



CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
ROADRUNNER EXECUTIVE TOWER



CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

THROUGH INNOVATION AND DEDICATION, WE BUILD AND MAINTAIN SAN ANTONIO'S INFRASTRUCTURE

SHEET NO.SHEET TITLEGENERAL

- 1 TITLE SHEET
- 2 INDEX
- 3 GENERAL NOTES
- 4 SUPPLEMENTAL GENERAL NOTES

STRUCTURAL

- 5 SITE PLAN
- 6 FOUNDATION FRAMING
- 7 SECOND FLOOR FRAMING
- 8 ROOF FRAMING

TRANSPORTATION

- 9 PARKING LOT LAYOUT
- 10 CONCRETE DRIVEWAY STANDARDS
- 11 CONCRETE CURB AND CURB AND GUTTER
- 12 MISCELLANEOUS CONSTRUCTION STANDARDS I
- 13 MISCELLANEOUS CONSTRUCTION STANDARDS II
- 14 PEDESTRIAN FACILITIES CURB RAMPS
- 15 WHEELCHAIR RAMP STANDARDS
- 16 STANDARD PAVEMENT MARKINGS (ARROWS)
- 17 STANDARD PAVEMENT MARKINGS (WORDS)
- 18 SW3P
- 19 SW3P NARRATIVE

DRAINAGE

- 20 PRE-DEVELOPMENT HYDROLOGY
- 21 PRE-DEVELOPMENT HYDROLOGIC CALCULATIONS
- 22 PROPOSED GRADING PLAN
- 23 POST-DEVELOPMENT HYDROLOGY
- 24 POST-DEVELOPMENT HYDROLOGIC CALCULATIONS
- 25 TYPICAL CONCRETE CHANNEL RIP-RAP STANDARDS
- 26 TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS I
- 27 TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS II

UTILITIES

- 28 General Wastewater Layout
- 29 Wastewater Plan and Profile
- 30 Wastewater Details
- 31 Wastewater Details
- 32 General Water Layout
- 33 Fire Protection Plan
- 34 Fire Protection Details
- 35 Utility General Notes

LID DETAILS

- 36 ROOF PLAN
- 37 BIORETENTION AND BIOSWALE CROSS SECTIONS
- 38 WEST ELEVATION SOUTH ELEVATIONS

RAACC ENGINEERING

1 UTSA CIRCLE

SAN ANTONIO, TX 78249

(210) 458-4011 [HTTPS://RAACC-CE.COM](https://raacc-ce.com)

CITY OF SAN ANTONIO

PUBLIC WORKS DEPARTMENT

ROADRUNNER EXECUTIVE TOWER

INDEX

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.
6. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
8. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
9. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

SAN ANTONIO WATER SYSTEM (SAWS)	233-2010
BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET)	354-6538 /357-5741
COSA DRAINAGE	207-8048
COSA SIGNAL OPERATIONS	207-7720 /207-7765
TEXAS STATE WIDE ONE CALL LOCATOR	1-800-344-8377
- CITY PUBLIC SERVICE ENERGY	
- TIME WARNER	
- AT&T	
- MCI	
11. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
12. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
13. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
14. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND /OR TRACKED CONSTRUCTION MATERIALS AND /OR DEBRIS.
15. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.

IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.

IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
16. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND /OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND /OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL.

THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.
17. CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.

18. CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

TREE PROTECTION AND PRESERVATION GENERAL NOTES

1. NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
2. TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).
3. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
4. ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
5. ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).
6. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.
7. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. ROOT PROTECTION ZONE IS 1 FOOT OF RADIUS PER INCH OF TREE'S DIAMETER. A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.
8. SAPLINGS, SHRUBS OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.
9. NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.
10. TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI A-300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.
11. NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.
12. ALL DEBRIS GENERATED BY THE PRUNING AND TRIMMING OF THE TREES AND /OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY (NO SEPARATE PAY ITEM).
13. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE, BUT NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
14. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST. (207-8053)
15. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
16. TREE PLANTING FOR MITIGATION OR ENHANCEMENT: ALL PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATION, FERTILIZING, PRUNING AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT. TREES THAT DIE WITHIN TWELVE (12) MONTHS SHALL BE REPLACED WITH A TREE OF EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.
2. WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ALL-WEATHER ACCESS TO THE BUSINESSES AND RESIDENCES. THE TEMPORARY DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.
3. PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.
4. FOR BUSINESSES WITH MORE THAN ONE DRIVEWAY, AT LEAST ONE DRIVEWAY SHALL REMAIN OPEN WHILE THE OTHER NEW DRIVEWAY APPROACHES ARE CONSTRUCTED. FOR BUSINESSES WITH ONLY ONE DRIVEWAY, THE NEW DRIVEWAY APPROACH SHALL BE CONSTRUCTED IN HALF WIDTHS. UNLESS A TEMPORARY ASPHALT DRIVEWAY IS FIRST INSTALLED AT NO SEPARATE COST TO THE CITY.

NOTE TO CONSULTANT

DO NOT MODIFY, DELETE OR ADD TO THE CITY OF SAN ANTONIO'S GENERAL NOTES STANDARD SHEET. IF MODIFICATIONS ARE REQUIRED, FOLLOW THE INSTRUCTIONS ON THE "SUPPLEMENTAL GENERAL NOTES" SHEET.

DECEMBER 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CITY OF SAN ANTONIO
GENERAL NOTES

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY:	DSGN. BY:	CHKD. BY:
SHEET NO.: OF		

THE FOLLOWING CHANGES ARE MADE TO THE CITY OF SAN ANTONIO'S GENERAL NOTES:

ADDITIONAL NOTES

1. CONTRACTOR SHALL CONTACT METHODIST HOSPITAL AT (210)555-1234 72 HOURS PRIOR TO ANY WORK BEING DONE TO CONCRETE DRIVEWAY @ STA. 48+00 RT.

DELETED NOTES

1. DELETE NOTE NO. 8 – CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY-FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES IN ORDER TO SCHEDULE FOR DENSITY TESTS AS REQUIRED (TELEPHONE NO. 532-2860).

