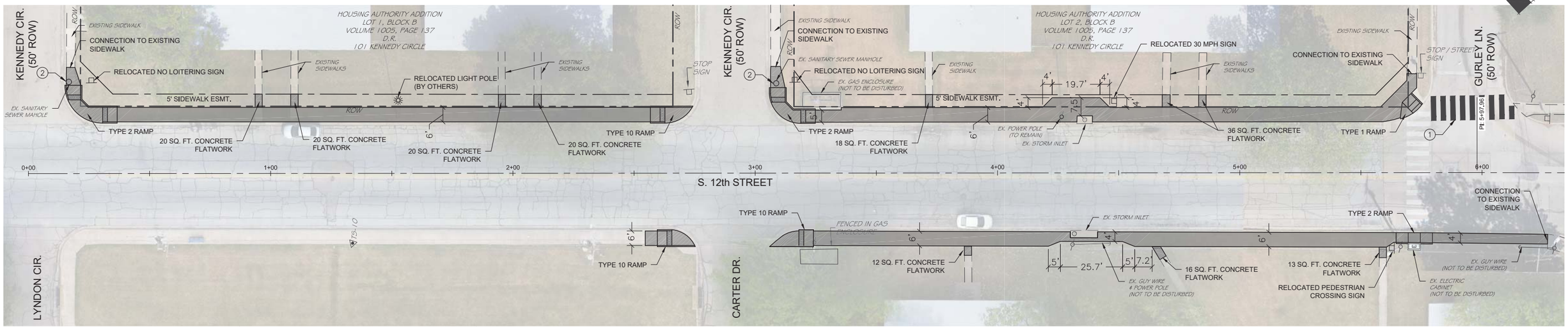

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KEYED NOTES:

1. FURNISH AND INSTALL CROSSWALK STRIPING
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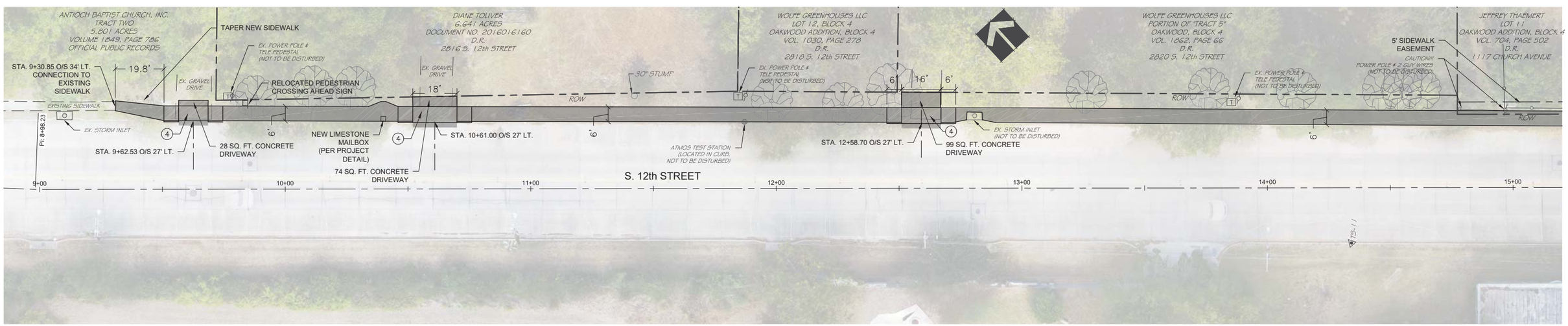

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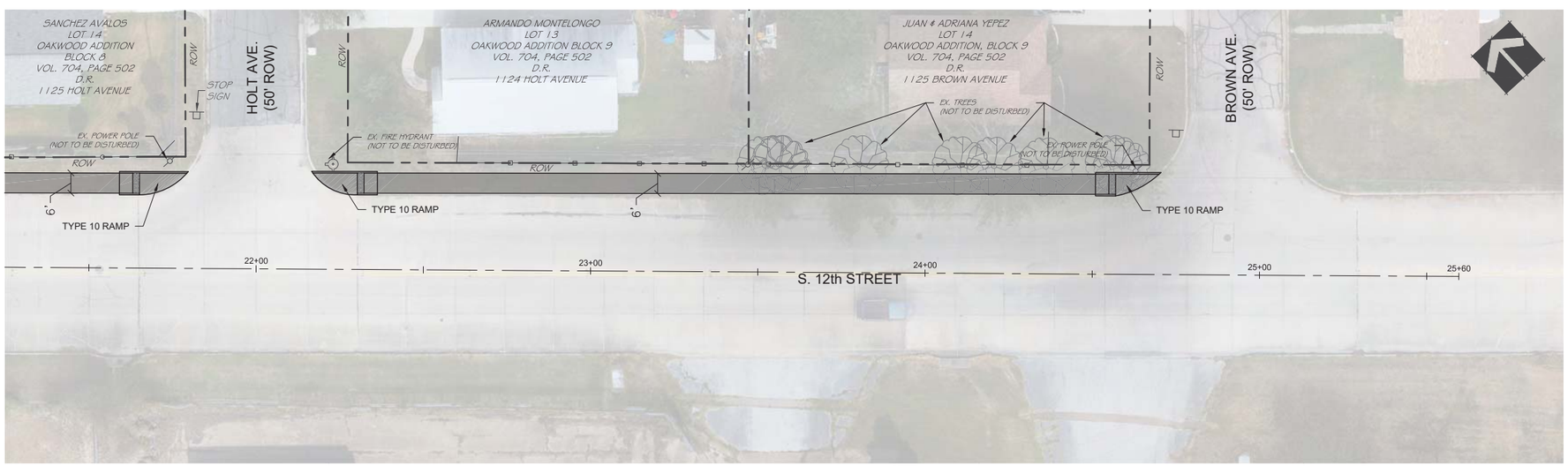

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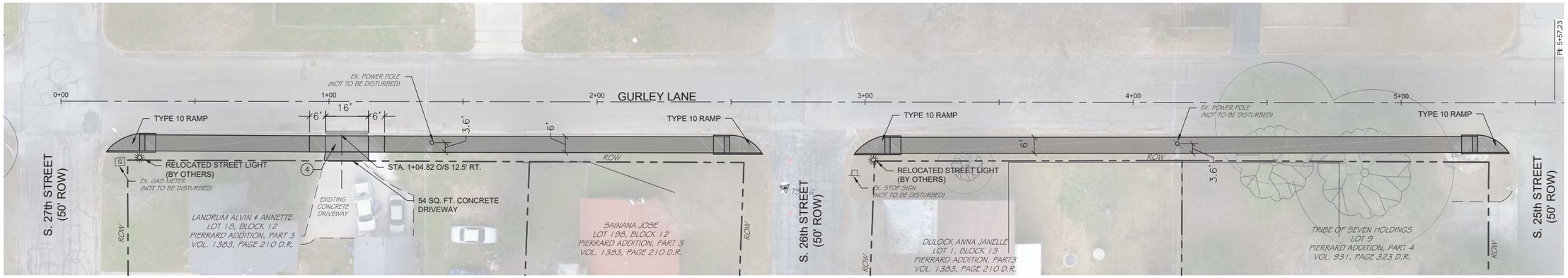

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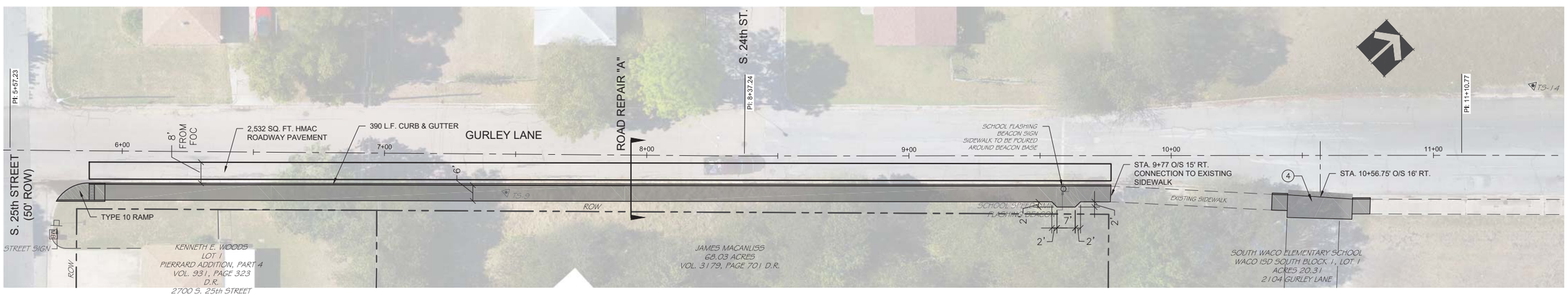

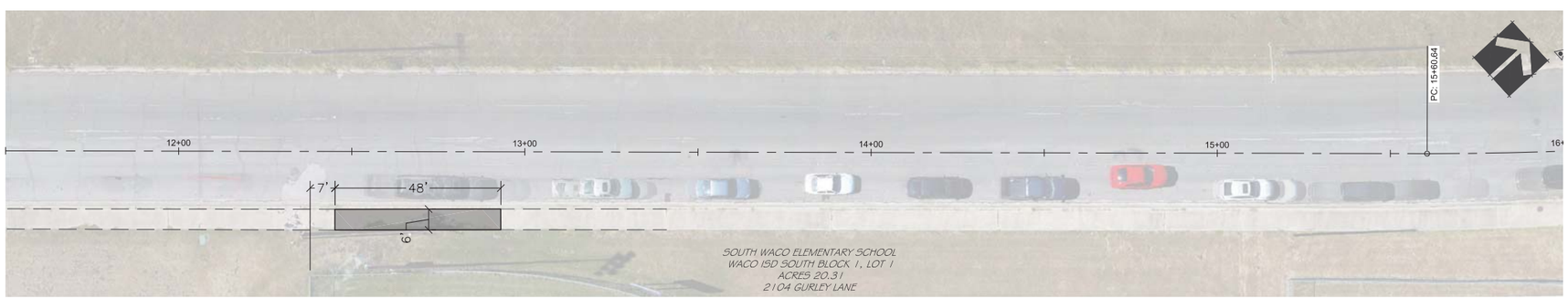

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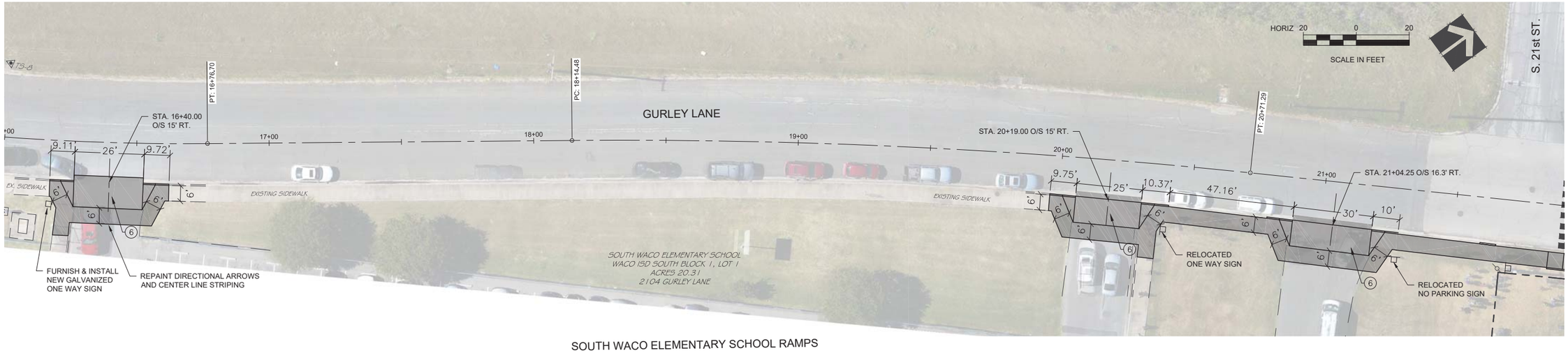

SOUTH WACO ELEMENTARY SCHOOL RAMPS

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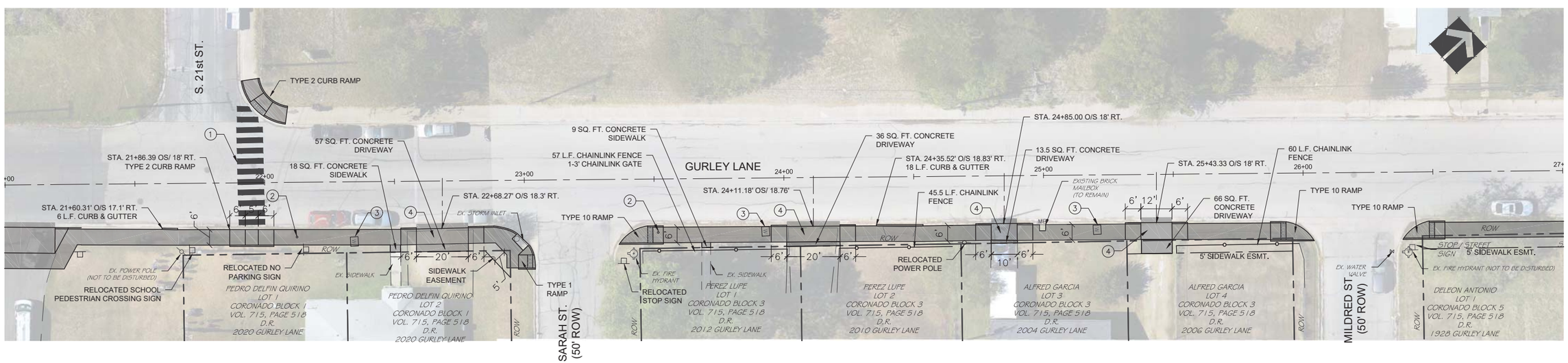

GURLEY LANE - SHEET 2 OF 3

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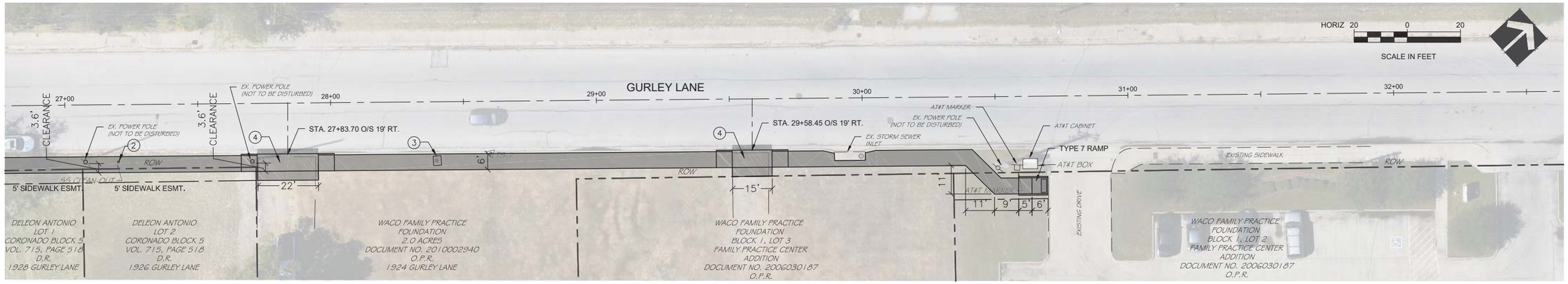

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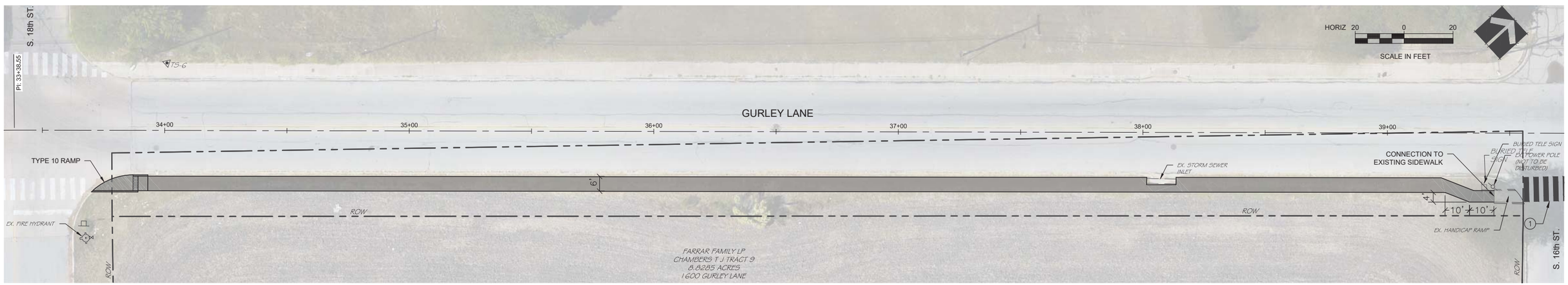

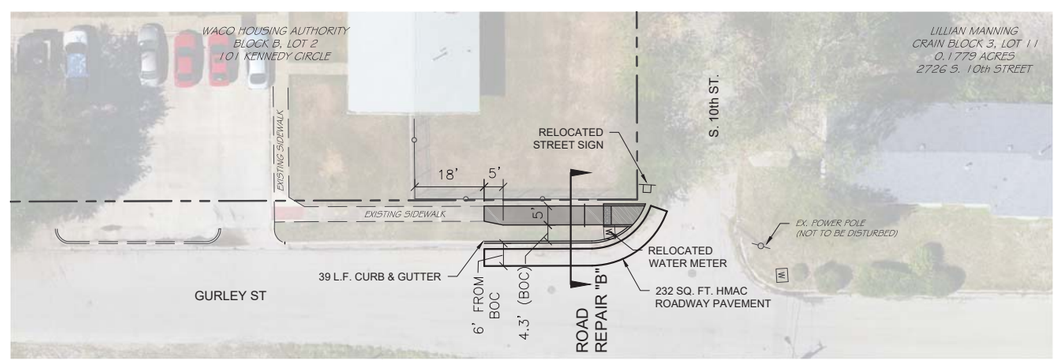

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CITY OF WACO
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Waco, Texas

Project No: 162347.00

G-1

STORM WATER POLLUTION PREVENTION

GENERAL NOTES

1. ALL CONSTRUCTION WORK WITHIN THE CITY OF WACO MUST COMPLY WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALTY GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) PROGRAM, AND CITY OF WACO ORDINANCES AND STANDARD SPECIFICATIONS FOR CONSTRUCTION (SECTION GP–3.6.D STORM WATER POLLUTION PREVENTION PLAN (EROSION CONTROL PLAN)).

2. ALL STORM WATER POLLUTION PREVENTION AND EROSION CONTROL PLANS MUST BE APPROVED BY THE CITY OF WACO STORM WATER MANAGER PRIOR TO INSTALLATION OF THE PROTECTIVE MEASURES. THE INSTALLATION OF THE PROTECTIVE MEASURES MUST BE INSPECTED AND APPROVED BY THE CITY OF WACO ENVIRONMENTAL INSPECTOR PRIOR TO COMMENCING ANY OTHER CONSTRUCTION ACTIVITIES.

3. ALL MATERIALS USED FOR STORM WATER POLLUTION PREVENTION SHALL MEET THE MINIMUM DESIGN AND SPECIFICATION REQUIREMENTS AS REFERENCED FROM THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) INTEGRATED STORM WATER MANAGEMENT (SWM) DESIGN MANUAL FOR CONSTRUCTION. THE CONTRACTOR SHALL USE APPROPRIATE CONTROL DEVICES TO PROTECT AGAINST STORM WATER POLLUTION FROM CONSTRUCTION SITE ACTIVITY.

4. IN THE EVENT OF CONFLICT BETWEEN THE SPECIFIED REQUIREMENTS AND STORM WATER POLLUTION CONTROL LAWS, RULES, OR REGULATIONS, OR OTHER LOCAL, STATE, OR FEDERAL AGENCIES, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.

5. ALL PROTECTIVE MEASURES SHALL BE INSPECTED REGULARLY (AT LEAST AS OFTEN AS REQUIRED BY THE TPDES CONSTRUCTION GENERAL PERMIT).

6. ALL POLLUTION PREVENTION CONTROL STRUCTURES AND PROCEDURES MUST BE MAINTAINED IN FULL WORKING ORDER AT ALL TIMES DURING CONSTRUCTION. THIS SHALL INCLUDE ANY NECESSARY REPAIR OR REPLACEMENT OF ITEMS, WHICH HAVE BECOME DAMAGED OR INEFFECTIVE. REMOVE SEDIMENT AND OTHER POLLUTANTS, WHICH ACCUMULATE IN POLLUTION CONTROL DEVICES AS NECESSARY TO MAINTAIN THE INTENDED DESIGN EFFICIENCY FOR THE POLLUTION PREVENTION MEASURE.