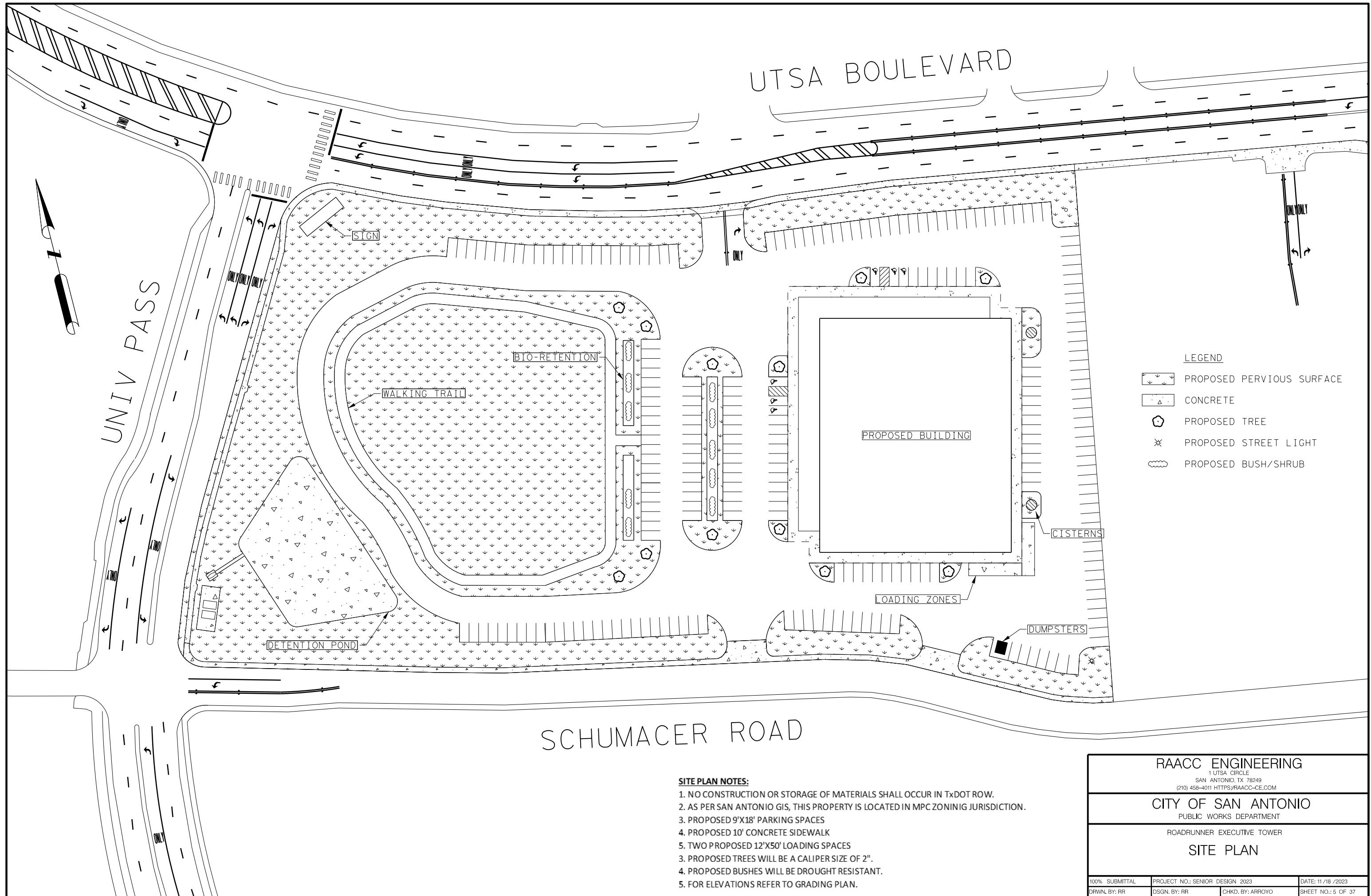
NOTE MODIFICATION

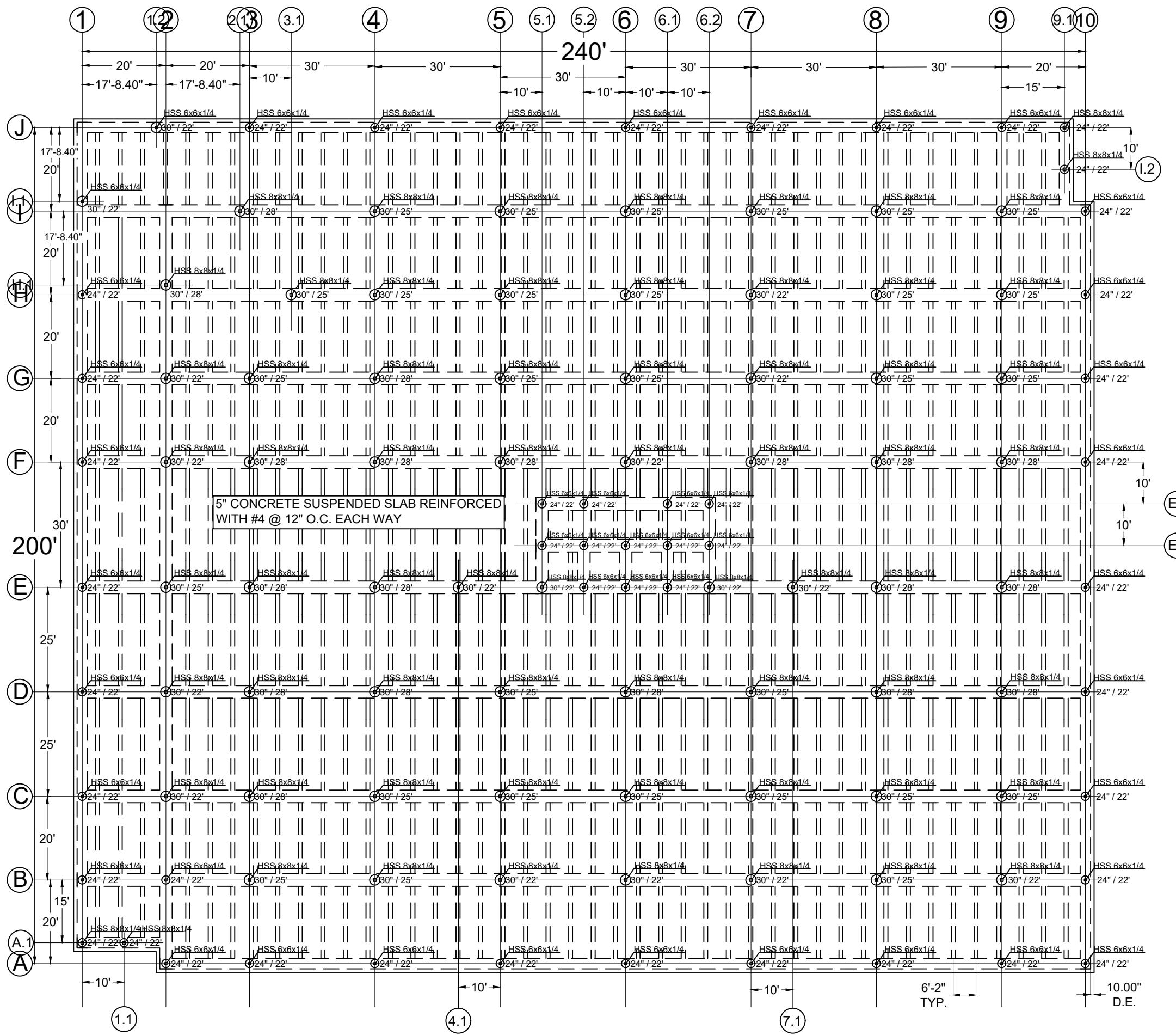
1. MODIFY NOTE NO. 4 – CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES, EXISTING WOODEN FENCES, ORNAMENTAL STONE PLANTERS, OR DRIVEWAYS (NO SEPARATE PAY ITEM).

NOTE TO CONSULTANT:

USE THIS FORMAT TO ADD, DELETE OR MODIFY THE CITY OF SAN ANTONIO GENERAL NOTES.
THE NOTES REFERENCED ABOVE ARE A SAMPLE ONLY.

CONSULTANT NAME STREET NUMBER AND ADDRESS CITY STATE ZIP CODE		TELEPHONE NUMBER	FAX NUMBER	INTERNET ADDRESS
CITY OF SAN ANTONIO CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT				
PROJECT TITLE SUPPLEMENTAL GENERAL NOTES				
% SUBMITTAL	PROJECT NO.:	DATE:		
DRWN. BY:	DSGN. BY:	CHKD. BY:	SHEET NO.: OF	





BEAM SCHEDULE			
MEMBER	DIMENSIONS	REINFORCEMENT	STIRRUPS
JOIST	25"D x 8"W	TOP: 5-#10 BOT: 5-#8	#4, 4-legs 1@3", 1@6", 8@11",BAL@24"
GIRDER	25"D x 36"W	TOP: 5-#8 BOT: 5-#6	#4, 4-legs 1@3", 1@6", 8@11",BAL@24"
PERIMETER BEAM	25"D x 30"W	TOP: 2-#8 BOT: 2-#8	#4, 2-legs 1@3", 1@6", 6@11" BAL@24"

11/7/2023

Scale: 1/25" = 1'-0"