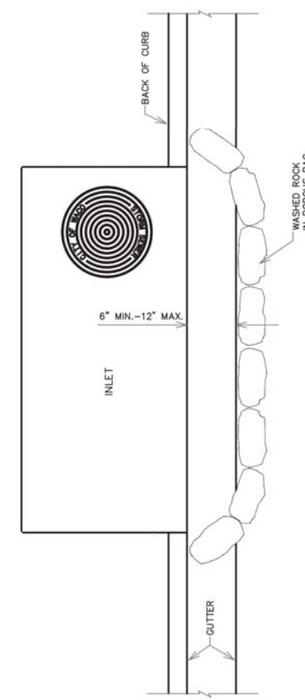
5. UPON COMPLETION OF CONSTRUCTION AND ACHIEVEMENT OF FINAL STABILIZATION, PROPERLY REMOVE THE TEMPORARY POLLUTANT CONTROL STRUCTURES AND COMPLETE THE AREA AS INDICATED. POLLUTION CONTROL DEVICES MADE OF ORGANIC MATERIALS DESIGNED TO DEGRADE NATURALLY IN PLACE WILL NOT REQUIRE REMOVAL, UNLESS SPECIFICALLY REQUIRED BY THE OWNER, ENGINEER, OR OWNER'S REPRESENTATIVE.

6. STANDARD DETAILS FOR SOME PROTECTIVE MEASURES HAVE BEEN INCLUDED. PLEASE REFER TO THE iSWM DESIGN MANUAL FOR OTHER PROTECTIVE MEASURES AS NEEDED.

WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	BOOK PAGE NUMBER 0000
1	REMOVE SEAL	DG	06/03/2014	DATE 06/03/2014

G-3



TOP VIEW

CURB INLET DRAIN FILTER

WACO ENGINEERING SERVICES

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NO.	COMMENTS	BY	DATE	BOOK PAGE NUMBER 0000
1	REMOVE SEAL	DG	06/03/2014	DATE 06/03/2014

CITY OF WACO
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CITY OF WACO GENERAL DETAILS (1 OF 2)

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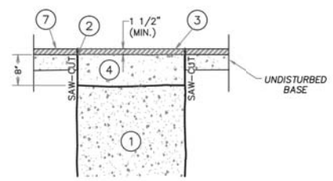
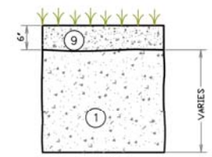
G-5



CLASS A

H.M.A.C.

NOTE: CLASS A-1 SURFACE REPLACEMENT SHALL HAVE 2" ASPHALT AND 10" CONCRETE

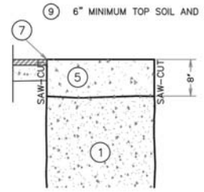


CLASS E

SEED OR SOD

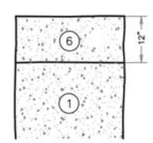
SURFACE REPLACEMENT DETAILS

1. GRAVEL FOR TRENCH BACKFILL – MECHANICALLY COMPACTED IN ONE FOOT (MAX.) LIFTS TO 95% STANDARD PROCTOR DENSITY.
2. TACK COAT OF RC-2 ASPHALT-APPLIED TO CLEAN SURFACE AND ALLOWED TO CURE.
3. HOT MIX ASPHALTIC CONCRETE – HOT LAY, PLACED AND COMPACTED TO MATCH EXISTING SURFACE THICKNESS. 1 1/2" MIN.
4. CONCRETE – MIN. 2000 P.S.I, PLACED TO 1 1/2" BELOW EXISTING SURFACE. 8" MIN.
5. CONCRETE – MIN. 3000 P.S.I., PLACED TO MATCH EXISTING CONCRETE PAVEMENT. 8" MIN. IF THE EXISTING CONCRETE PAVEMENT IS REINFORCED, THE NEW CONCRETE PAVEMENT SHALL BE REINFORCED IN A LIKE MANNER. SEE STANDARD DETAILS G-10 & ST-1
6. ROAD GRAVEL – MECHANICALLY COMPACTED TO 95% STD. PROCTOR DENSITY.
7. CUT – EDGE OF EXISTING PAVEMENT ON BOTH SIDES OF DITCH LINE TO PRODUCE A SMOOTH AND EVEN EDGE OF SURFACE REPLACEMENT.
8. USE FLOWABLE FILL TO BACKFILL ALL DITCHES 18" OR NARROWER, IN THE RIGHT OF WAY.
9. 6" MINIMUM TOP SOIL AND SEED OR SOD – PAID SUBSIDIARY.



CLASS C

CONCRETE



CLASS D

ROAD GRAVEL

WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	BOOK PAGE NUMBER 0000
04	REMOVE SEAL	DG	08/03/2014	DATE 08/03/2014
03	REMOVE "CLASS B" ADD "CLASS E"/ADD NOTE 9.	DG	08/01/2014	
02	REVISE NOTE #8	DG	02/01/2013	
01	REMOVE DIMENSION: 6" MINIMUM (CLASS B) / ADD SAW-CUT	DG	06/21/2011	

G-10

GENERAL CONCRETE & REINFORCEMENT NOTES

GENERAL

1. ALL CONCRETE AND REINFORCEMENT MATERIALS AND PLACEMENT MUST COMPLY WITH SECTION 5.1 OF THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. CURING MEMBRANE SHALL BE APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

MATERIALS

3. ALL CONCRETE SHALL BE A 3000 PSI, 5 SACK, MIX WITH A MAXIMUM 15% FLYASH CONTENT; PLACED AT A MAXIMUM 4" SLUMP, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER OF RECORD AND APPROVED BY THE CITY ENGINEER.
4. ALL REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60, UNLESS OTHERWISE SPECIFIED.

SITE PREPARATION

5. GRADE AND SUB GRADE NEED TO BE ADEQUATELY WATERED, PRIOR TO THE PLACEMENT OF PUG AND PRIOR TO THE PLACEMENT OF CONCRETE.
6. GRADE AND/OR SUB GRADE SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY AT ±2% OPTIMAL MOISTURE CONTENT.

REINFORCING STEEL

7. CONSTRUCTION VEHICLES SHALL NOT DRIVE ON REINFORCEMENT.
8. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE DESIGN SPECIFICATIONS AND THE ACI STANDARDS, WITH OVERLAPS OF 40 BAR DIAMETERS.
9. DOWEL BARS SHALL BE SMOOTH, LEVEL, AND PERPENDICULAR TO THE JOINT; ADEQUATELY SUPPORTED TO RETAIN PROPER ALIGNMENT; AND SHALL HAVE ONE END PROTECTED AGAINST BONDING TO THE CONCRETE IN ACCORDANCE WITH STANDARD CONSTRUCTIONS SPECIFICATIONS (SEE SECTION 5.1 PART 1 ITEM 6).
10. REBAR CHAIRS SHALL BE PLACED ON 4' MAXMUM SPACING, EACH WAY.
11. REBAR SHALL BE PLACED SUCH THAT THE MINIMUM COVER IS 2", AND THE MAXIMUM LATERAL COVER IS 3".

CONCRETE

12. PLACEMENT OF CONCRETE NEEDS TO COMPLY WITH THE SPECIFICATIONS AND ACI STANDARDS, INCLUDING HOT AND COLD WEATHER PLACEMENT. SEE STANDARD SPECIFICATION SECTION 5.1 PART 3 ITEM E FOR MORE INFORMATION.
13. NO WATER SHALL BE ADDED AFTER INSPECTION AND TESTING.
14. CONCRETE SHALL BE VIBRATED WHERE POSSIBLE.
15. UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE PLACED AT A 4" SLUMP, ±1".

DIMENSIONAL TOLERANCES

16. LEVEL AND HORIZONTAL ALIGNMENT TOLERANCES FOR CURBS, GUTTERS, PAVEMENTS, SIDEWALKS, AND RAMPS, IN ALL DIRECTIONS, SHALL BE SUCH THAT THE GAP BELOW AN UNLEVELED 10' STRAIGHTEDGE RESTING ON THE HIGH SPOTS SHALL NOT EXCEED 1/8".
17. DIMENSIONAL TOLERANCES FOR OTHER CONCRETE PLACEMENTS SHALL COMPLY WITH ACI 117.

CONSTRUCTION AND CRACK CONTROL JOINTS

18. UNLESS OTHERWISE SPECIFIED CONSTRUCTION (FULL DEPTH) JOINTS SHALL BE PLACED AT MAXIMUM OF 50' AND CRACK CONTROL JOINTS (DUMMY JOINTS) AT A MAXIMUM OF 10'.
19. CRACK CONTROL JOINTS MAY BE TOOLED OR SAWED A MINIMUM OF 1/2 THE THICKNESS OF THE CONCRETE ON CURB AND GUTTER AND 1/2" ON SIDEWALKS.
20. CONSTRUCTION JOINTS ARE FULL DEPTH JOINTS AND MAY BE CONSTRUCTED WITH DOWEL BARS, AS INDICATED IN THE DESIGN AND DETAILS.
21. CONSTRUCTION JOINTS WITH EXPANSION MATERIAL ARE FULL DEPTH JOINTS THAT MAY BE CONSTRUCTED WITH DOWEL BARS, AS INDICATED IN THE DESIGN AND DETAILS. EXPANSION MATERIAL MAY BE 1/2" THICK REDWOOD OR ANY MATERIAL COMPLYING WITH ASTM D 1751. ALL MATERIALS MUST BE PLACED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	BOOK PAGE NUMBER 0000
2	REMOVE SEAL	DG	08/03/2014	DATE 08/03/2014
1	REVISE NOTES #3, #9 & #12	DG	07/17/2013	

Revisions

Date: Remarks:

CITY OF WACO GENERAL DETAILS (2 OF 2)

CITY OF WACO

12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS

Waco, Texas

4/17/2017

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BSP engineers F - 7587

Project No: 162347.00

ST-1

STREETS - GENERAL NOTES

GENERAL

1. ALL CONCRETE AND REINFORCEMENT MATERIALS AND PLACEMENT MUST COMPLY WITH SECTION 5.1 OF THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. PLEASE REFER TO CITY OF WACO MANUAL OF STANDARD DETAILS G-10 FOR GENERAL CONCRETE AND REINFORCEMENT NOTES.

STREETS

3. SAWED JOINTS MUST BE SAWED AS SOON AS CONCRETE CAN SUPPORT THE WEIGHT OF THE SAW.
4. A BURLAP DRAG FINISH IS SPECIFIED FOR CONCRETE PAVEMENT.
5. AT THE CONTRACTOR'S OPTION, EVERY OTHER LONGITUDINAL CONSTRUCTION JOINT MAY BE DELETED AND A SAWED JOINT OF THE SAME DETAIL AS THE TRANSVERSE JOINT USED IN IT'S PLACE.
6. TRANSVERSE CONSTRUCTION JOINTS SHALL BE OF THE SAME DETAIL AS LONGITUDINAL CONSTRUCTION JOINTS AND SHALL BE LOCATED AT A NORMAL JOINT LOCATION.

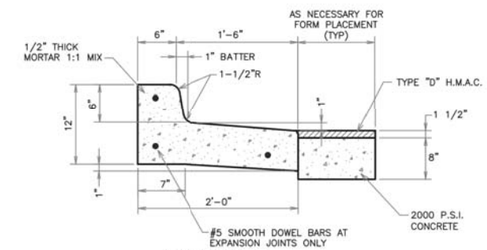
CURB AND GUTTER

7. CURB AND GUTTER FORMS NEED TO BE "TAPPED" TO MINIMIZE VOIDS. WITHIN 24 HOURS OF REMOVAL OF THE FORMS, ANY VOIDS SHALL BE PATCHED WITH PORTLAND CEMENT MORTAR.
8. CONSTRUCTION JOINTS WITH EXPANSION MATERIAL SHALL BE PLACED AT 50' INTERVALS, AND AT THE BEGINNING AND END OF ALL CURB RETURNS AND DRIVE APPROACHES.
9. TOOLED, CRACK CONTROL (DUMMY) JOINTS WILL BE CUT ON 10' SPACING. JOINTS WILL BE CUT AT LEAST HALFWAY THROUGH THE FACE, TOP, AND GUTTER.
10. CURB AND GUTTER SHALL CURE A MINIMUM OF 7 DAYS PRIOR TO INSTALLATION OF BASE COURSE, OR WITH THE PRIOR APPROVAL OF THE CITY ENGINEER, SHALL REACH A COMPRESSIVE STRENGTH OF 3000 PSI AS TESTED BY CYLINDER BREAK.
11. CURB AND GUTTER SHALL BE PLACED USING A MULE AND GOOSENECK. OR WITH THE PRIOR APPROVAL OF THE CITY ENGINEER, OTHER APPROVED EQUIVALENT MEANS TO PRODUCE A UNIFORM PRODUCT.

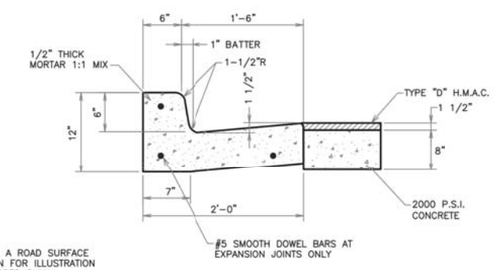
WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	INDEX PAGE NUMBER 0000
03	REMOVE SEAL	DG	09/03/2014	DATE 09/03/2014
02	REVISED ALL NOTES	DG	02/01/2013	
01	UPDATED	DG	10/01/2010	

ST-8



INDIRECT FLOW



NOTE:
CLASS A ROAD SURFACE SHOWN FOR ILLUSTRATION PURPOSES ONLY.

DIRECT FLOW

STANDARD CURB & GUTTER

WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	INDEX PAGE NUMBER 0000
02	REMOVE SEAL	DG	09/03/2014	DATE 09/03/2014
01	UPDATED	DG	10/01/2010	

Revisions
Date: Remarks:

CITY OF WACO
12th STREET & GURLEY LANE
SIDEWALK IMPROVEMENTS
Waco, Texas

4/17/2017
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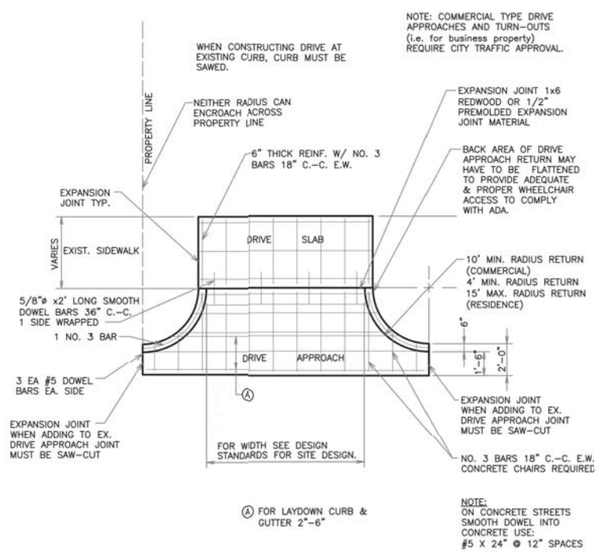
BSP engineers F-7587

CITY OF WACO STREET DETAILS (1 OF 2)

Project No:
162347.00

ST-10

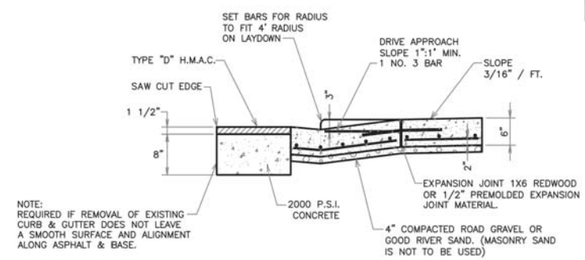


STANDARD DRIVE APPROACH

WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	BOOK PAGE NUMBER 0000
03	REMOVE SEAL	DG	09/03/2014	DATE 09/03/2014
02	UPDATED	DG	01/05/2012	
01	UPDATED	DG	10/01/2010	

ST-11

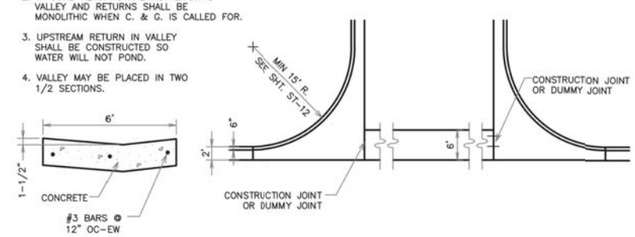


STREET TIE-IN

NEW DRIVE APPROACH ON EXISTING ASPHALT STREET

NOTE:

1. CURB & GUTTER TO BE PAID FOR SEPARATELY FROM CONCRETE VALLEY AT THE CONTRACTOR UNIT PRICE FOR CURB & GUTTER.
2. IF CURB RETURNS ARE NOT EXISTING VALLEY AND RETURNS SHALL BE MONOLITHIC WHEN C. & G. IS CALLED FOR.
3. UPSTREAM RETURN IN VALLEY SHALL BE CONSTRUCTED SO WATER WILL NOT POND.
4. VALLEY MAY BE PLACED IN TWO 1/2 SECTIONS.

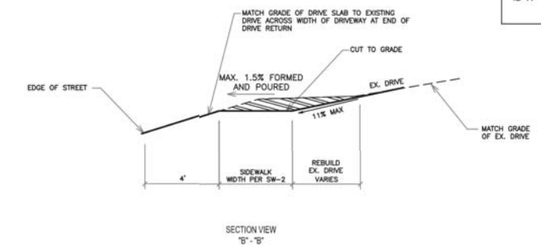


STANDARD VALLEY

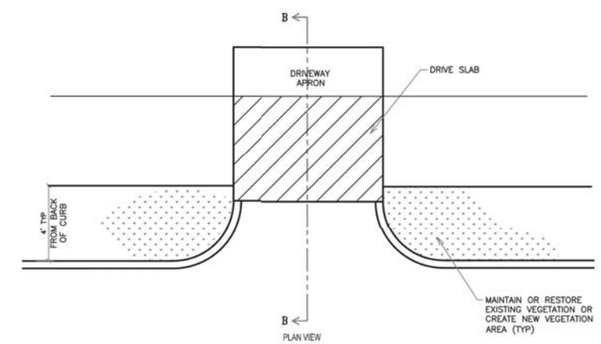
WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	BOOK PAGE NUMBER 0000
02	REMOVE SEAL	DG	09/03/2014	DATE 09/03/2014
01	UPDATED	DG	10/01/2010	

SW-3



SECTION VIEW "B"-"B"



TYPICAL SIDEWALK TREATMENT AT NEW DRIVEWAYS

SCALE NTS

WACO ENGINEERING SERVICES

REVISIONS				
NO.	COMMENTS	BY	DATE	BOOK PAGE NUMBER 0000
03	REMOVE SEAL	DG	09/03/2014	DATE 09/03/2014
02	SLOPE FOR REBUILDING DRIVES FROM 15% MAX. TO 11% MAX.	DG	02/01/2013	
01	UPDATED	DG/CA	07/03/2009	

Revisions

Date: Remarks:

CITY OF WACO

12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS

Waco, Texas

4/17/2017

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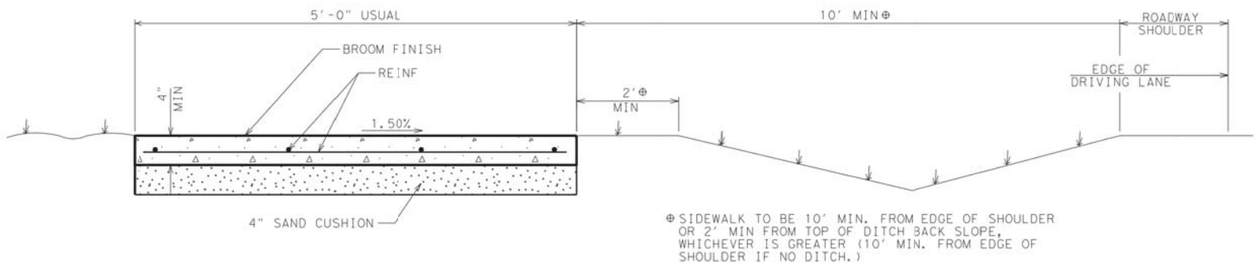
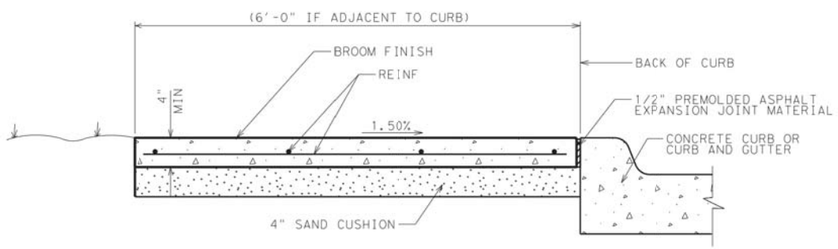
CITY OF WACO STREET AND SIDEWALK TREATMENT DETAIL