ROADRUNNER EXECUTIVE
TOWER

FOUNDATION FRAMING PLAN

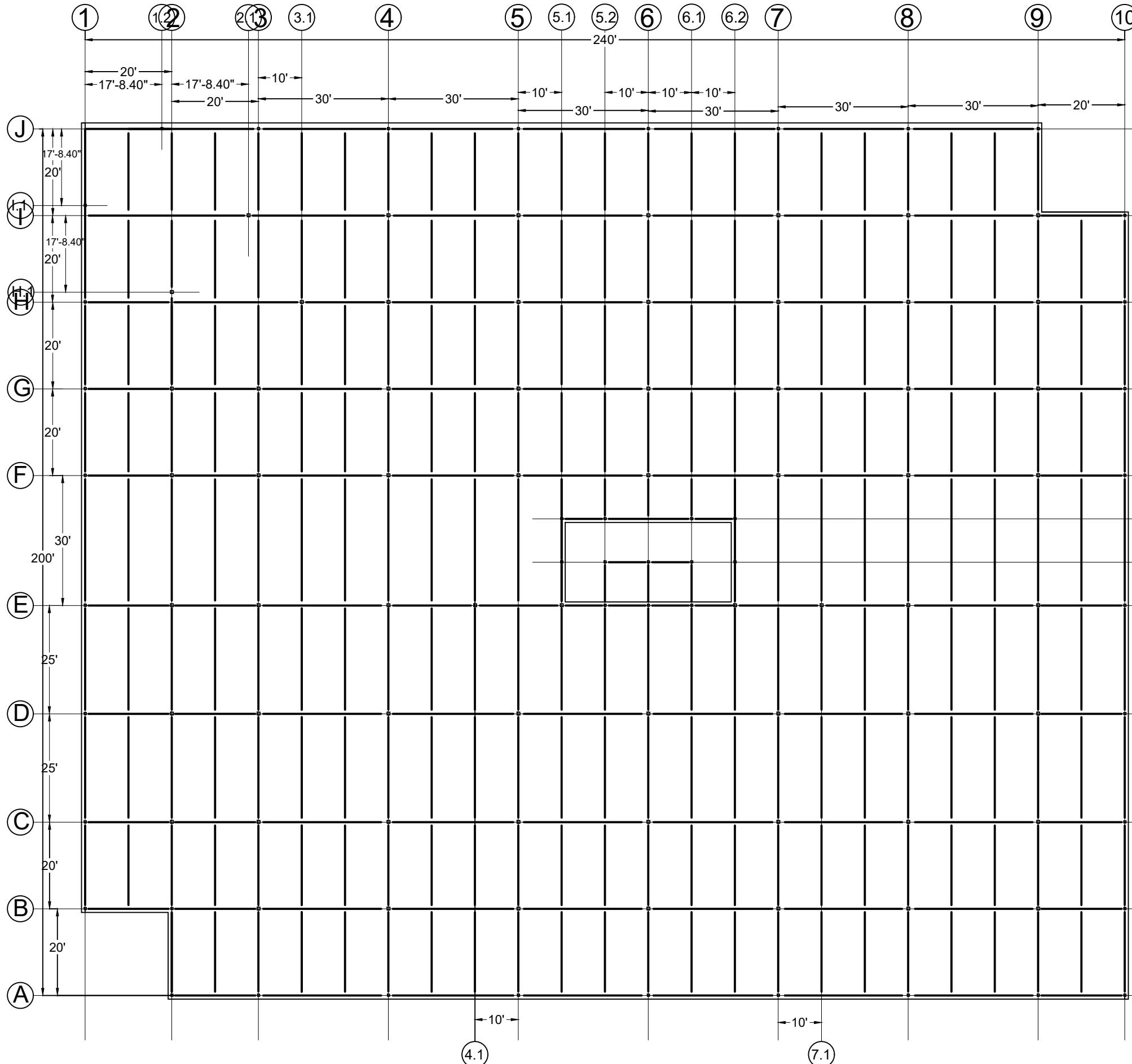
RAACC

KAAGO
CIVIL ENGINEERING

CONT	SECT	STATE	PROJECT
------	------	-------	---------

1009	02	TEXAS	12345-
DIST	COUNTY		SHE

4 BEXAR



MODEL NAME: ROADRUNNER EXECUTIVE TOWER
DATE: 11/7/2023
FILE: PLANSHEET

AYAZJI

**2.5" NORMAL WEIGHT CONCRETE ON
1.5 VL DECK (4" TOTAL THICKNESS)**

BEAM SCHEDULE	
FLOOR JOIST	>25' SPAN= W12X19 (STUDS=10) <25' SPAN=W16X26) (STUDS=12)
GIRDERS	W21X50 (STUDS=30)
PERIMETER BEAMS	W16X31 (STUDS=28)

11/7/2023

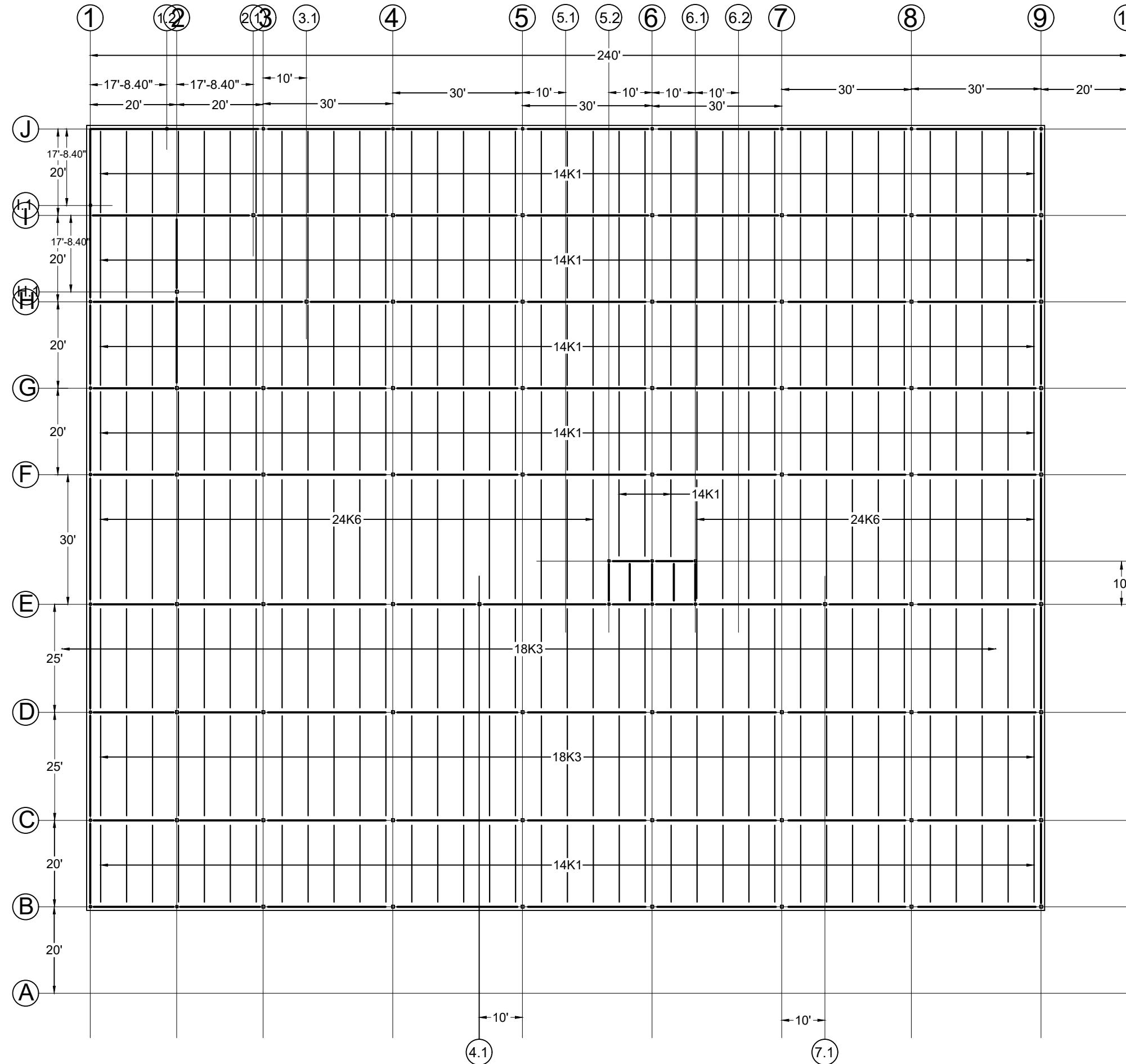
Scale: 1/25" = 1'-0"

ROADRUNNER EXECUTIVE
TOWER

SECOND FLOOR
FRAMING PLAN

RAACC

T	SECT	STATE	PROJECT #
9	02	TEXAS	12345-2
T	COUNTY		SHEET NO
	BEXAR		



1.5 BP 22-GAUGE ROOF METAL DECK
(TRIPPLE SPAN CONDITION FOR
UNSHORED CONSTRUCTION)

BEAM SCHEDULE	
GIRDERS	W16X26
PERIMETER BEAMS	W12X19

11/7/2023

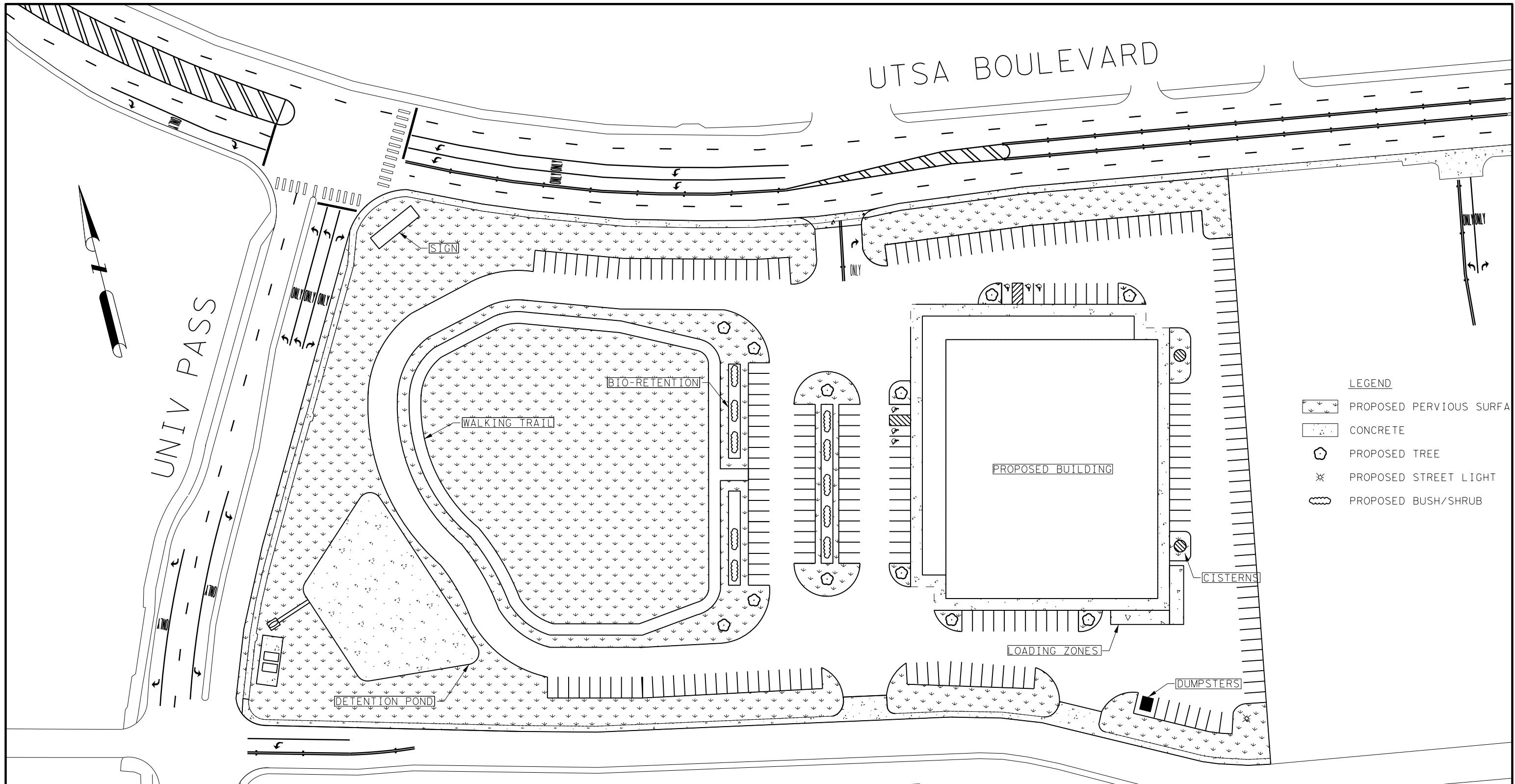
Scale: 1/25" = 1'-0"

ROADRUNNER EXECUTIVE
TOWER

ROOF FRAMING PLAN

RAACC
CIVIL ENGINEERING

CONT	SECT	STATE	PROJECT #
1009	02	TEXAS	12345-2
DIST	COUNTY	SHEET NO	
4	BEXAR		



SCHUMACER ROAD

PARKING SUMMARY				
	USE	AREA	RATIO	# OF SPACES
PARKING REQUIRED FOR PROPOSED DEVELOPMENT	OFFICE SPACE	79200	1/300	264
TOTAL # OF PARKING SPACES				265

SITE PLAN NOTES:

1. NO CONSTRUCTION OR STORAGE OF MATERIALS SHALL OCCUR IN TxDOT ROW.
2. AS PER SAN ANTONIO GIS, THIS PROPERTY IS LOCATED IN MPC ZONING JURISDICTION.
3. PROPOSED 9'X18' PARKING SPACES
4. PROPOSED 10' CONCRETE SIDEWALK
5. TWO PROPOSED 12'X50' LOADING SPACES
6. PROPOSED TREES WILL BE A CALIPER SIZE OF 2".
7. PROPOSED BUSHES WILL BE DROUGHT RESISTANT.
8. FOR ELEVATIONS REFER TO GRADING PLAN.