BSP engineers F - 7587

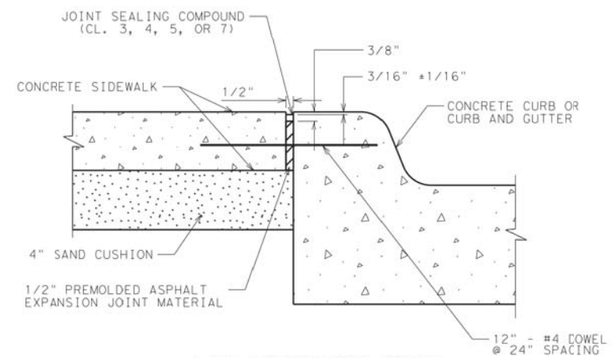
Project No: 162347.00



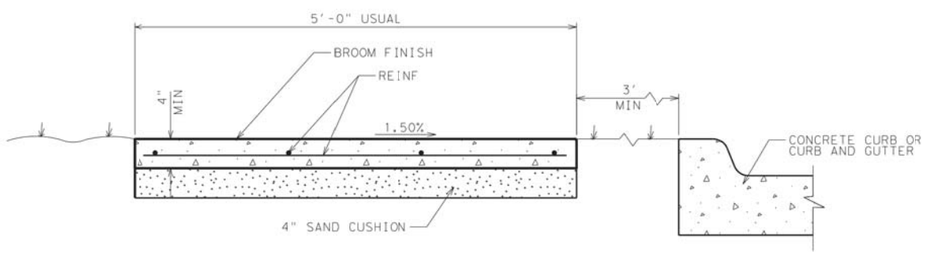
CONCRETE SIDEWALK
(ROADWAY W/O CURB)



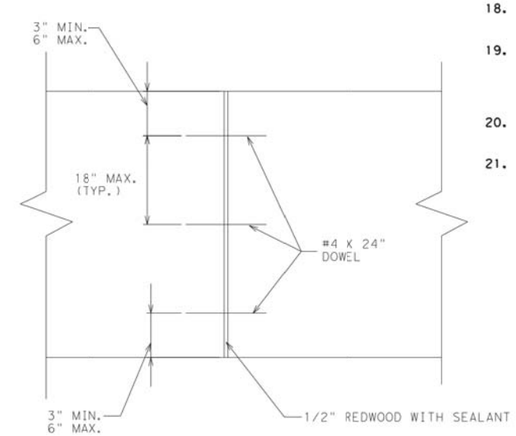
CONCRETE SIDEWALK
(ADJACENT TO CURB)



1/2" EXPANSION JOINT
(SIDEWALK ADJACENT TO CURB)



CONCRETE SIDEWALK
(OFFSET FROM CURB)



TRANSVERSE EXPANSION JOINT

GENERAL NOTES

1. SEE PLAN SHEETS FOR LOCATIONS OF SIDEWALKS AND RETAINING WALLS.
2. SEE TXDOT PED STANDARD FOR ADDITIONAL PEDESTRIAN ELEMENT CRITERIA.
3. CONSTRUCT SIDEWALK IN ACCORDANCE WITH ITEM #531.
4. UNLESS SPECIFIED ELSEWHERE IN THE PLANS TO BE ONLY REINFORCING BARS, THE REINFORCEMENT MAY BE COMPOSED OF REINFORCING BARS, WELDED WIRE REINFORCEMENT (WWR) OR ANY SUITABLE COMBINATION OF BOTH TYPES. UNLESS SPECIFIED ELSEWHERE IN THE PLANS, REINFORCING BARS SHALL BE #3 @ 18" C-C, GRADE 40 WITH LAP SPLICES 40 BAR DIAMETERS LONG. WELDED WIRE REINFORCEMENT (WWR) SHALL BE 6x6-#6 WIRE MESH.
5. ALL DOWELS SHALL BE ADEQUATELY SUPPORTED TO RETAIN PROPER ALIGNMENT.
6. REBAR CHAIRS SHALL BE PLACED ON 4" MAXIMUM SPACING EACH WAY.
7. DRILL & DOWEL INTO EXISTING CURB & GUTTER #4 BARS, 12" @ 24" SPACING.
8. CURING MEMBRANE SHALL BE APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
9. PLACE EXPANSION JOINTS EVERY 40'.
10. EXPANSION JOINTS SHALL ALIGN WITH CURB AND GUTTER JOINTS.
11. PLACE CONTRACTION OR DUMMY JOINTS AT A SPACING EQUAL TO THE WIDTH OF THE WALK.
12. TYPICAL SIDEWALKS SHALL BE FORMED AND POURED AT A MAXIMUM CROSS-SLOPE OF 1.5%. ANY CROSS-SLOPES EXCEEDING 2% WILL NOT BE ACCEPTED.
13. LOGITUDINAL SLOPE OF SIDEWALKS SHALL NOT EXCEED 5% EXCEPT IN CASES WHERE THE ADJACENT ROADWAY SLOPE EXCEEDS 5%. IF ROADWAY SLOPE EXCEEDS 5%, LONGITUDINAL SLOPE OF SIDEWALKS MAY MATCH THAT OF ROADWAY.
14. CHANGES IN LEVEL GREATER THAN 1/4 INCH ARE NOT PERMITTED ALONG SIDEWALKS.
15. NEW SIDEWALK SHALL BE CONNECTED TO ALL EXISTING ADJACENT WALKS AND STEPS.
16. MINIMUM COVER OVER REINF SHOULD BE 2". MAXIMUM LATERAL COVER OVER REINF IS 3".
17. WHERE SIDEWALK OR WHEELCHAIR RAMP ADJOINS BACK OF CURB, INLET, POLE OR ANY STRUCTURE, APPROVED EXPANSION MATERIAL SHALL BE USED.
18. IF SIDEWALK WIDTH IS LESS THAN 5', PROVIDE 5' X 5' PASSING AREAS AT INTERVALS NOT TO EXCEED 200' SPACING.
19. WHERE SIDEWALK WITH RETAINING WALL IS SPECIFIED, RETAINING WALL WILL BE SUBSIDIARY TO THE ITEM, "CONCRETE SIDEWALK (SPECIAL)(RETAINING WALL)", WITH LIMITS OF PAY AS SHOWN HEREON.
20. SIDEWALK EXPANSION JOINTS SHOULD EXTEND THROUGH ADJACENT CONCRETE STRUCTURES SUCH AS CURB AND CURB AND GUTTERS.
21. BRICK SAND UNDER SIDEWALK WILL BE UNACCEPTABLE.

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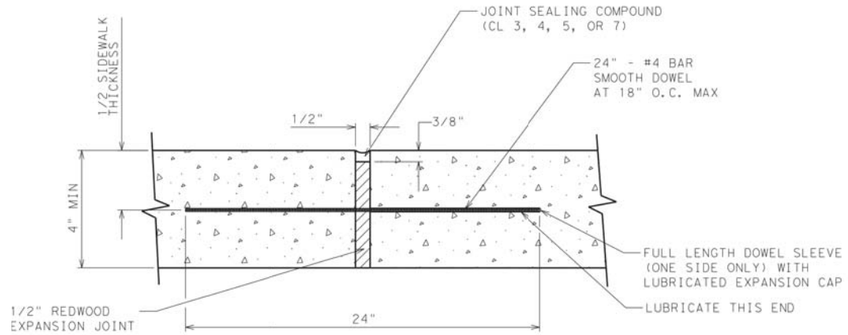
WACO DISTRICT STANDARD

CONCRETE SIDEWALK DETAILS

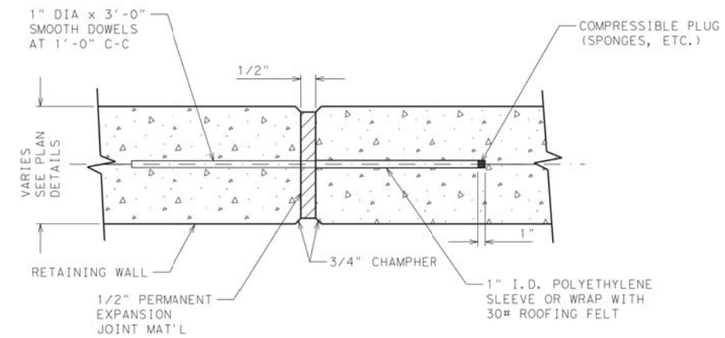
SHEET 1 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6			20
STATE	DIST.	COUNTY	
TEXAS	WACO		
CONT.	SECT.	JOB	HIGHWAY NO.

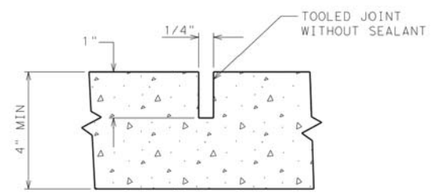
CONCRETE SIDEWALK DETAILS



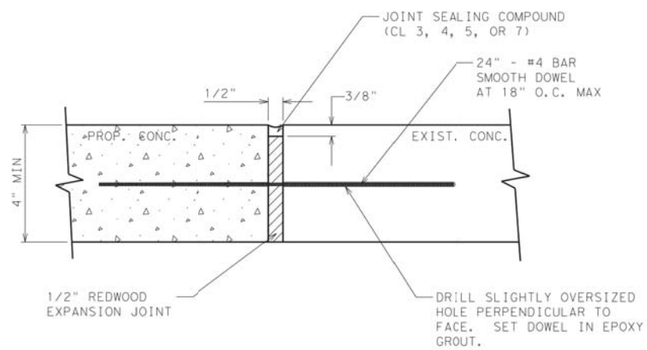
EXPANSION JOINT
(SIDEWALK)



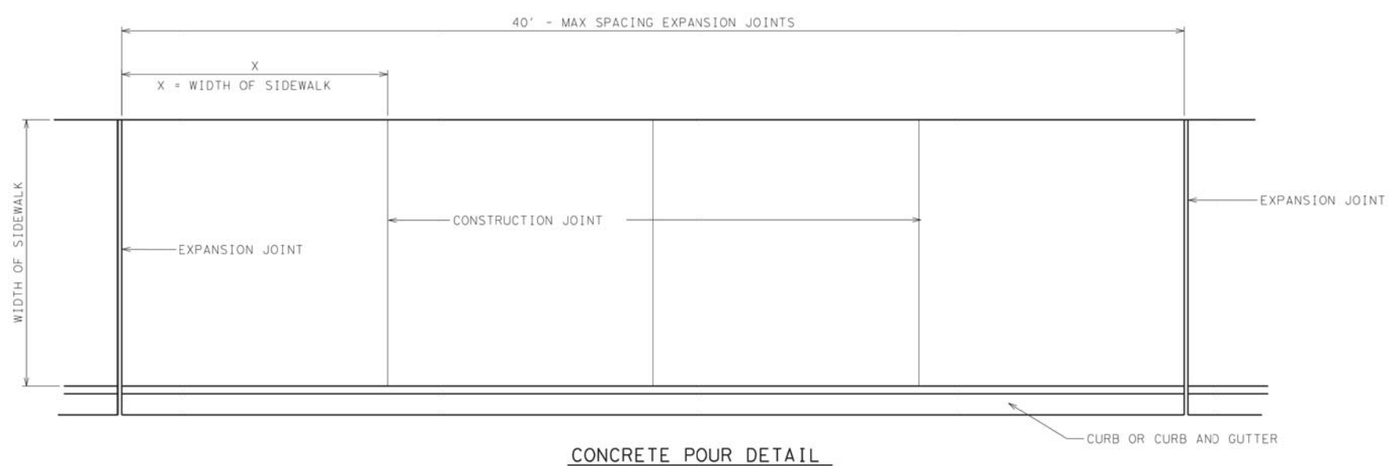
EXPANSION JOINT
(RETAINING WALL)



CONTRACTION JOINT



DOWEL TO EXISTING DETAIL



CONCRETE POUR DETAIL

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WACO DISTRICT STANDARD

CONCRETE SIDEWALK DETAILS

SHEET 2 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6			21
STATE	DIST.	COUNTY	
TEXAS	WACO		
CONT.	SECT.	JOB	HIGHWAY NO.

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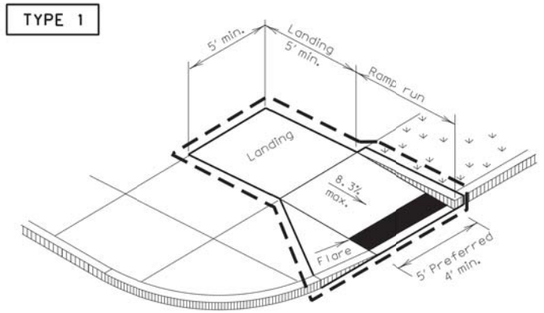
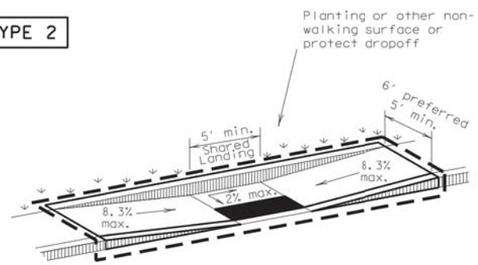
TYPE 1



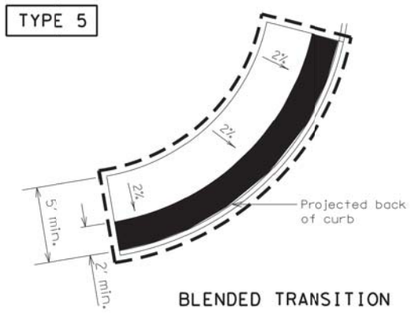
PERPENDICULAR CURB RAMP

TYPE 2



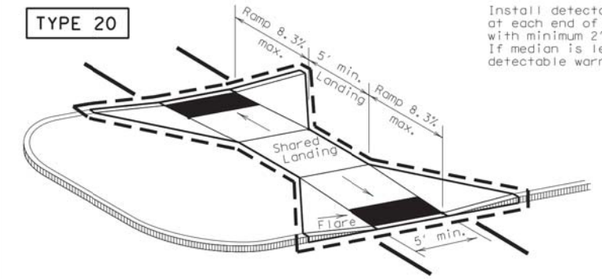
PARALLEL CURB RAMP
(Use only where water will not pond in the landing.)

TYPE 5



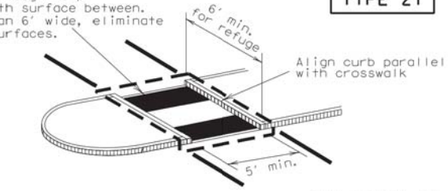
BLENDED TRANSITION

TYPE 20



Install detectable warning surface at each end of cut-through ramp with minimum 2' smooth surface between. If median is less than 6' wide, eliminate detectable warning surfaces.

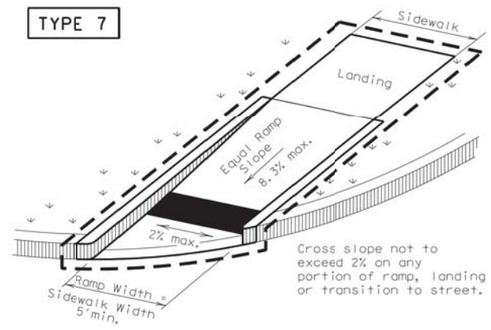
TYPE 21



Curb details are shown elsewhere in the plans.

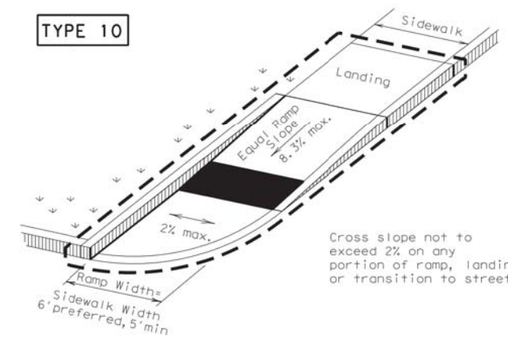
CURB RAMPS AT MEDIAN ISLANDS

TYPE 7



(Sidewalk set back from curb)

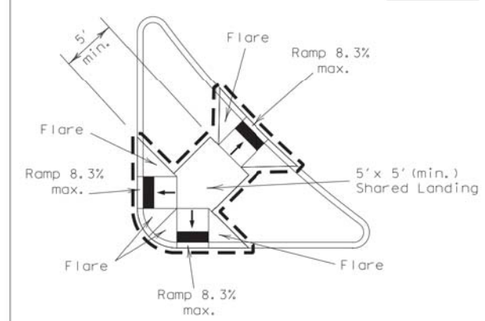
TYPE 10



(Sidewalk adjacent to curb)

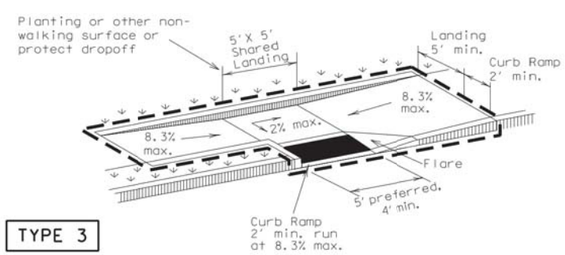
DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 22

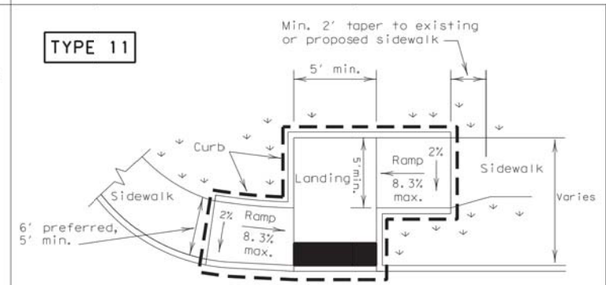


COMBINATION ISLAND RAMPS

TYPE 3

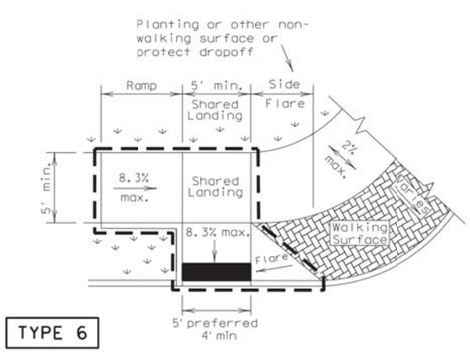


TYPE 11



OFFSET PARALLEL CURB RAMP

TYPE 6



COMBINATION CURB RAMPS

NOTES / LEGEND:

See General Notes on sheet 2 of 4 for more information.

Denotes planting or non-walking surface not part of pedestrian circulation path.

Ramp Limits of Payment

Detectable Warning Surface

SHEET 1 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: RM	DW: TxDOT	CK: VP
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REVISIONS VP June 13, 2012	DIST		COUNTY	SHEET NO. 22

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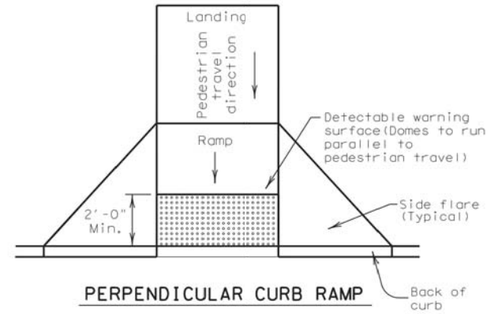
General Notes

Curb Ramps

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
4. Landings shall be 5'x 5' minimum with a maximum 2% slope in any direction.
5. Maneuvering space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
6. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102.
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Handrails are not required on curb ramps. Provide curb ramps wherever on accessible route crosses (penetrates) a curb.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Provide a smooth transition where the curb ramps connect to the street.
16. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
17. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.

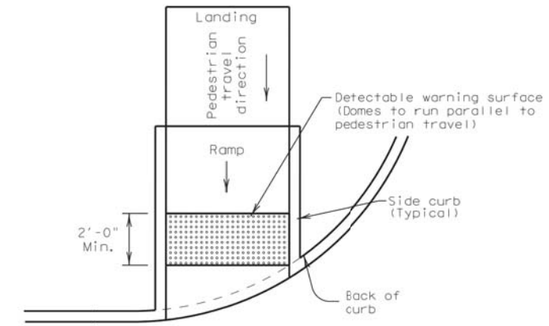
Detectable Warning Material

18. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
19. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
20. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
21. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
22. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. Align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Detectable warning surfaces may be curved along the corner radius.
23. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



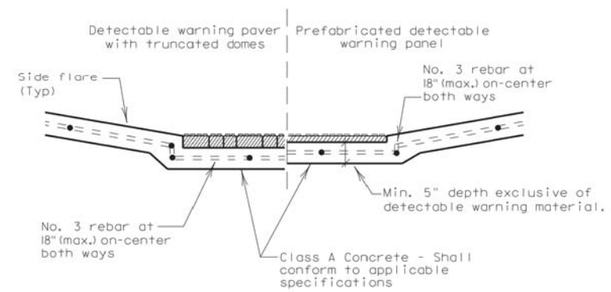
PERPENDICULAR CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.