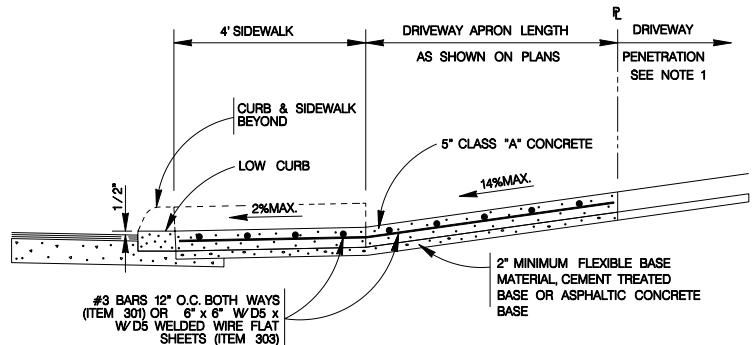
RAACC ENGINEERING

1 UTSA CIRCLE
SAN ANTONIO, TX 78249
(210) 458-4011 [HTTPS://RAACC-CE.COM](https://RAACC-CE.COM)

CITY OF SAN ANTONIO

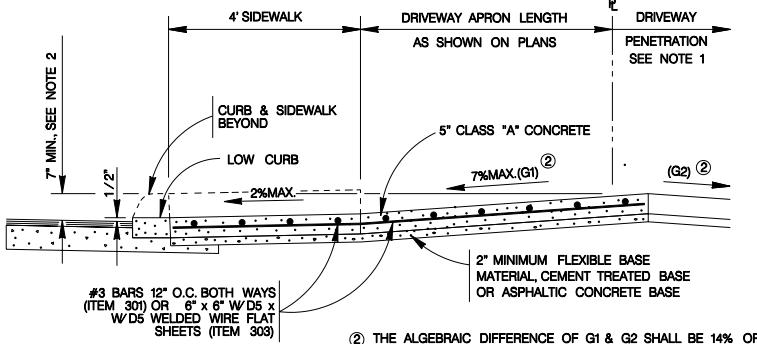
PUBLIC WORKS DEPARTMENT
ROADRUNNER EXECUTIVE TOWER

PARKING LOT LAYOUT



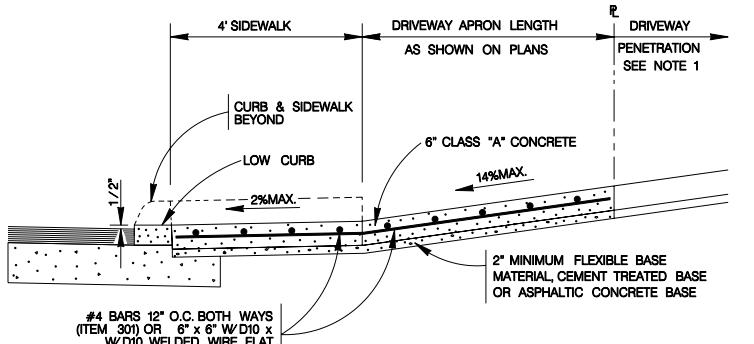
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.1



TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION

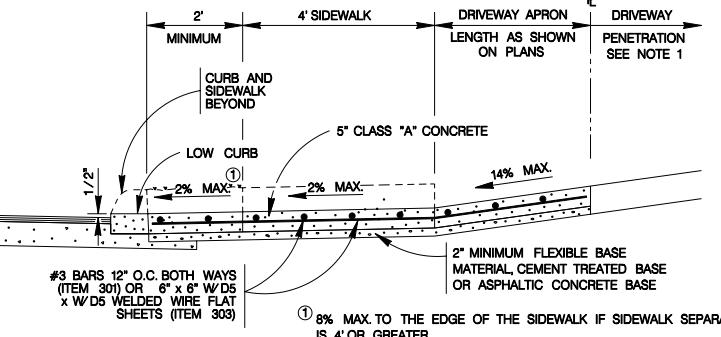
WITH SIDEWALK ABUTTING CURB
ITEM 503.2

CONCRETE DRIVEWAY NOTES

- DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
 - CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2.
 - ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 'D' & 6" FLEXIBLE BASE.
 - GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE.
- 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
- THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

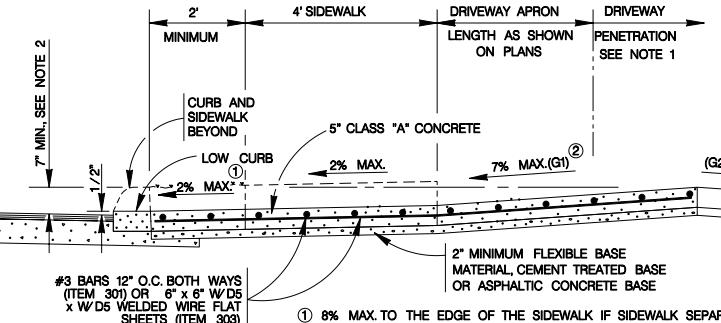
TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL - ONE WAY	12'	20'
COMMERCIAL - TWO WAY	24'	30'

- FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
- FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
- DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
- A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
- SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



TYPICAL RESIDENTIAL DRIVEWAY SECTION

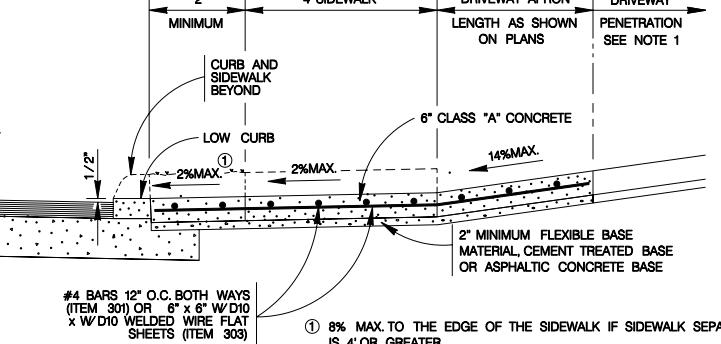
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1



(1) 8% MAX. TO THE EDGE OF THE SIDEWALK IF SIDEWALK SEPARATION IS 4' OR GREATER.
(2) THE ALGEBRAIC DIFFERENCE OF G1 & G2 SHALL BE 14% OR LESS

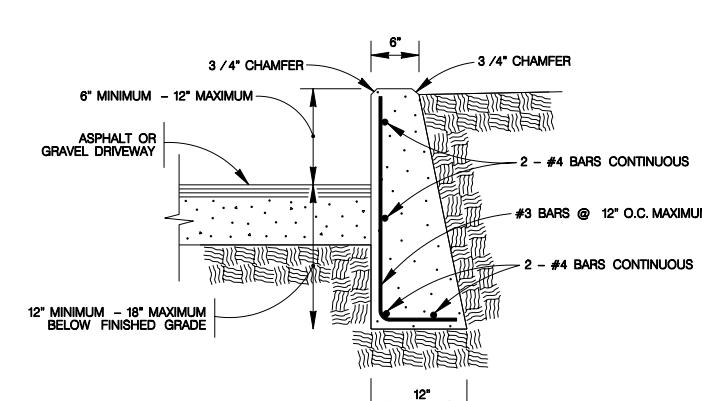
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB
ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION