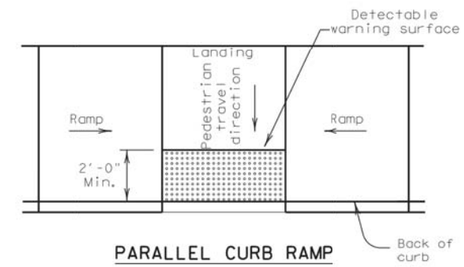


DIRECTIONAL CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.



SECTION: CURB RAMP AT DETECTABLE WARNING



PARALLEL CURB RAMP

Typical placement of detectable warning surface on landing at street edge.

DETECTABLE WARNINGS

Detectable Warning Pavers

24. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
25. Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning paver units using a power saw.

Sidewalks

26. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
27. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
28. Street grades and cross slopes shall be as shown elsewhere in the plans.
29. Changes in level greater than 1/4 inch are not permitted.
30. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than 5% must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with TAS 505.
31. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
32. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
33. Sidewalk details are shown elsewhere in the plans.

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: RM	DW: TxDOT	CK: VP
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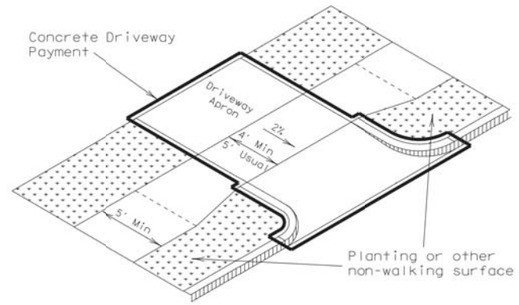
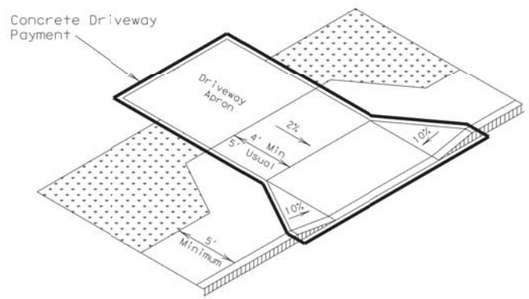
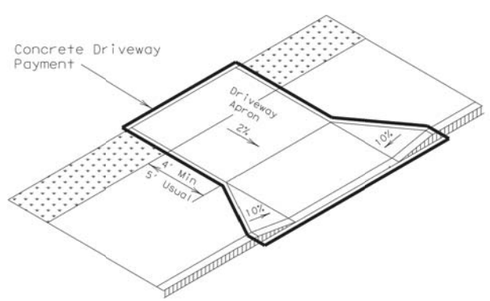


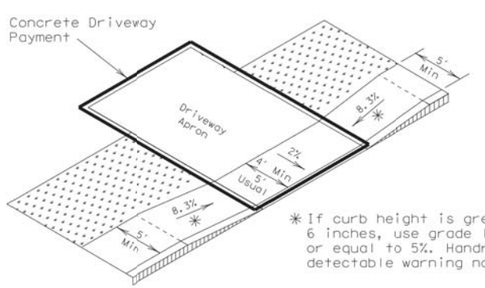
Setback sidewalk



Apron offset sidewalk



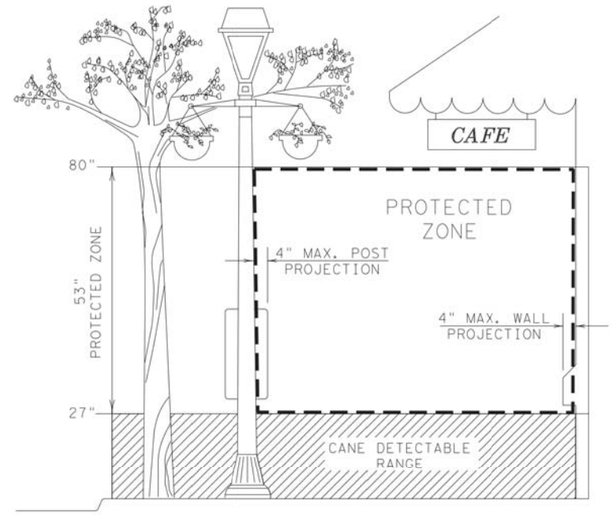
Wide sidewalk



* If curb height is greater than 6 inches, use grade less than or equal to 5%. Handrail and detectable warning not required.

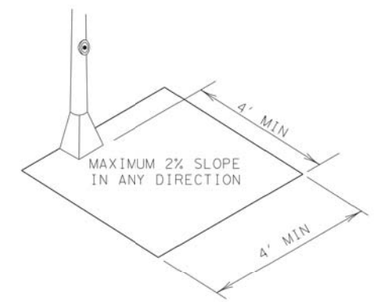
Ramp sidewalk

SIDEWALK TREATMENT AT DRIVEWAYS

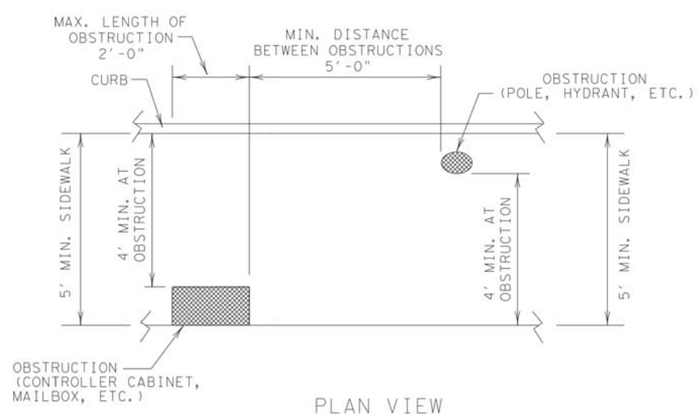


PROTECTED ZONE

In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27"and 80" above the surface.



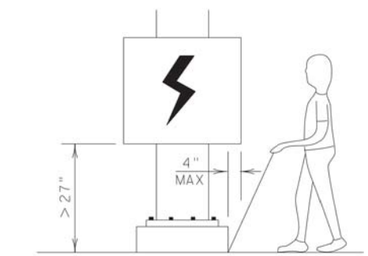
CLEAR GROUND SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



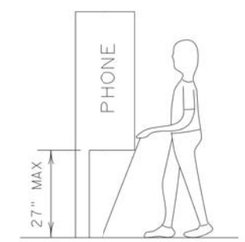
PLAN VIEW

PLACEMENT OF STREET FIXTURES

(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)



When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct additional curb or foundation at the bottom to provide a maximum 4" overhang.



Protruding objects of a height ≤ 27" are detectable by cane and do not require additional treatment.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

SHEET 3 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

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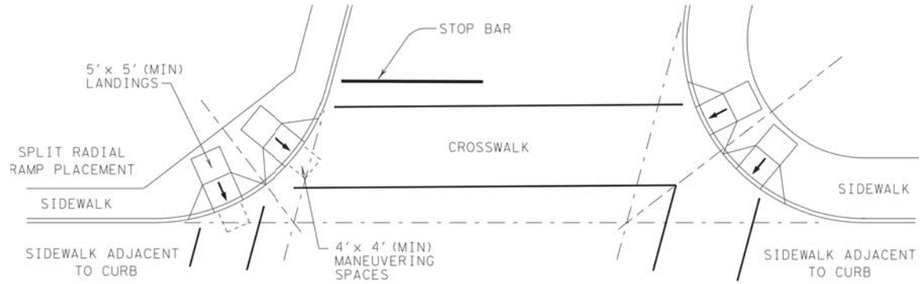
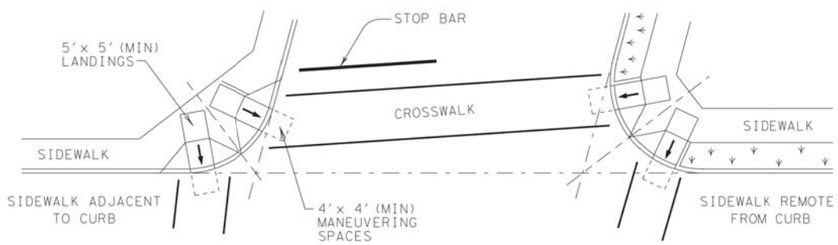
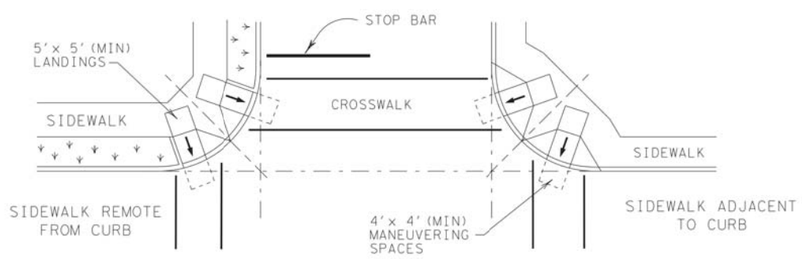


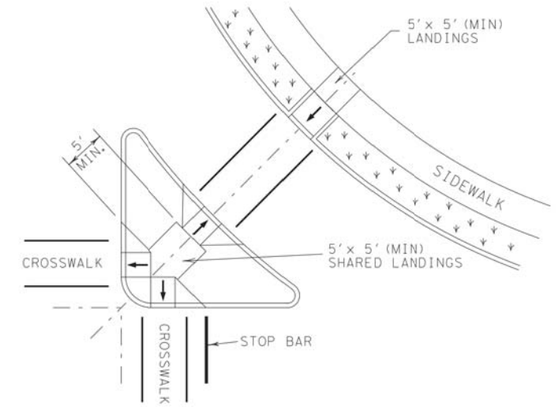
SKEWED INTERSECTION WITH "LARGE" RADIUS



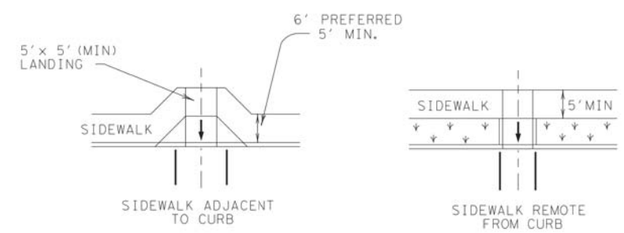
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

TYPICAL CROSSING LAYOUTS

SHEET 4 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

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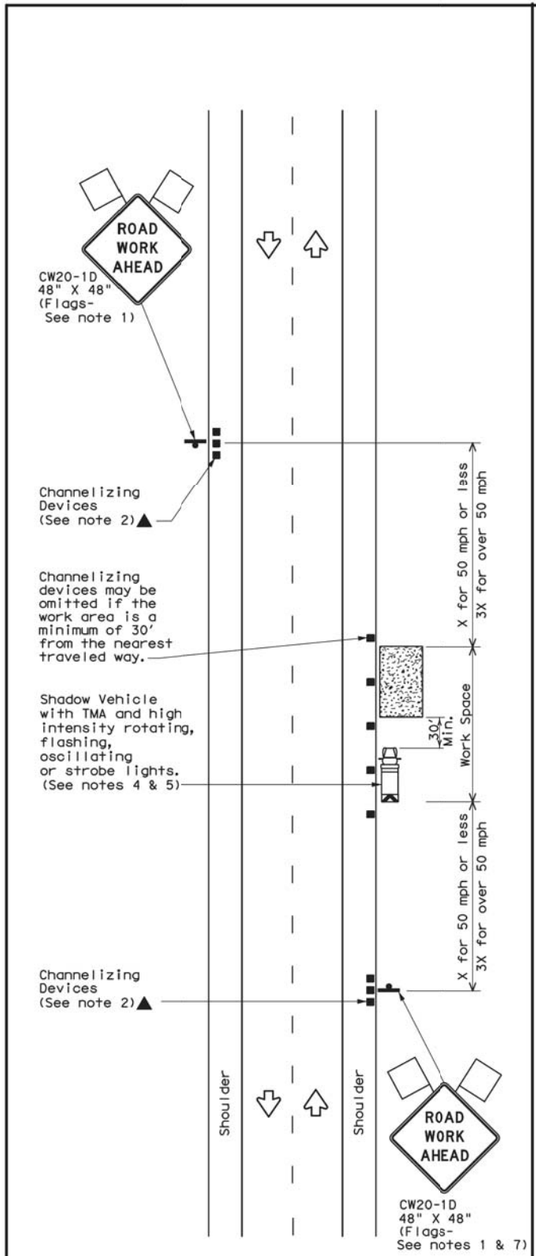
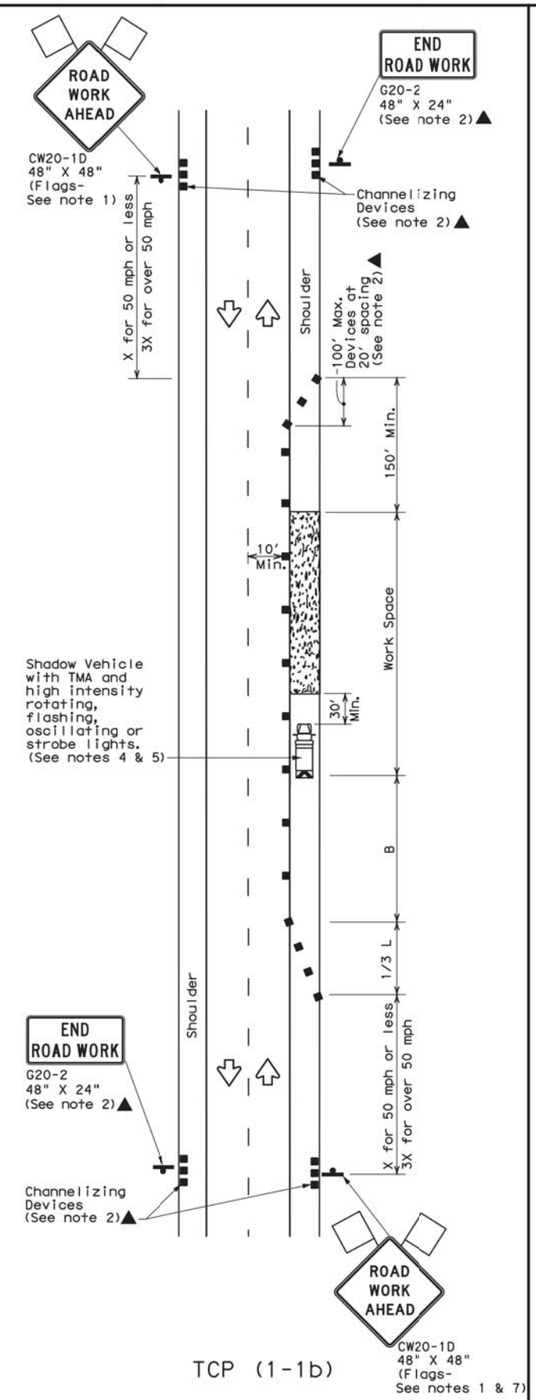


TCP (1-1a)

WORK SPACE NEAR SHOULDER

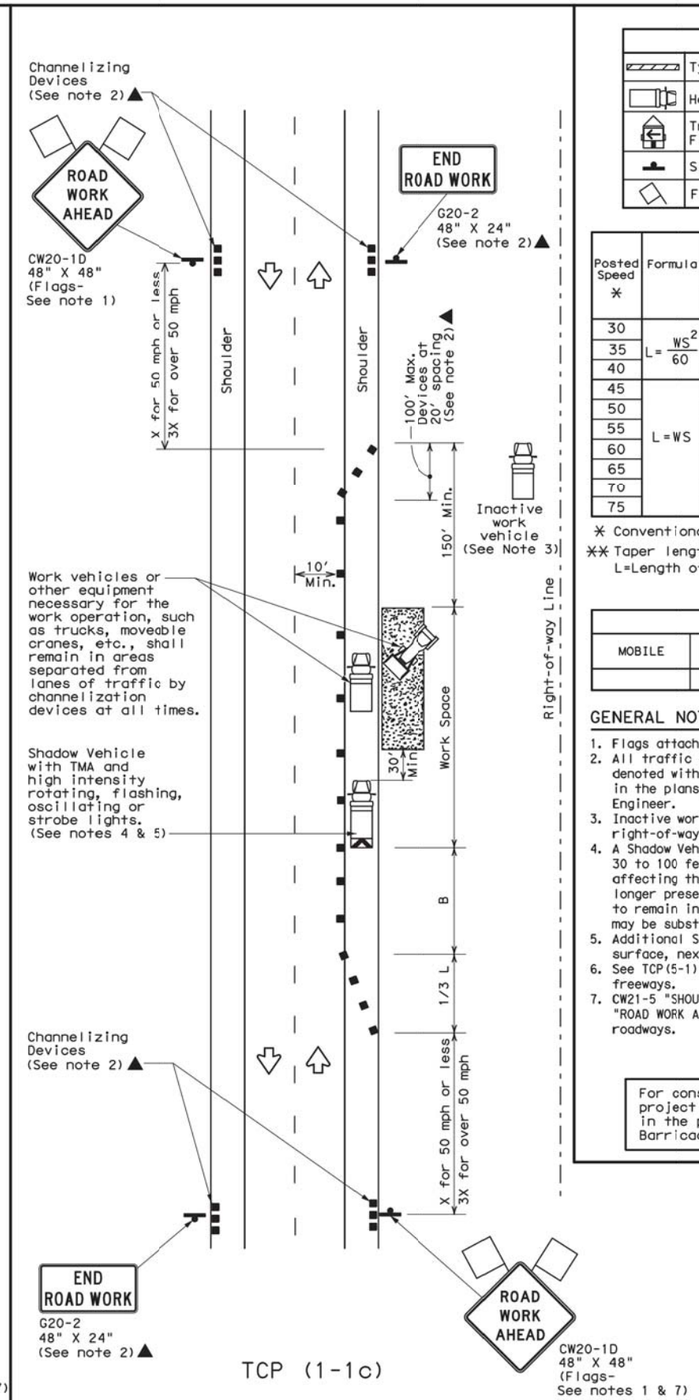
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER

Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER

Conventional Roads

LEGEND

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.

L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-12

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8-95
1-97
4-98

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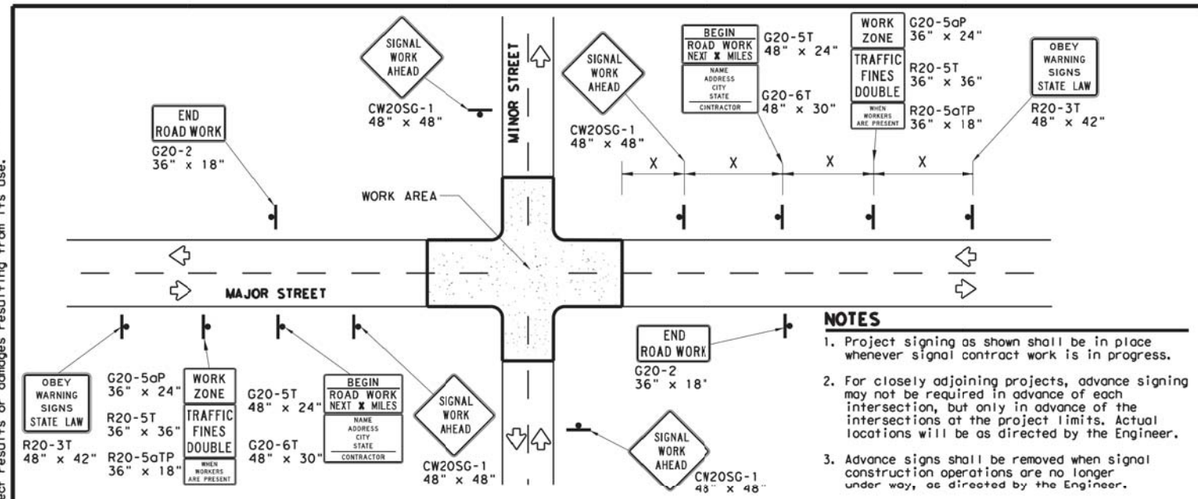


TYPICAL ADVANCE SIGNAL PROJECT SIGNING

FOR LONG TERM and INTERMEDIATE-TERM STATIONARY WORK OPERATIONS

NOTES

1. Project signing as shown shall be in place whenever signal contract work is in progress.
2. For closely adjoining projects, advance signing may not be required in advance of each intersection, but only in advance of the intersections at the project limits. Actual locations will be as directed by the Engineer.
3. Advance signs shall be removed when signal construction operations are no longer under way, as directed by the Engineer.
4. Warning sign spacing shown is typical for both directions.
5. See the Table on sheet 1 of 2 for Typical warning sign spacing.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Signs shall be installed and maintained in a straight and plumb condition.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. Nails shall NOT be used to attach signs to any support.
5. All signs shall be installed in accordance with the plans or as directed by the Engineer.
6. The Contractor shall furnish the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD).
7. The Contractor shall furnish sign supports and substrates listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD), installed as per the manufacturer's recommendations.
8. Temporary signs that have damaged or cracked substrates and/or damaged or marred reflective sheeting shall be replaced as directed by the Engineer.
9. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1".
10. Damaged wood posts shall be replaced. Splicing wood posts will not be allowed.

DURATION OF WORK

1. Work zone durations are defined in Part 6, Section 6G.02 of the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

SIGN MOUNTING HEIGHT

1. Sign height of Long-term/Intermediate-term warning signs shall be as shown on Figure 6F-1 of the TMUTCD.
2. Sign height of Short-term/Short Duration warning signs shall be as shown on Figure 6F-2 of the TMUTCD.
3. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered, unless otherwise approved by the Engineer.
2. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night without damaging the sign sheeting. Burlap, or heavy materials such as plywood or aluminum shall not be used to cover signs.
3. Duct tape or other adhesive material shall NOT be affixed to a sign face.
4. Signs and anchor stubs shall be removed and holes back filled upon completion of the work.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the requirements of the DMS and color usage table shown on this sheet.

SIGN SUPPORT WEIGHTS

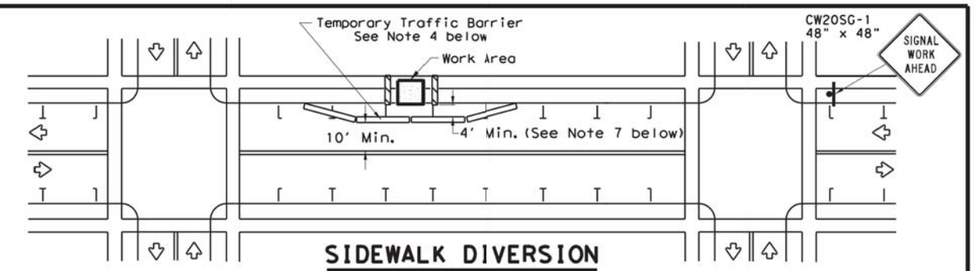
1. Weights used to keep signs from turning over should be sandbags filled with dry, cohesionless material.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber, such as tire inner tubes, shall not be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fastners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

LEGEND	
	Sign
	Channelizing Devices
	Type 3 Barricade

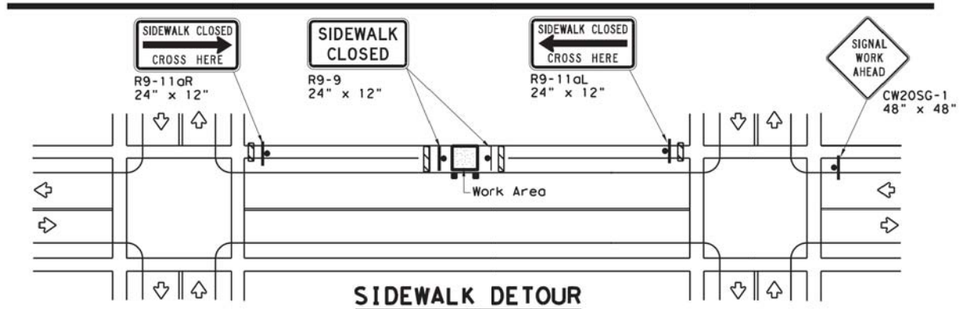
DEPARTMENTAL MATERIAL SPECIFICATIONS	
SIGN FACE MATERIALS	DMS-8300
FLEXIBLE ROLL-UP REFLECTIVE SIGNS	DMS-8310

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B_{FL} OR TYPE C_{FL} SHEETING
WHITE	BACKGROUND	TYPE A SHEETING
BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

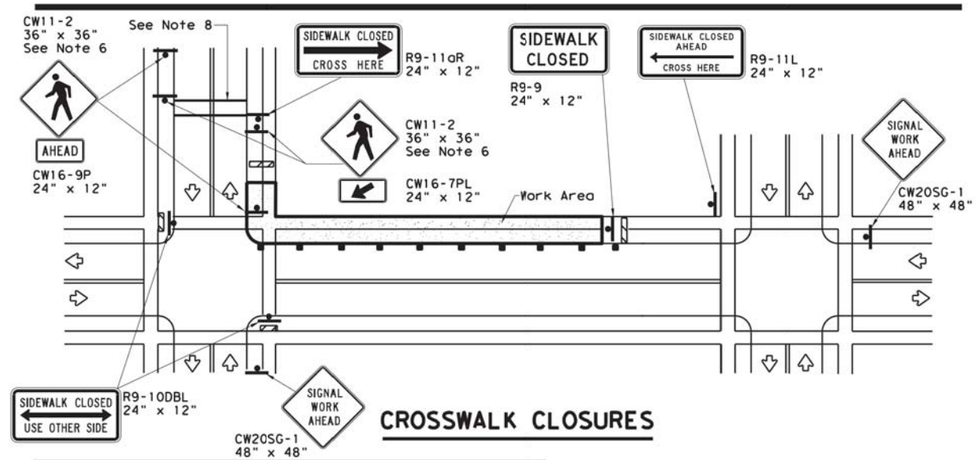
Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found at the following web address:
http://www.txdot.gov/txdot_library/publications/construction.htm



SIDEWALK DIVERSION



SIDEWALK DETOUR



CROSSWALK CLOSURES

PEDESTRIAN CONTROL

1. Holes, trenches or other hazards shall be adequately protected by covering, delineating or surrounding the hazard with orange plastic pedestrian fencing or longitudinal channelizing devices, or as directed by the Engineer.
2. "CROSSWALK CLOSURES" as detailed above will require the Engineer's approval prior to installation.
3. R9 series signs shown may be placed on supports detailed on the BC standards or CWZTCD list, or when fabricated from approved lightweight plastic substrates, they may be mounted on top of a plastic drum at or near the location shown.
4. For speeds less than 45 mph longitudinal channelizing devices may be used instead of traffic barriers when approved by the Engineer. Attenuation of blunt ends and installation of water filled devices shall be as per BC(9) and manufacturer's recommendations.
5. Location of devices are for general guidance. Actual device spacing and location must be field adjusted to meet actual conditions.
6. Where pedestrians with visual disabilities normally use the closed sidewalk Detectable Pedestrian Barricades should be used instead of the Type 3 Barricades shown.
7. The width of existing sidewalk should be maintained if practical.
8. Pavement markings for mid-block crosswalks shall be paid for under the appropriate bid items.
9. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

SHEET 2 OF 2

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC SIGNAL WORK BARRICADES AND SIGNS

WZ(BTS-2)-13

FILE: wzbts-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS				
2-98 10-99 7-13	DIST		COUNTY	SHEET NO.
4-98 3-03				27

DATE:
FILE:

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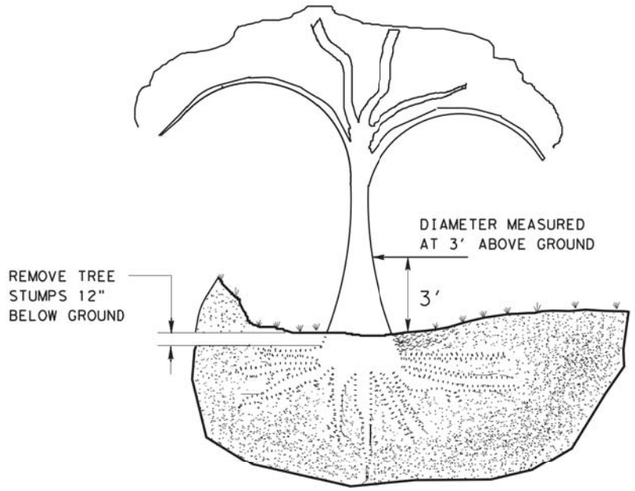
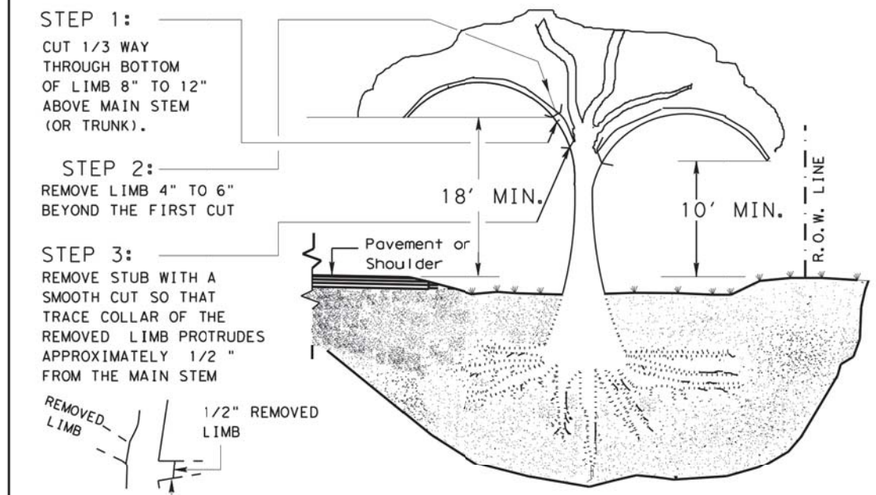
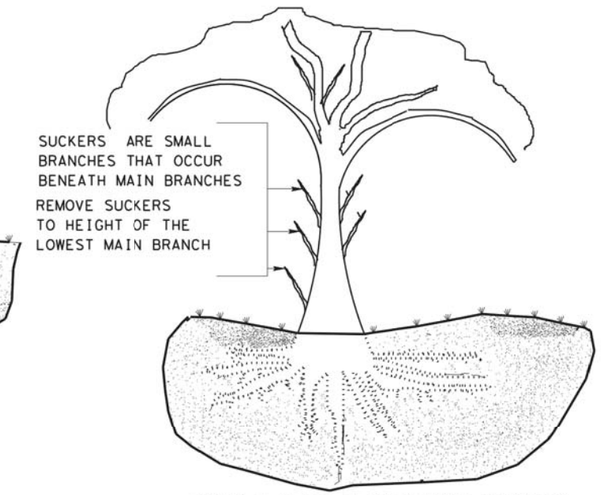


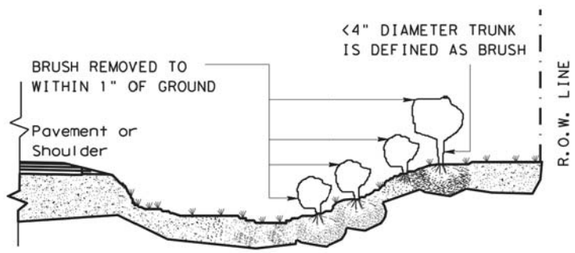
TREE REMOVAL



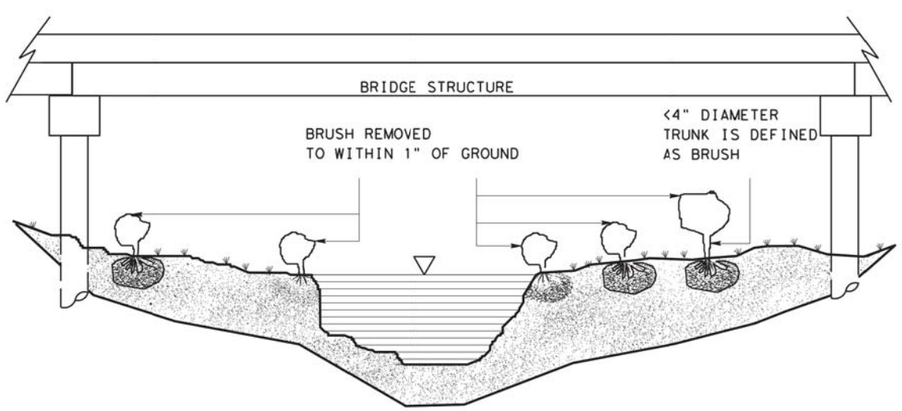
TREE TRIMMING



STEPS 1,2 AND 3 APPLY WHEN REMOVING LIMBS 2" IN DIAMETER OR LARGER.



BRUSH REMOVAL



BRUSH REMOVAL UNDER BRIDGE AND IN CHANNEL

GENERAL NOTES:

TREE TRIMMING

1. TRIM AND REMOVE ALL TREE LIMBS ON THE PAVEMENT SIDE OF THE TRUNK 18' ABOVE THE PAVEMENT OR BRIDGE DECK ELEVATION, UNLESS OTHERWISE SHOWN ON THE PLANS.

2. TRIM AND REMOVE ALL TREE LIMBS BETWEEN THE TRUNK AND R.O.W. LINE 10' ABOVE NATURAL GROUND, TERRAIN OR OTHER STRUCTURE ELEVATION, UNLESS OTHERWISE SHOWN ON THE PLANS.

TREE REMOVAL

3. FOR TREES MARKED FOR REMOVAL, THE DIAMETER OF TREES ARE DETERMINED BY MEASUREMENT OF THE TRUNK CIRCUMFERENCE 3' ABOVE THE GROUND. TREES WITH TRUNKS OF LESS THAN 4" DIAMETER ARE CONSIDERED TO BE BRUSH. TREES WITH MULTIPLE TRUNKS AT THE POINT OF MEASUREMENT ARE MEASURED AND PAID FOR SEPARATELY.

4. MEASUREMENTS FOR PAYMENT OF TREE DIAMETERS ARE DIVIDED INTO THE RANGES SHOWN IN TABLE 1.

TABLE 1
TREE TRUNK SIZE FOR TREE REMOVAL PAYMENT

PAY ITEM	RANGE FOR PAY ITEMS			
	TRUNK DIAMETER *		TRUNK CIRCUMFERENCE	
	LOWER LIMIT IS GREATER THAN	UPPER LIMIT IS LESS THAN OR EQUAL TO	LOWER LIMIT IS GREATER THAN	UPPER LIMIT IS LESS THAN OR EQUAL TO
752 6005	4	12	12 1/2	37 1/2
752 6006	12	18	37 1/2	56 1/2
752 6007	18	24	56 1/2	75 1/2
752 6008	24	30	75 1/2	94
752 6009	30	36	94	113
752 6010	36	42	113	132
752 6011	42	48	132	151
752 6012	48	60	151	188 1/2
752 6013	60	72	188 1/2	226
752 6019	72	84	226	264
	84	GREATER THAN 84	264	NOT APPLICABLE

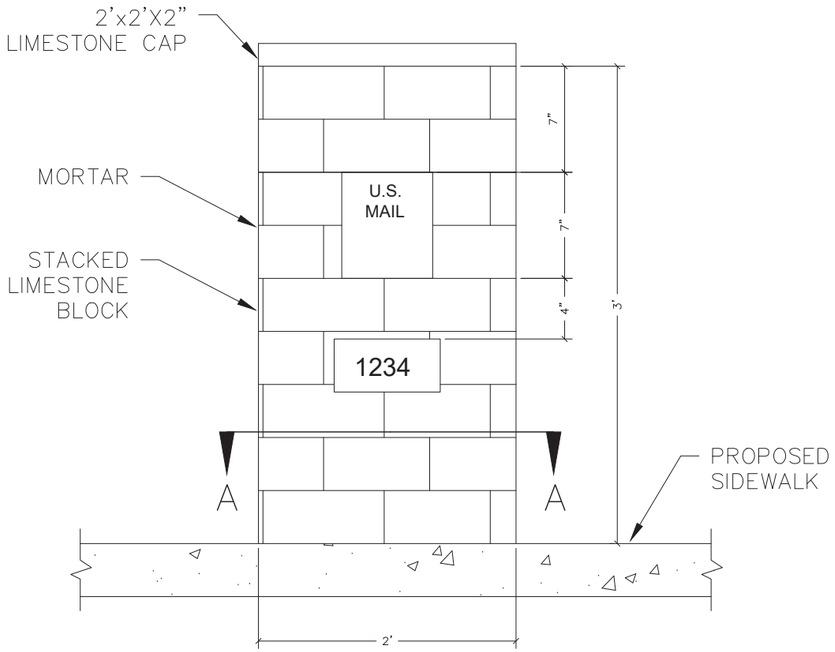
***SEE GENERAL NOTE #3.**

Texas Department of Transportation — Maintenance Division Standard

TREE AND BRUSH REMOVAL

TRB-15(1)

FILE:	DN: JEO	CK: LJB	DW: JEO	CK:
© TxDOT MARCH 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS Revised table 1 to 2014 Specification	DIST		COUNTY	SHEET NO.

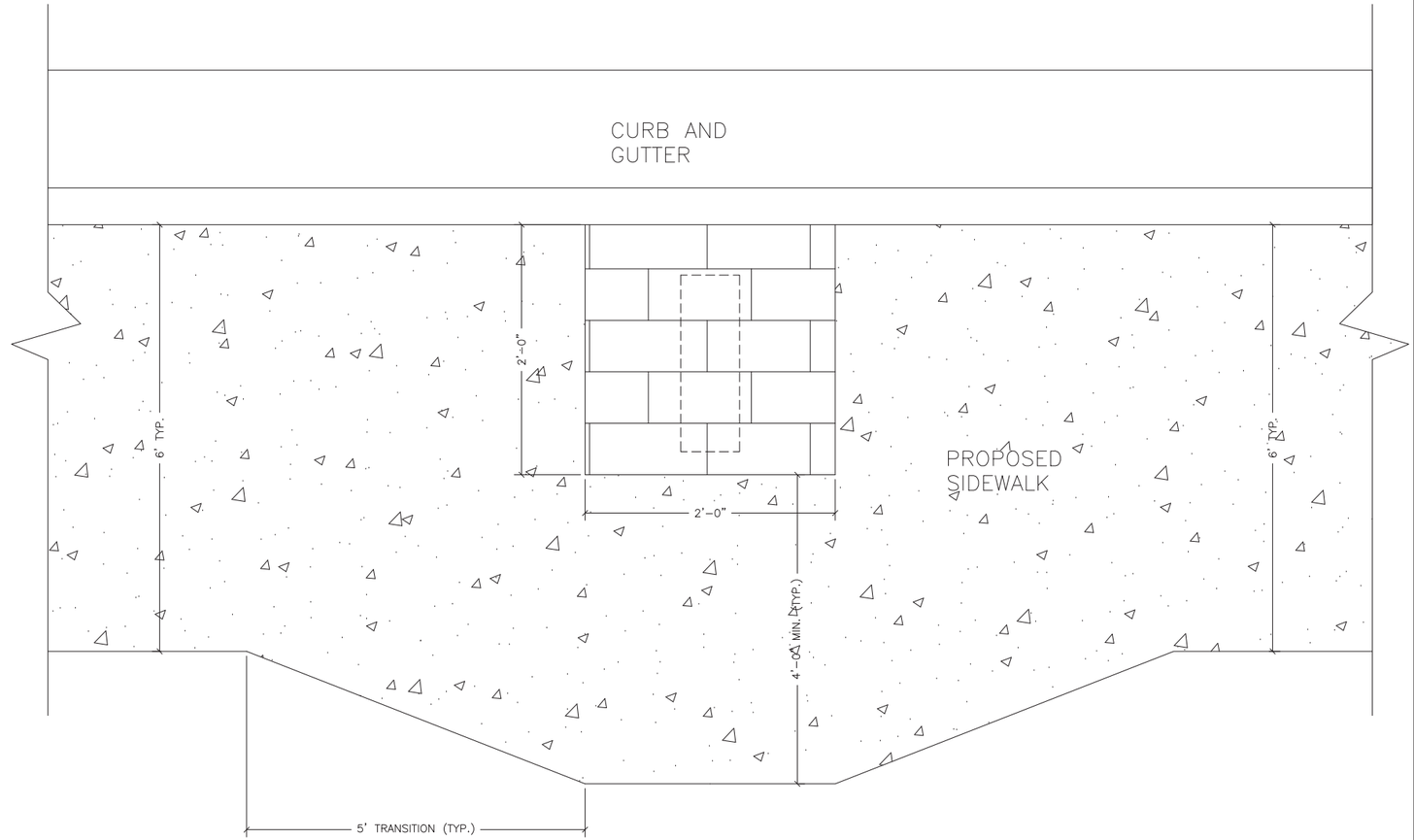


MAILBOX COLUMN NOTE:

1. CONCRETE MORTAR – A MIXTURE OF PORTLAND CEMENT AND SAND WITH MINIMUM COMPRESSIVE STRENTH OF 3,000 PSI AT 28 DAYS.

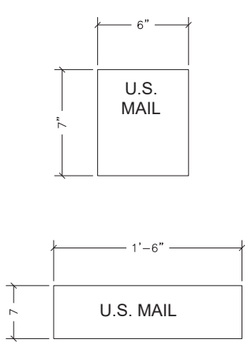
N.T.S.