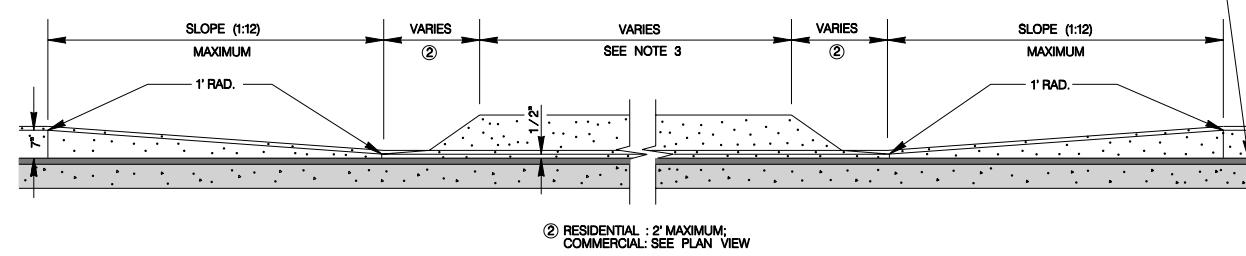
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2



NOTE:

- COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
- CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

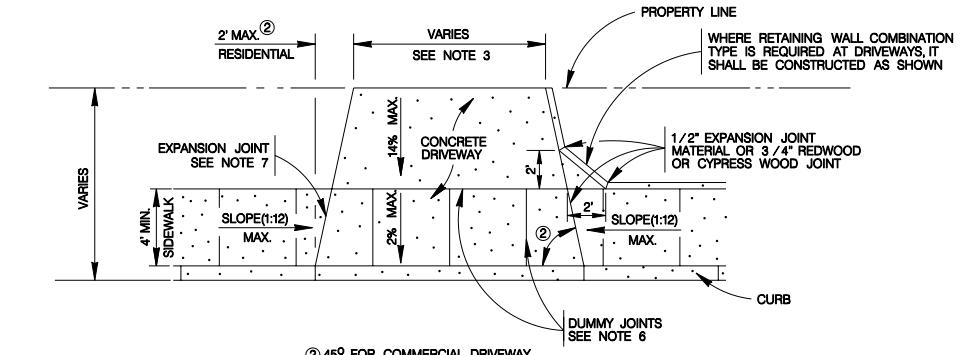
DRIVEWAY - CONCRETE RETAINING WALL
ON COMPACTED SUBGRADE
ITEM 307.1



CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB

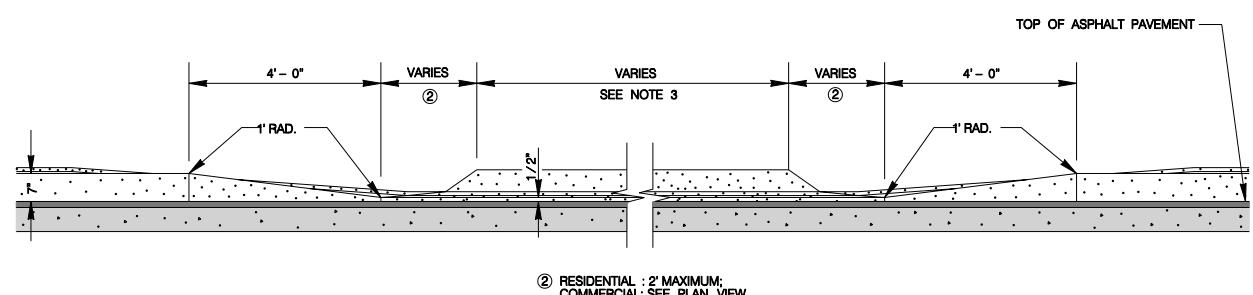
(2) RESIDENTIAL: 2' MAXIMUM;
COMMERCIAL: SEE PLAN VIEW



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK ABUTTING CURB

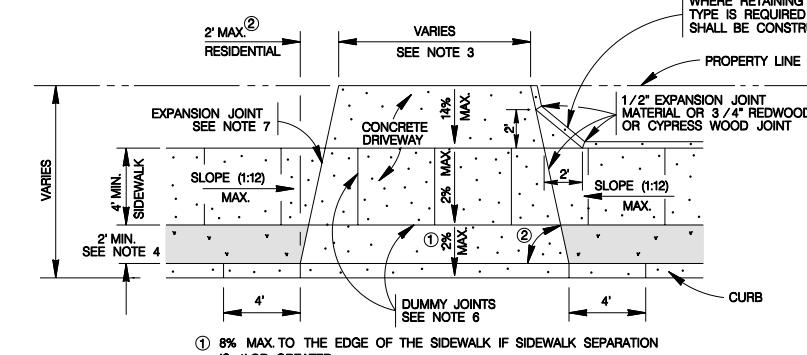
TOP OF ASPHALT PAVEMENT



CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB

WHERE RETAINING WALL COMBINATION
TYPE IS REQUIRED AT DRIVEWAYS, IT
SHALL BE CONSTRUCTED AS SHOWN



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK SEPARATED FROM CURB

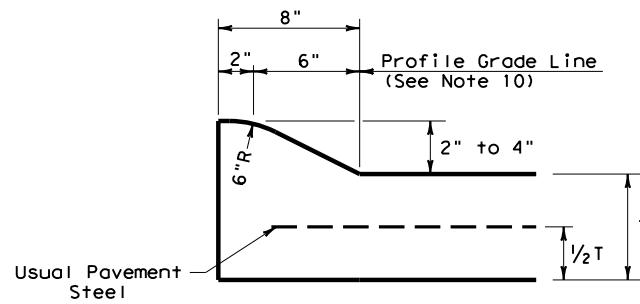
TOP OF ASPHALT PAVEMENT

MAY 2009

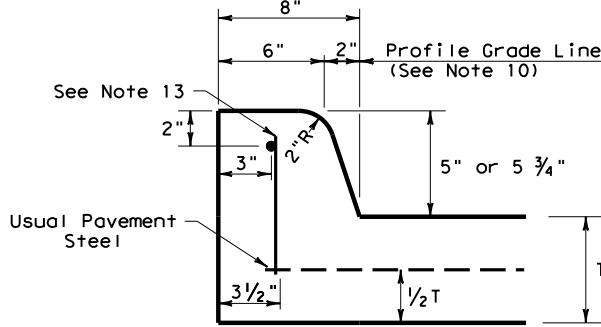
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