MAIL BOX COLUMN



SECTION A

N.T.S.



MAIL BOX DETAIL

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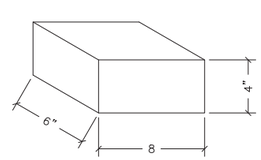


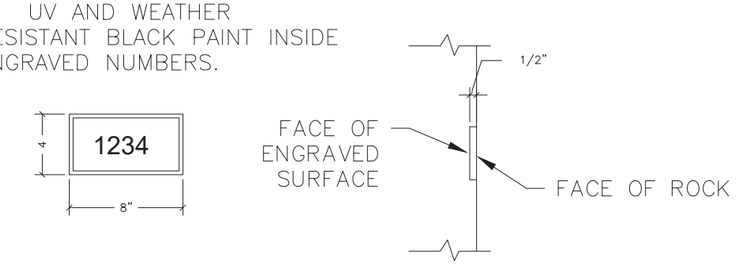
N.T.S.

TYPICAL
LIMESTONE
BLOCK

ADDRESS PLAQUE NOTES:

1. INSTALL ENGRAVED NUMBERS 1/2" DEEP.

2. UV AND WEATHER RESISTANT BLACK PAINT INSIDE ENGRAVED NUMBERS.



N.T.S.

ADDRESS
PLAQUES

Revisions

Date:	Remarks:

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12th STREET & GURLEY LANE
SIDEWALK IMPROVEMENTS
Waco, Texas

4/17/2017

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BSP engineers
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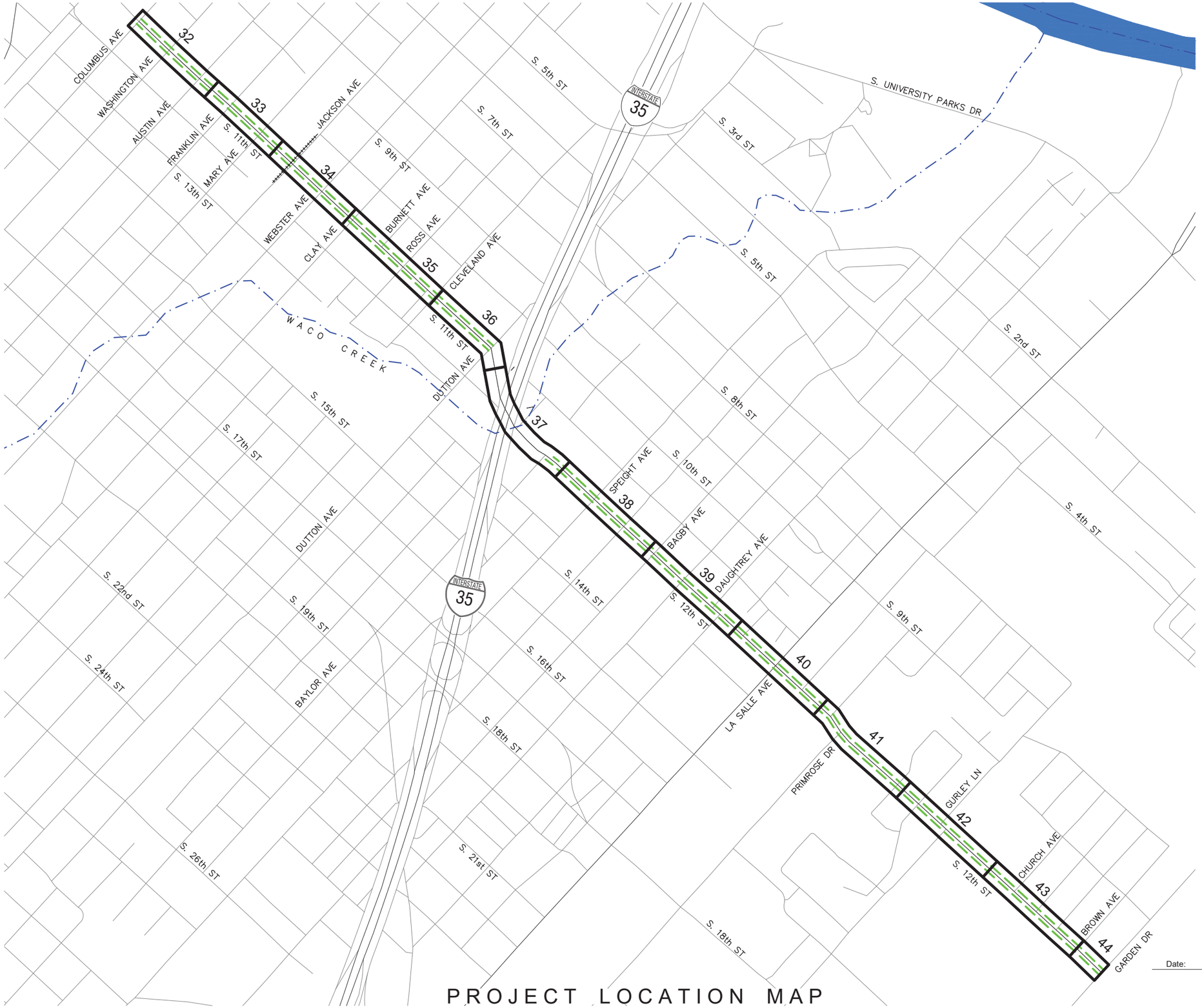
MAILBOX DETAILS

Project No:
162347.00



PROJECT LOCATION MAP

scale: 1:500

LEGEND:

(2) 6' BIKE LANES
(PER AASHTO STANDARDS)

CITY OF WACO
12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS
Waco, Texas

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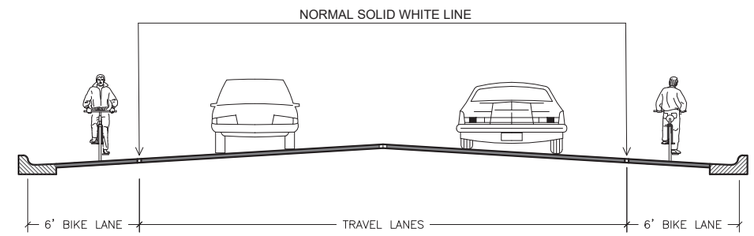
12th STREET BIKE LANE PROJECT LOCATION MAP

Project No:
162347.00

SIGN MATERIALS REQUIRED			
QUANTITY	SIGN NUMBER	DIMENSIONS	APPEARANCE
23	R3–17	24" x 18"	
88	R7–1	24" x 18"	
12	R7–9a	24" x 18"	
81 – TELESPAR SIGN POSTS AND BOOTS REQUIRED			

PAVEMENT MARKING QUANITIES	
QUANTITY	ITEM
22,074 L.F.	4" SOLID WHITE LINE
717 L.F.	4" DOTTED WHITE LINE
52	BIKE LANE SYMBOL BOX (GREEN 6' x 20' BACKGROUND / BIKE SYMBOL / ARROW
10	SHARED LANE MARKING
2	RAILROAD CROSSING APPROACH



CROSS SECTION

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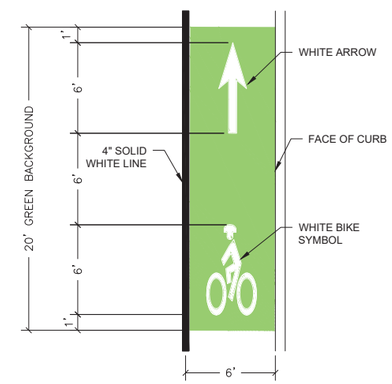

BIKE LANE SYMBOL MARKING

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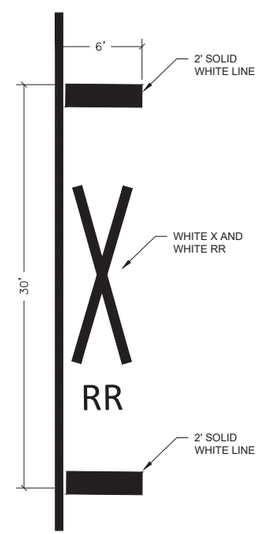

RAILROAD CROSSING APPROACH

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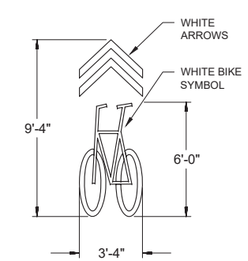

SHARED LANE MARKING

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CITY OF WACO

12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS

Waco, Texas

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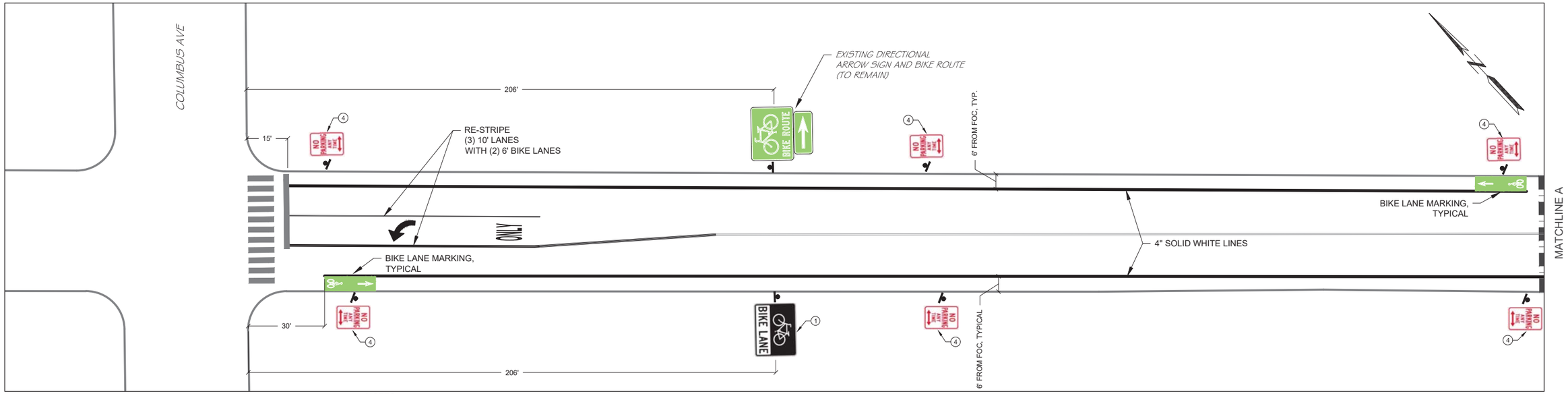
12th STREET BIKE LANE QUANTITY SUMMARY AND TRAFFIC CONTROL DEVICES

BSP engineers F - 7587

Project No: 162347.00



S 11th STREET

NOTES:

1. MANUFACTURE AND PLACE ALL SIGNS IN ACCORDANCE WITH STANDARD HIGHWAY SIGNS FOR TEXAS (2012 EDITION) AND TEXAS MUTCD 2011- REVISION 1.

2. MOUNT ALL SIGN PANELS VERTICALLY A MIN. OF 7 FT. BETWEEN BOTTOM OF SIGN AND TOP OF NEAREST CURB.

3. MOUNT ALL SIGN PANELS HORIZONTALLY A MIN. OF 2 FT. BETWEEN EDGE OF SIGN AND FACE OF NEAREST CURB.

4. LEAVE EXISTING SIGNS AS THEY ARE EXCEPT WHERE NEW SIGN PANELS ARE INSTALLED ON EXISTING POSTS.

5. MOUNT ALL PARKING PROHIBITION SIGN PANELS TO FACE ONCOMING TRAFFIC AT 45 DEGREES.

6. TRAFFIC LANE STRIPING LOCATION DIMENSIONS ON PLANS ARE FROM FOC (FACE OF CURB) TO CENTER OF THE STRIPING.

KEYED NOTES: (1)

1. CONTRACTOR SHALL REMOVE EXISTING BIKE ROUTE SIGN D11-1 AND REPLACE WITH R3-17.

2. CONTRACTOR SHALL REMOVE EXISTING BIKE ROUTE SIGN D11-1 REPLACE WITH R3-17 AND ADD R7-9a ON SAME POST.

3. CONTRACTOR SHALL REMOVE EXISTING BIKE ROUTE SIGN D11-1 AND REPLACE WITH R3-17 AND ADD R7-1 ON SAME POST.

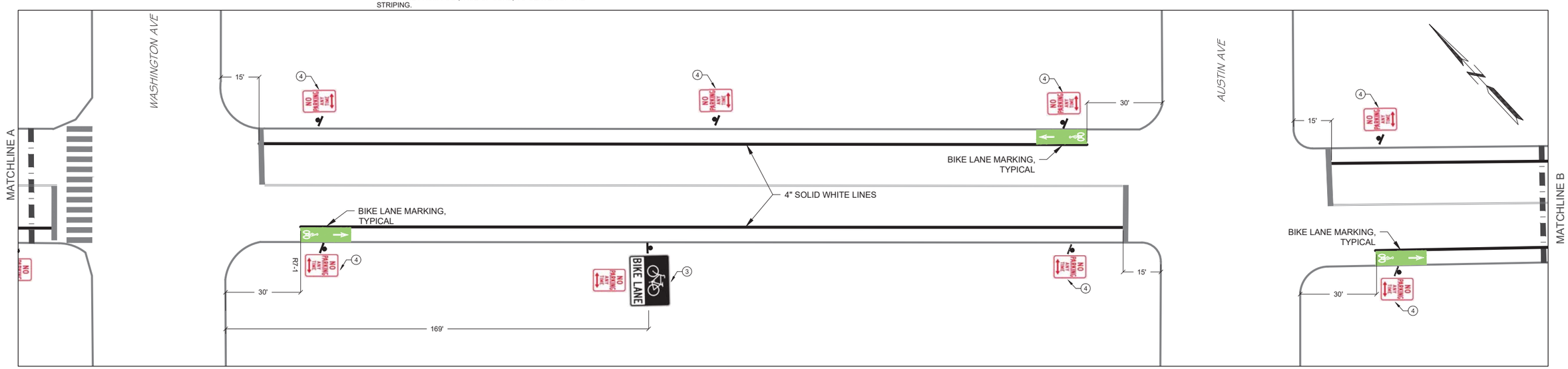
4. FURNISH AND INSTALL: R7-1 WITH POST.

5. FURNISH AND INSTALL: R3-17 AND R7-9a WITH POST.

6. FURNISH AND INSTALL: R3-17 AND R7-1 WITH POST.

HORIZ 20 0 20

SCALE IN FEET



S 11th STREET

BICYCLE LANE PLAN 1

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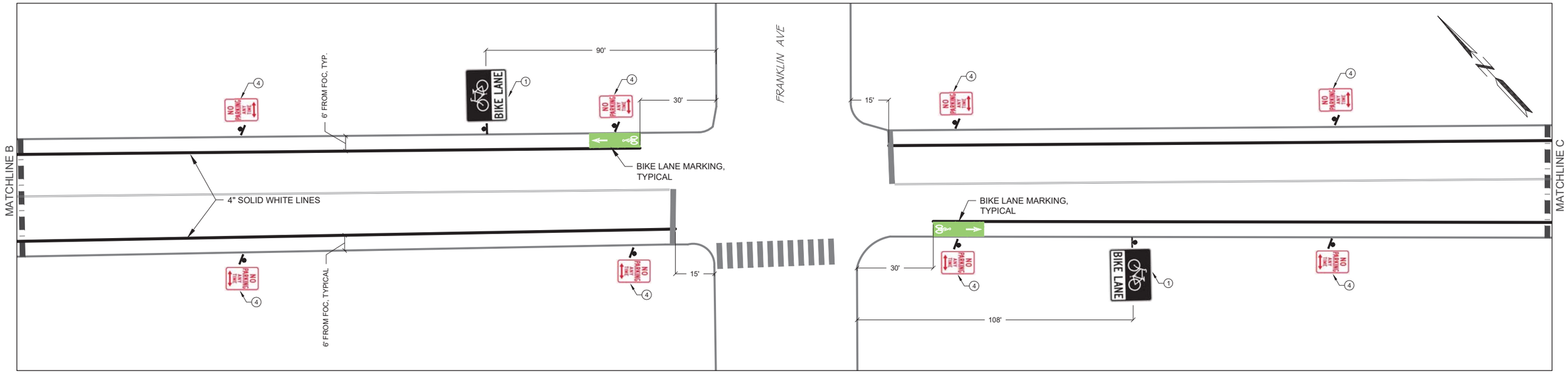
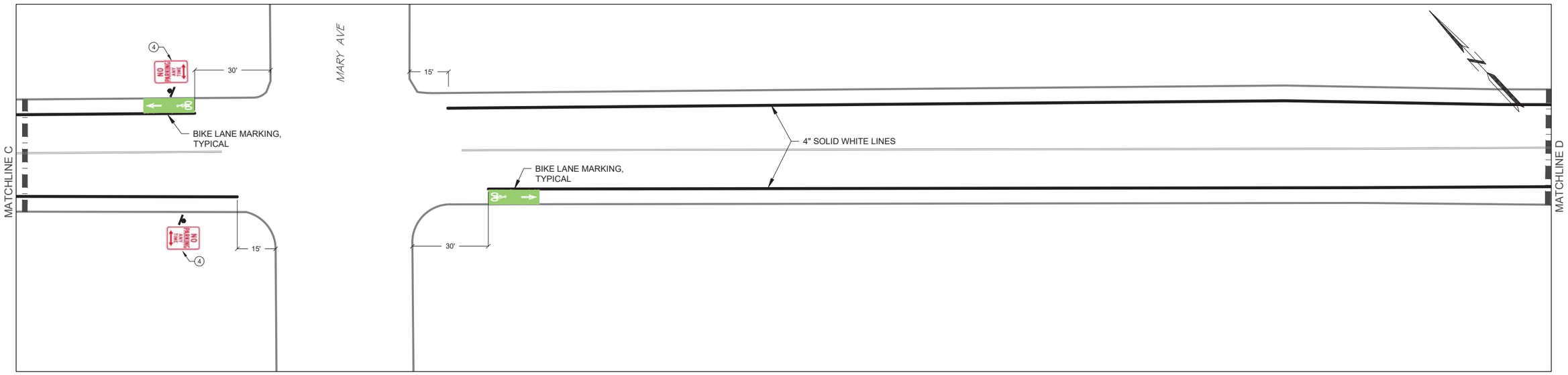
12th STREET & GURLEY LANE SIDEWALK IMPROVEMENTS

Waco, Texas

Project No: 162347.00





HORIZ 20 0 20

SCALE IN FEET

BICYCLE LANE PLAN 2

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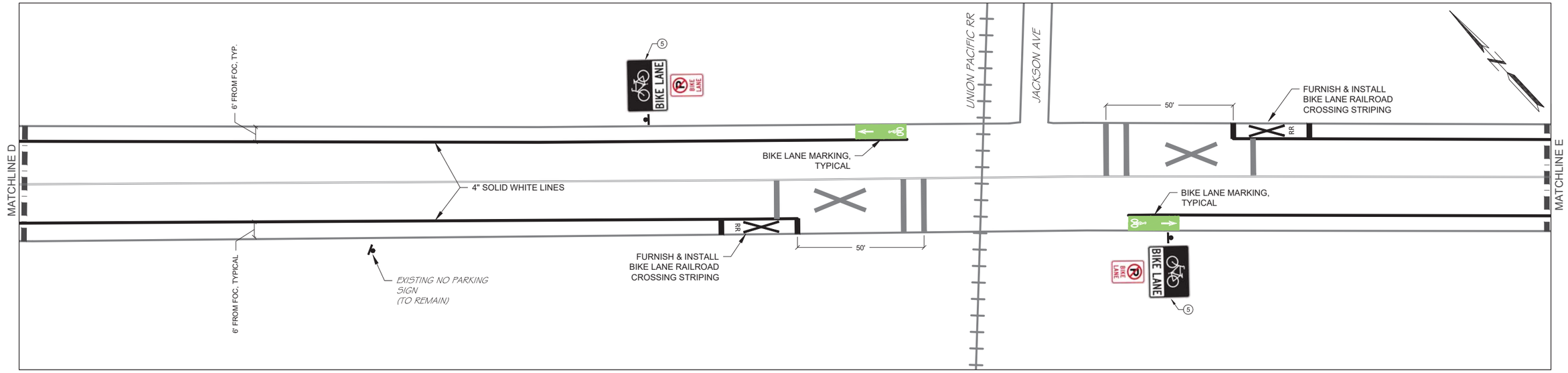
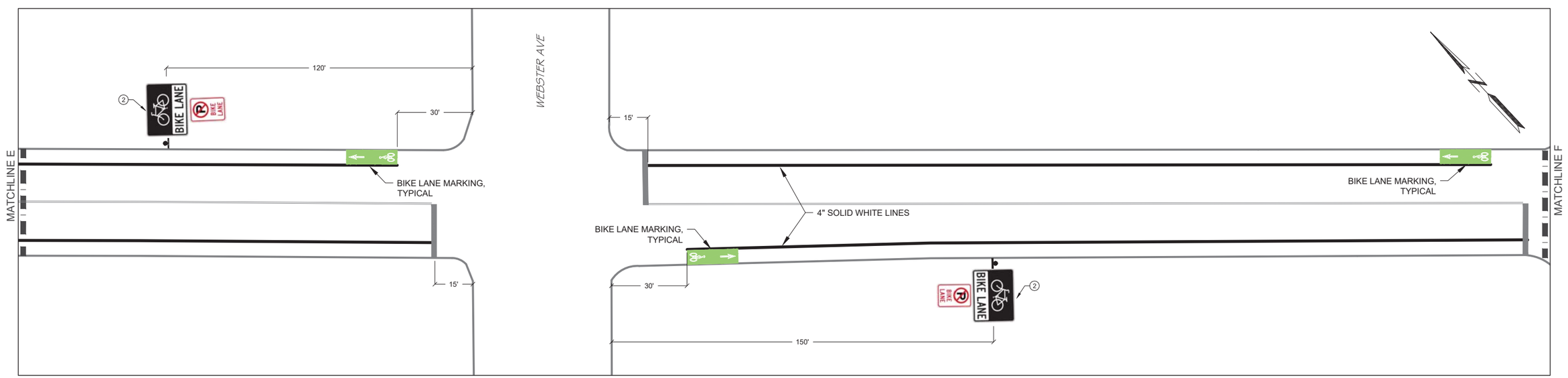


S 11th STREET

HORIZ 20 0 20

SCALE IN FEET



S 11th STREET

BICYCLE LANE PLAN 3

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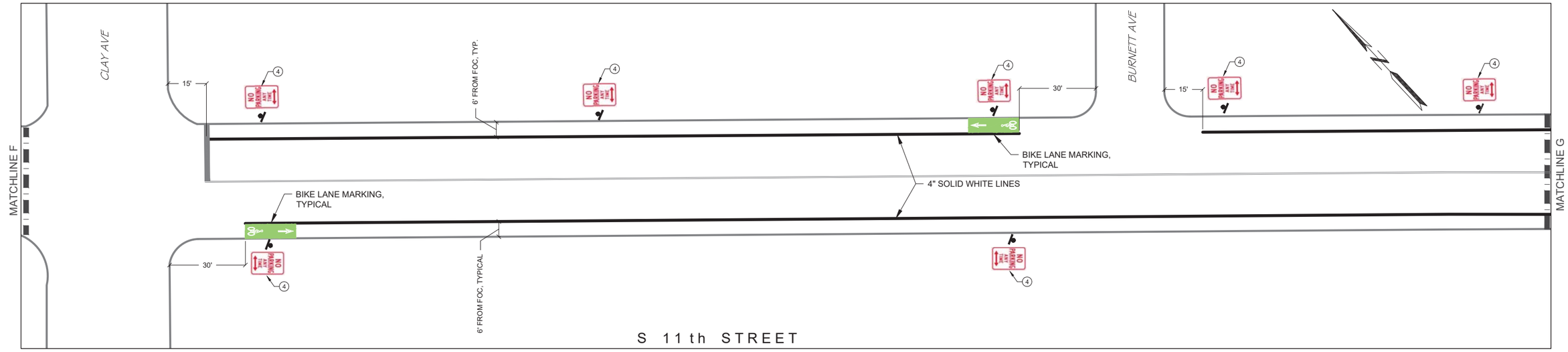

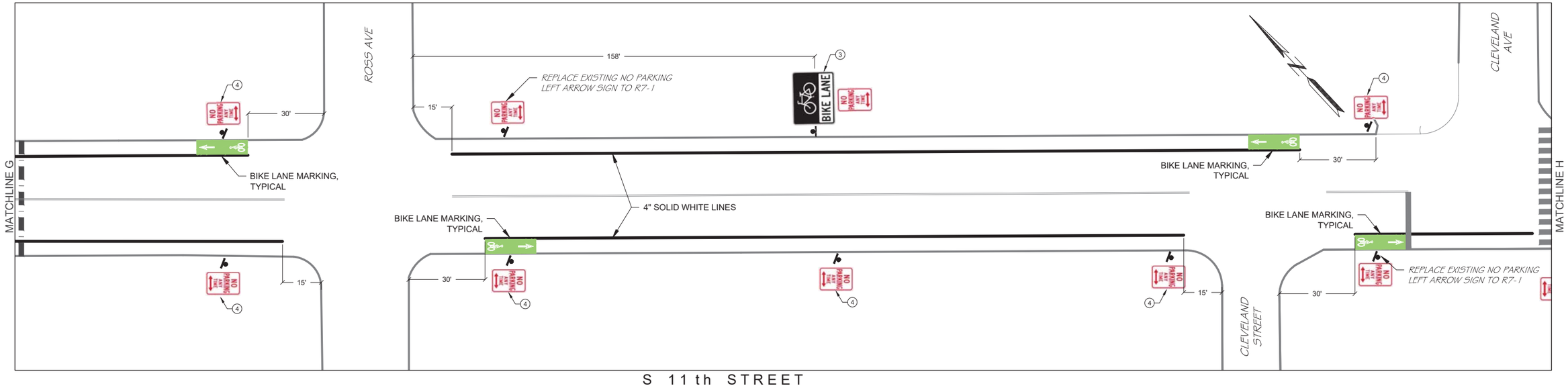

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BICYCLE LANE PLAN 4

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12th STREET & GURLEY LANE
SIDEWALK IMPROVEMENTS
Waco, Texas

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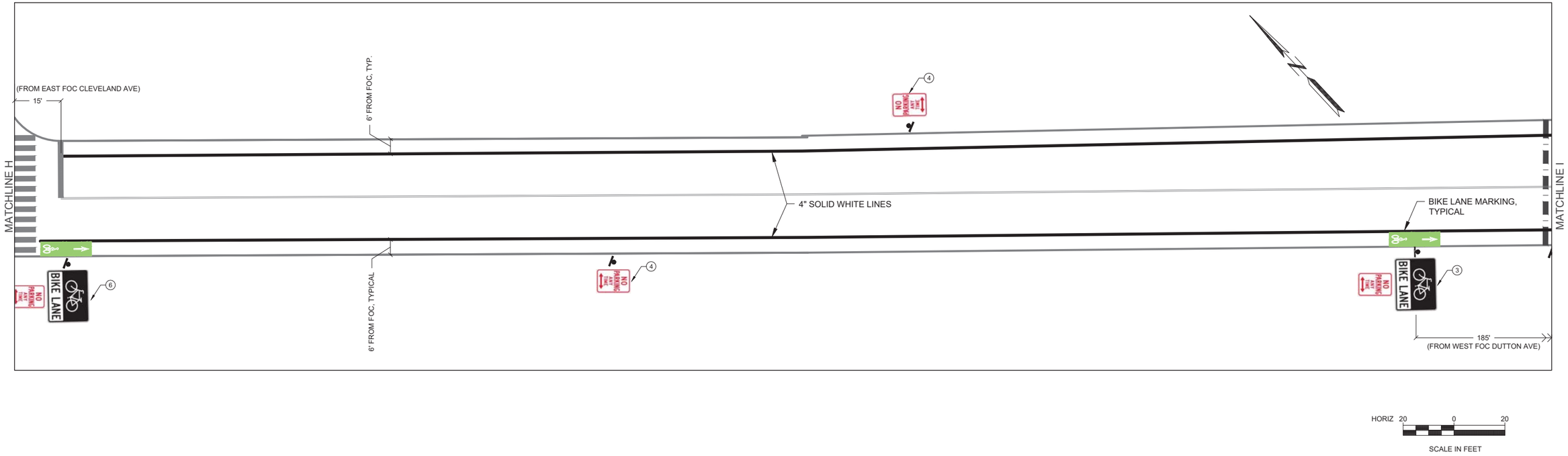

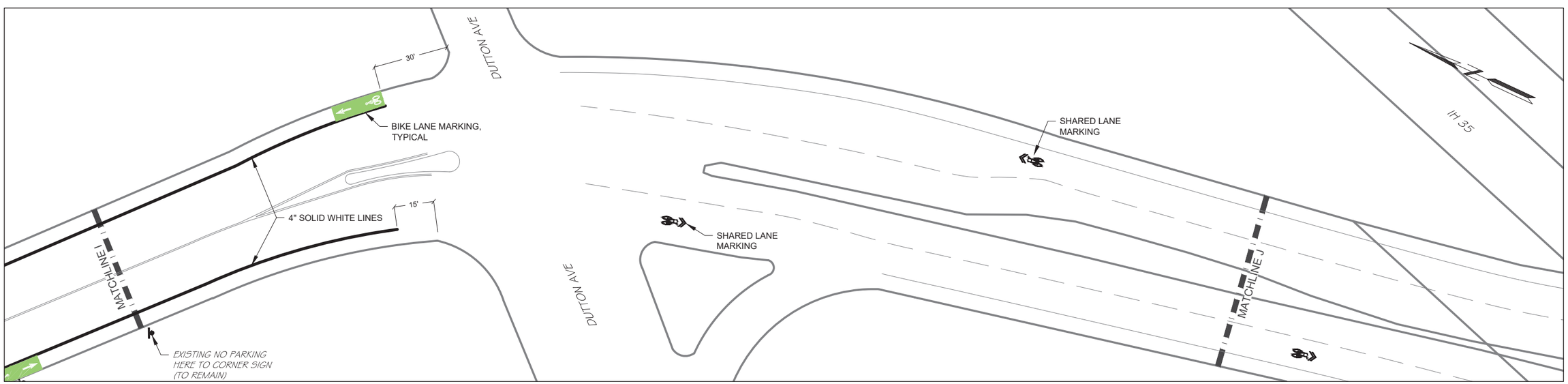

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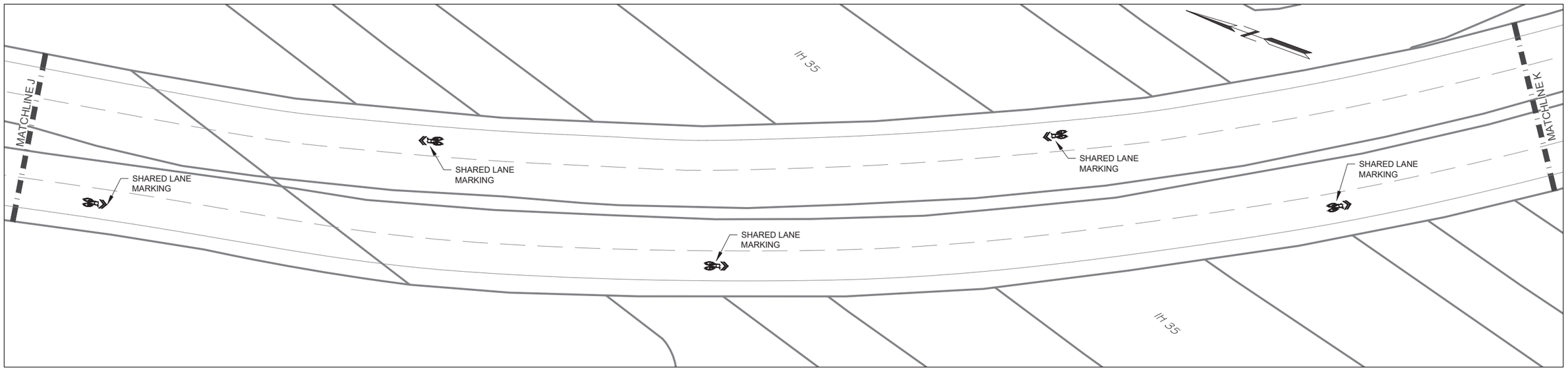

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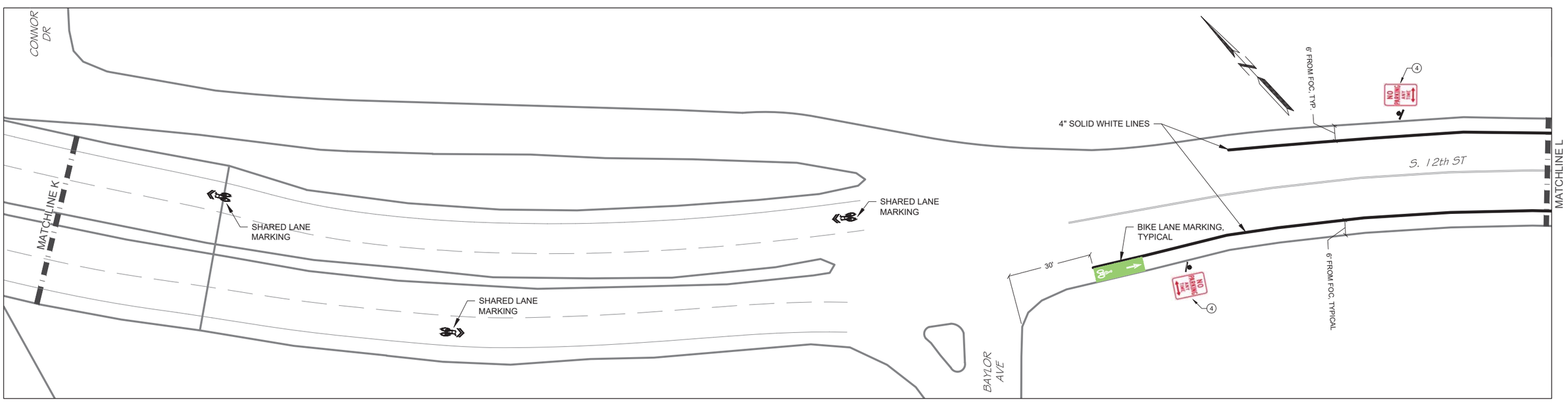

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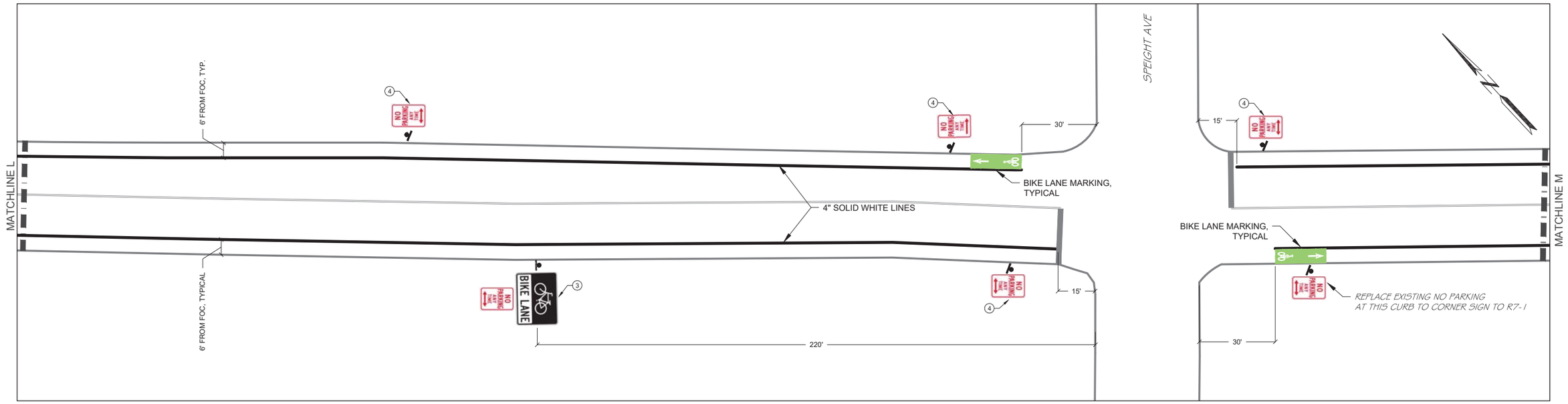

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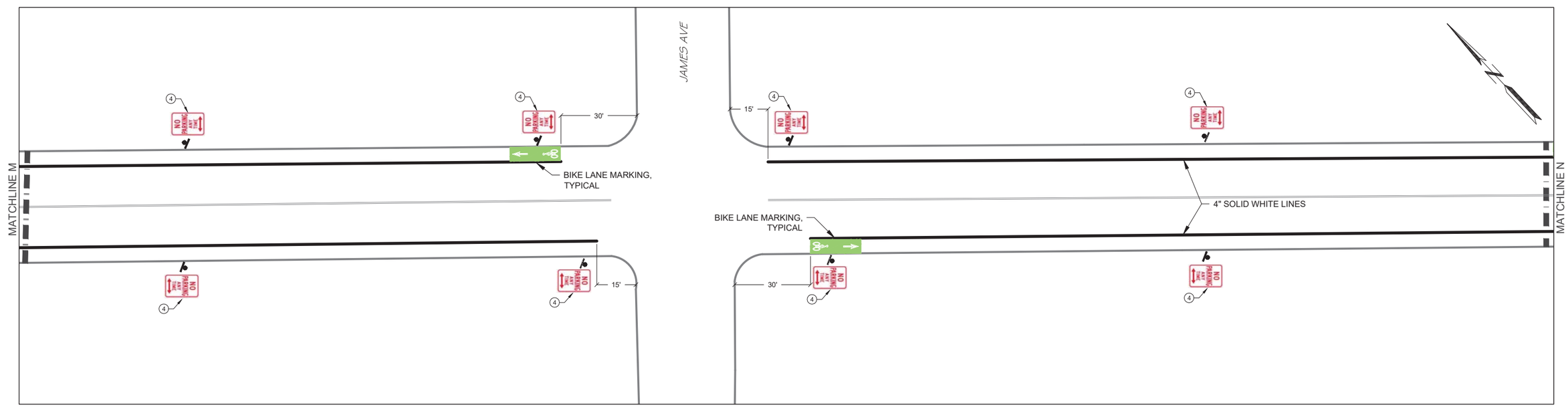

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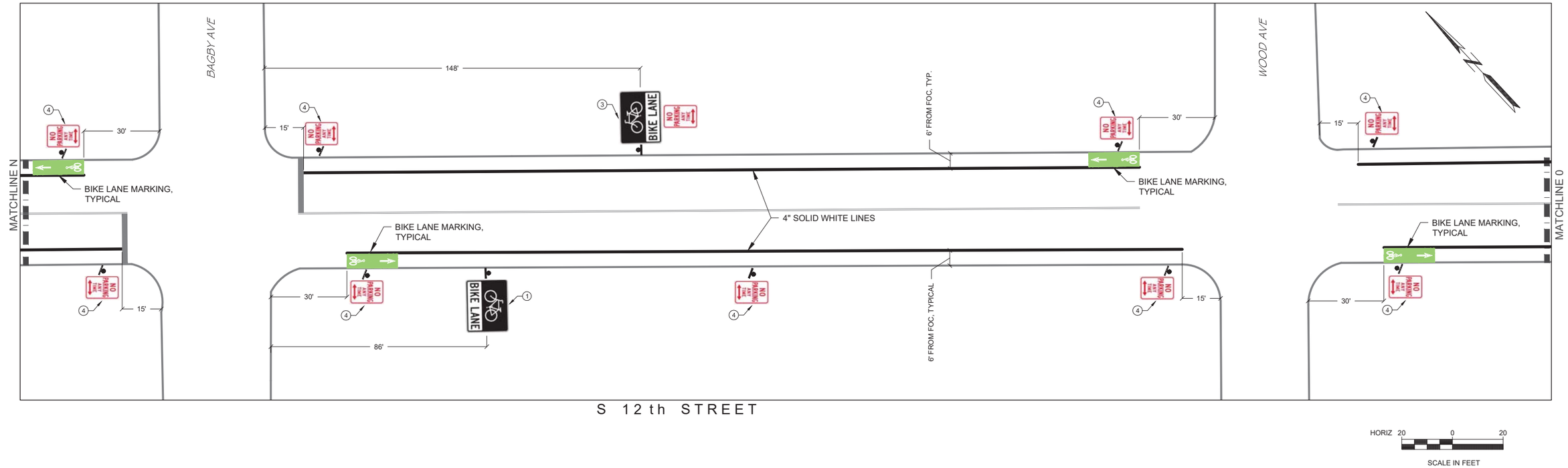

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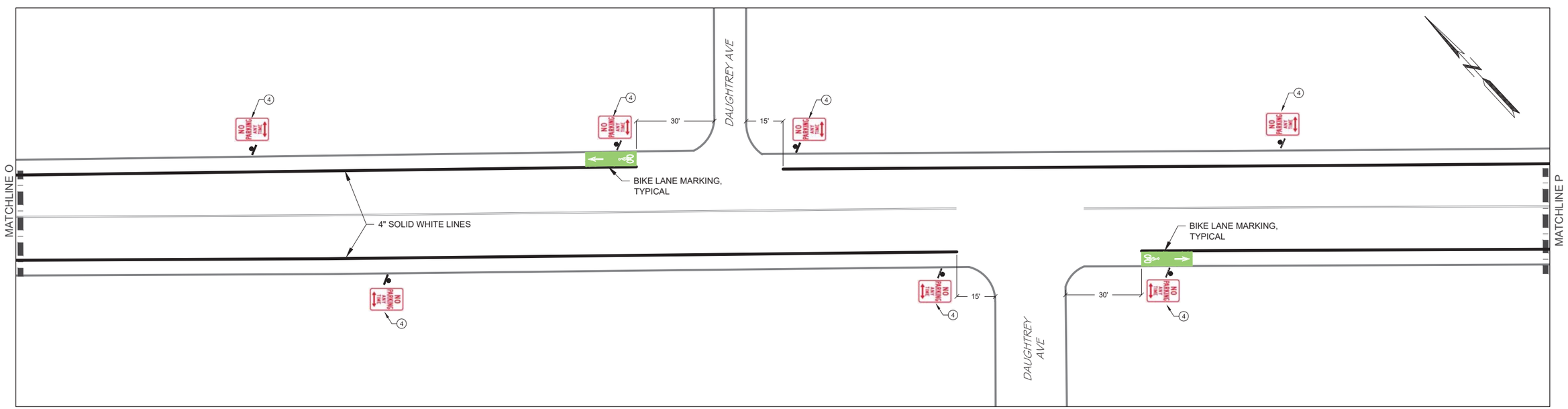

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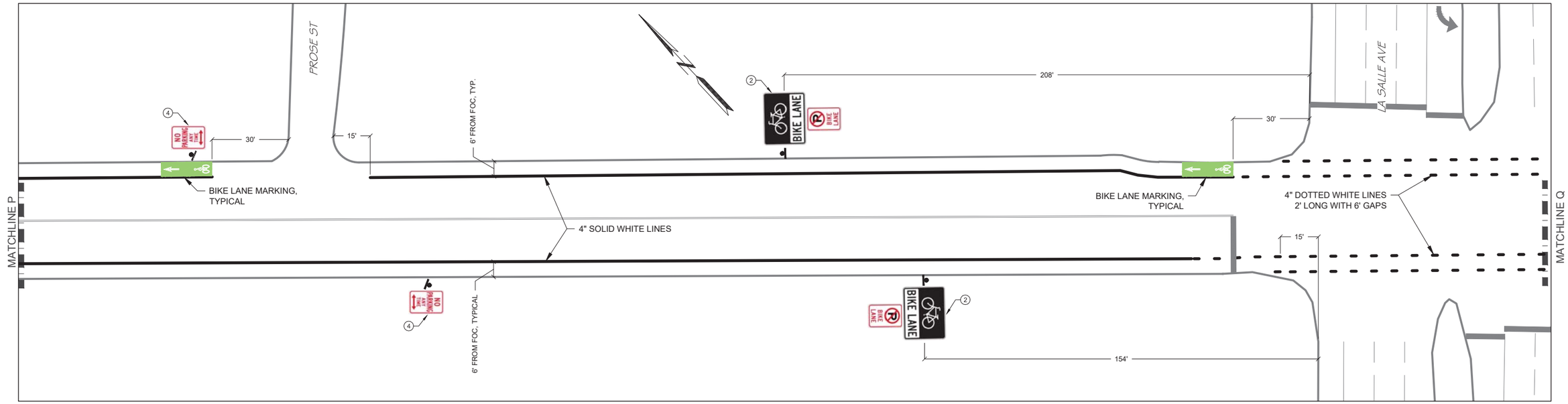

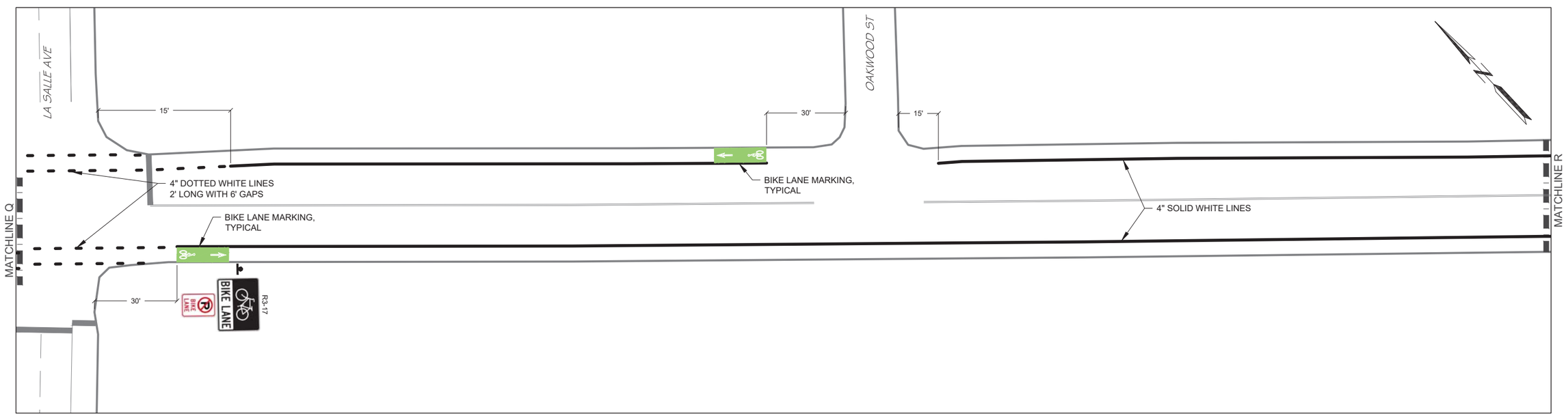

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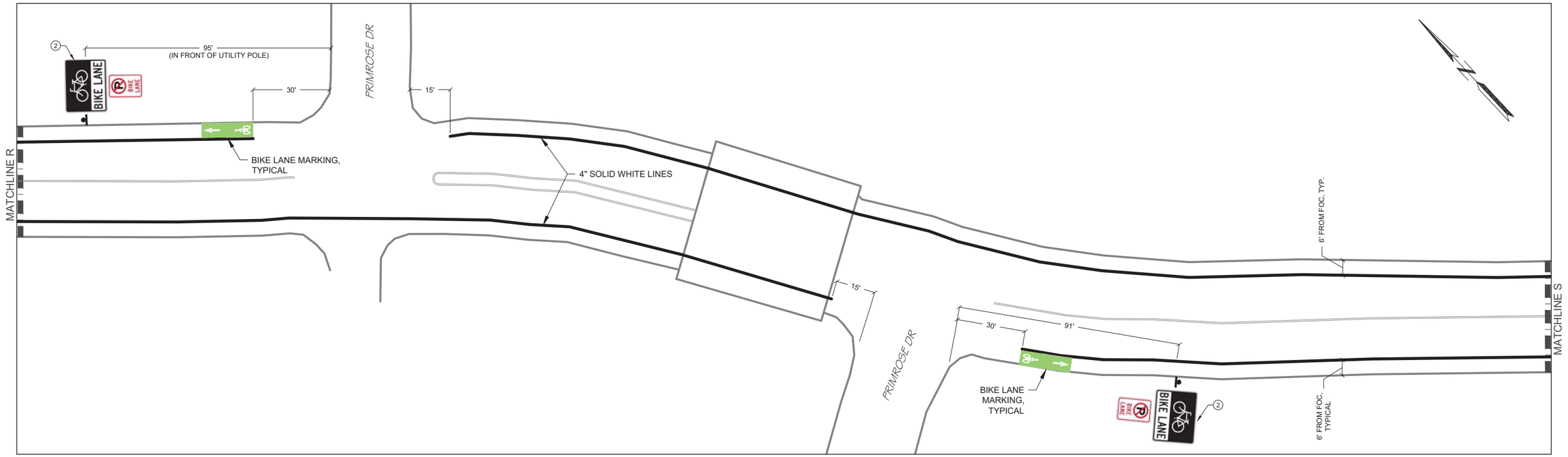

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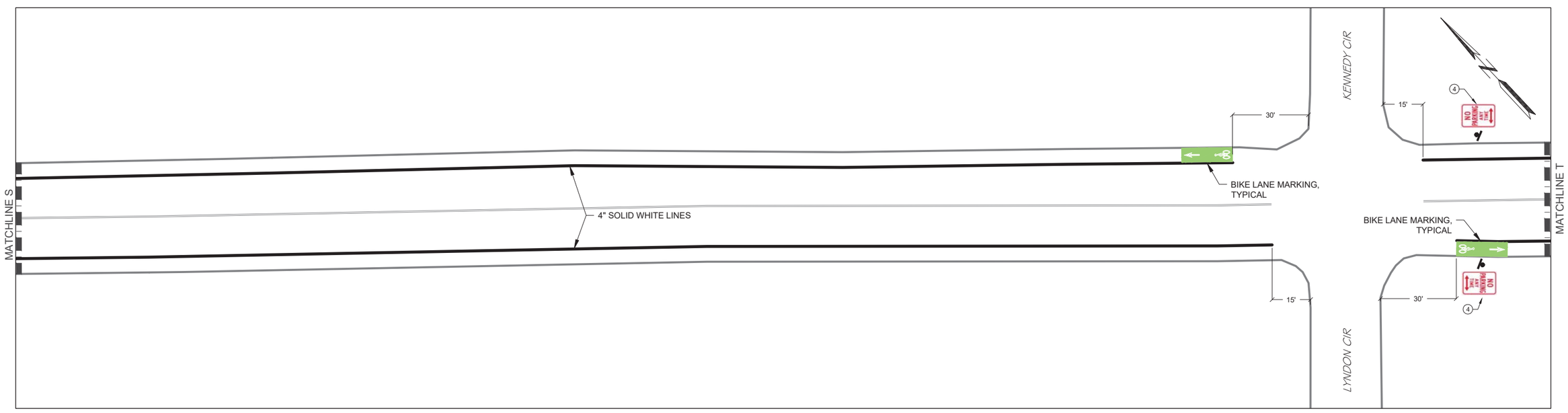

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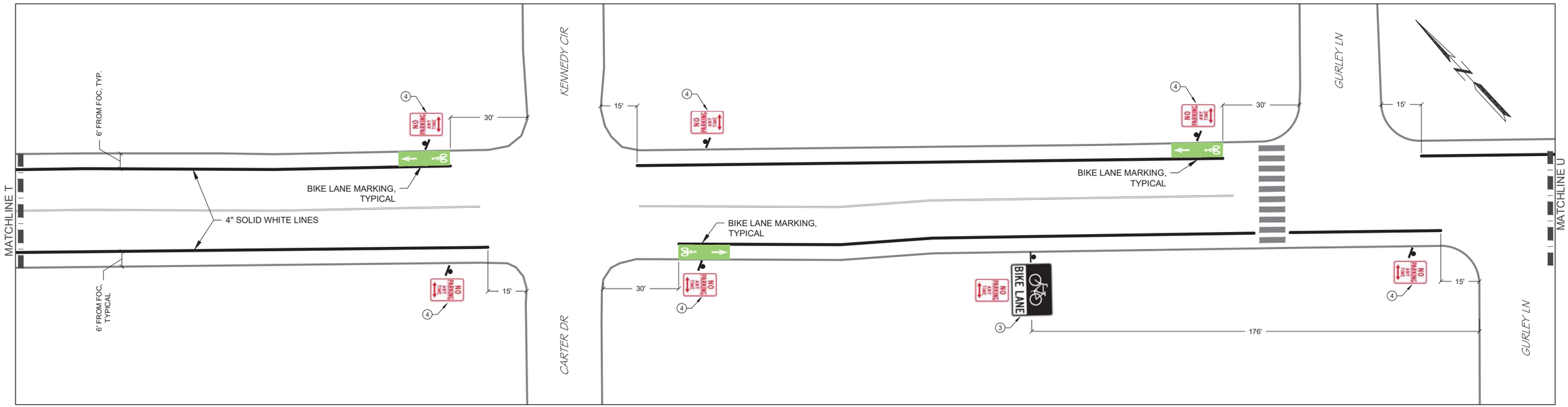

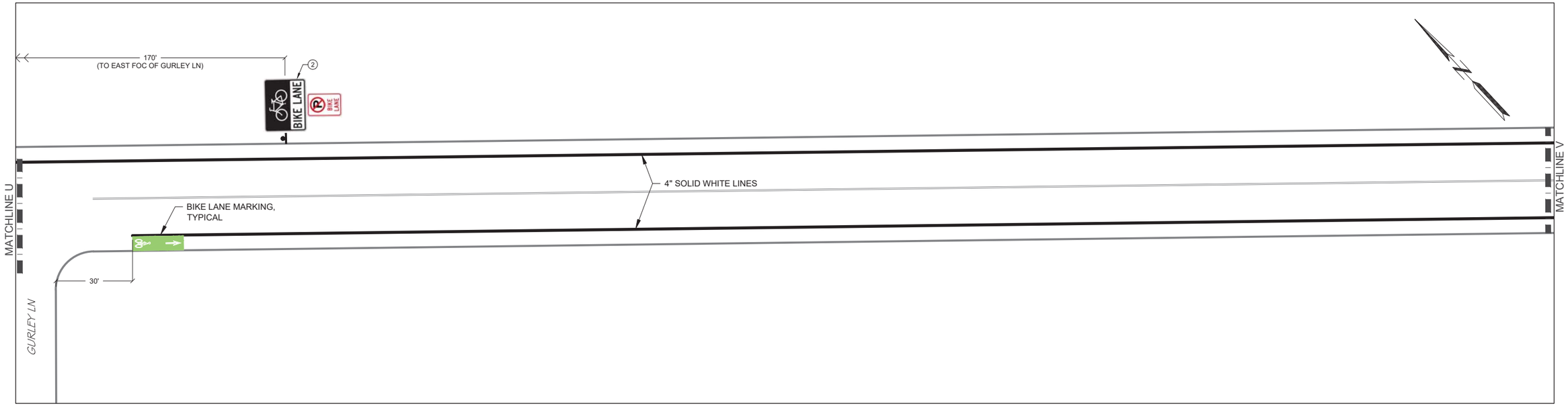

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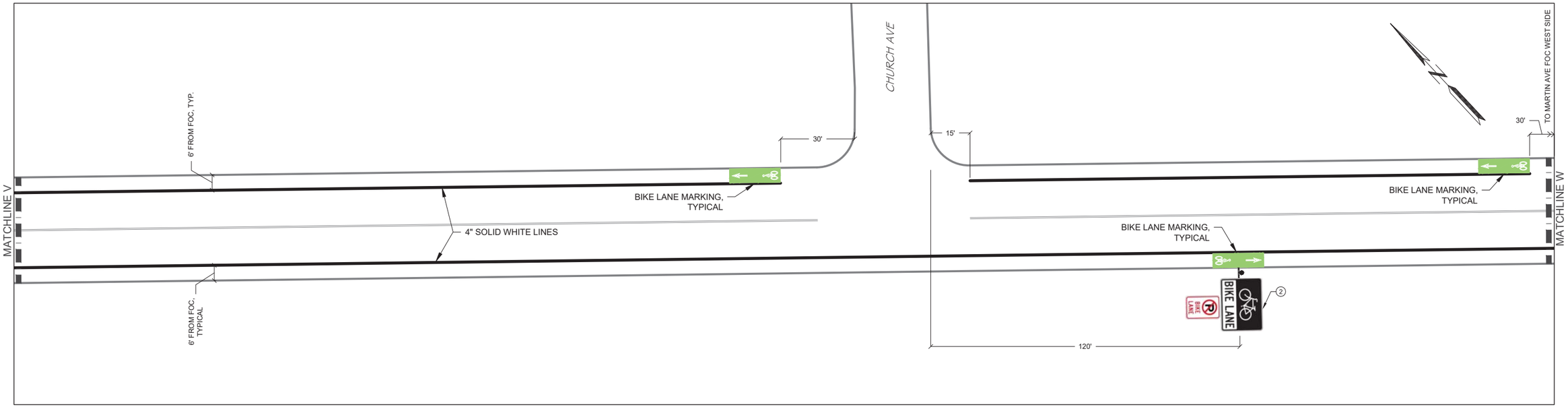

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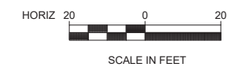

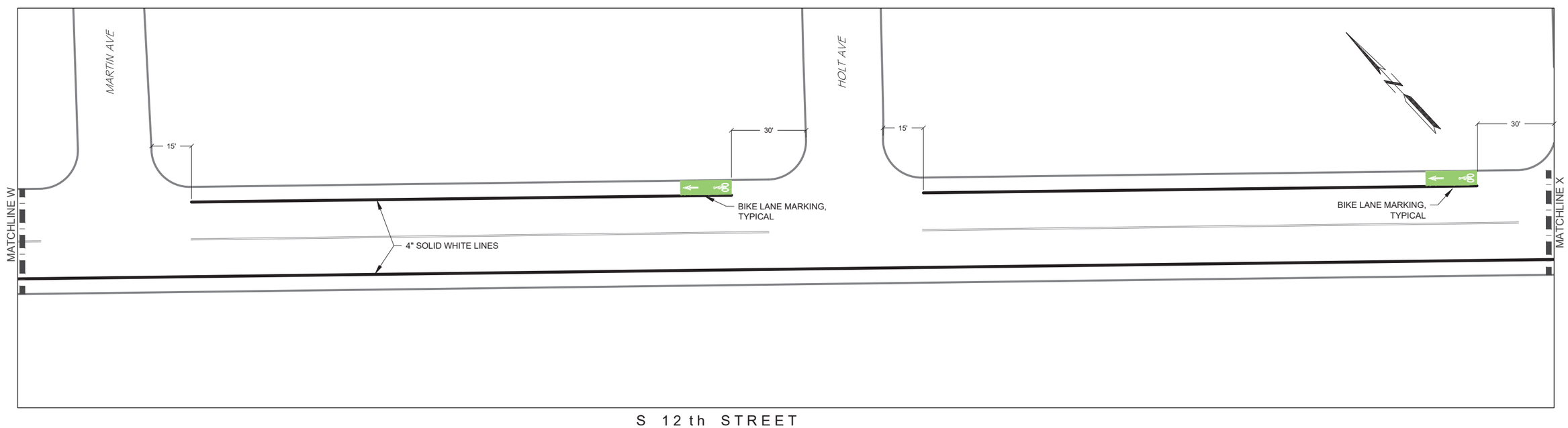

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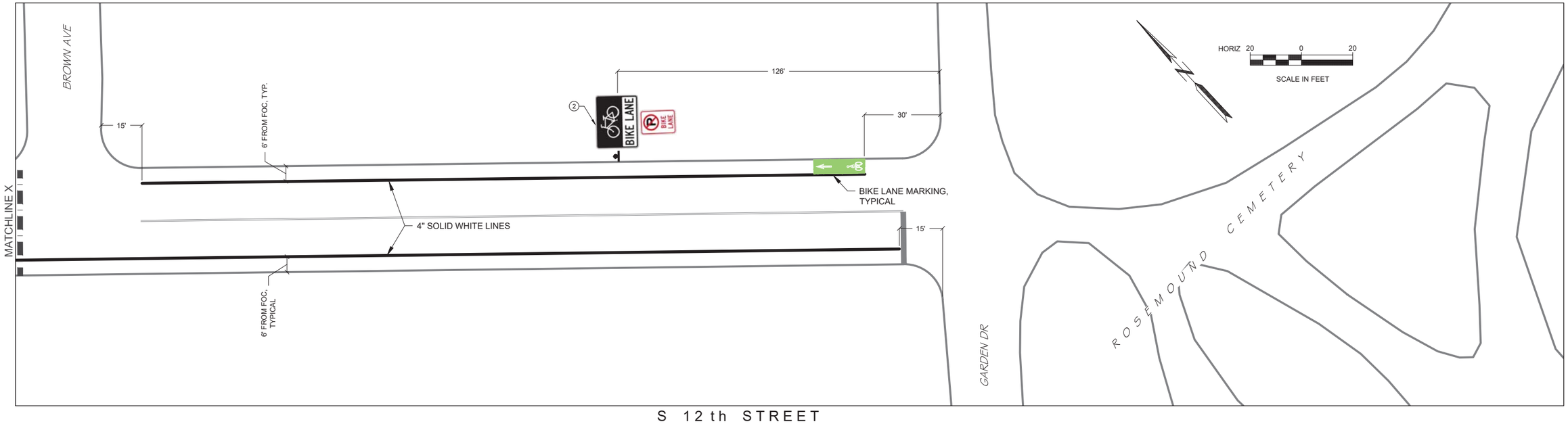

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