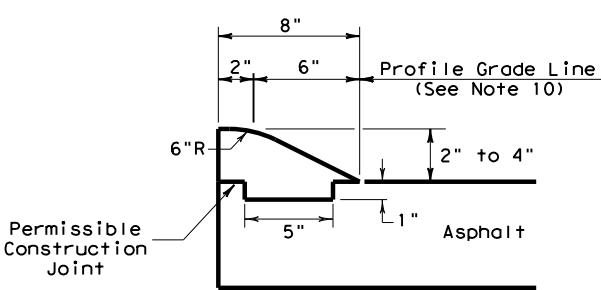
% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY: _____	CHKD. BY: R.S. HOSSEINI, P.E.
SHEET NO.: _____ OF _____		



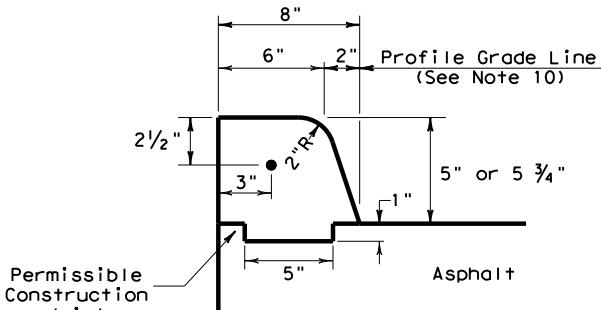
TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



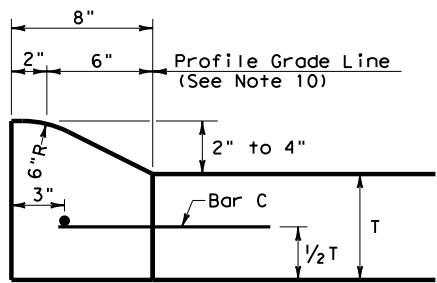
TYPE II CURB (MONOLITHIC)
5" - 5 3/4" HEIGHT



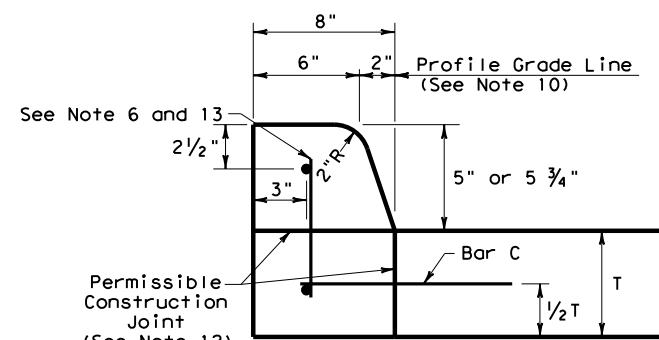
TYPE III CURB (KEYED)
2" - 4" HEIGHT



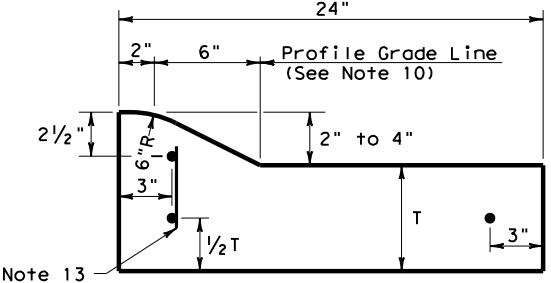
TYPE IV CURB (KEYED)
5" - 5 3/4" HEIGHT



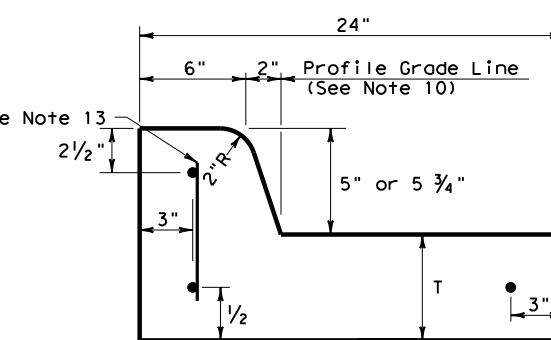
TYPE I CURB
2" - 4" HEIGHT



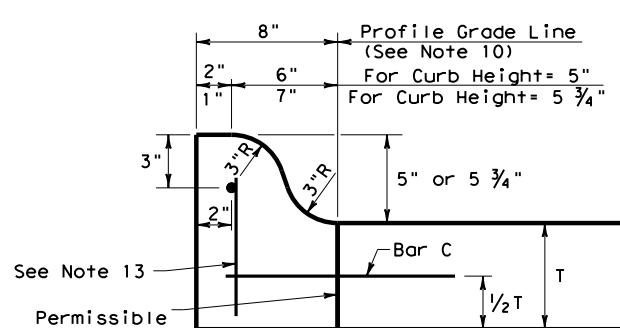
TYPE II CURB
5" - 5 3/4" HEIGHT



TYPE I CURB AND GUTTER
2" - 4" HEIGHT

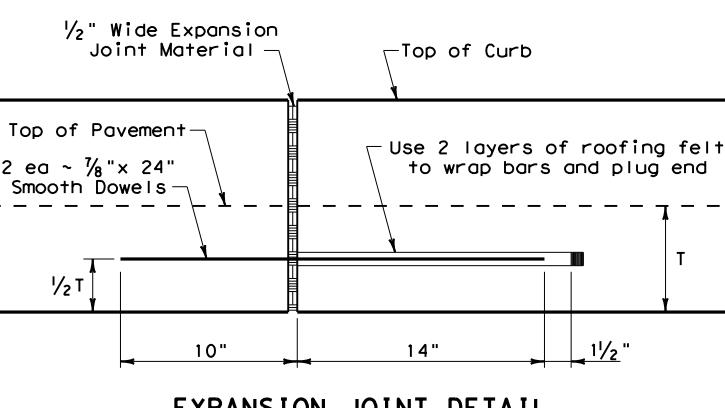


TYPE II CURB AND GUTTER
5" - 5 3/4" HEIGHT



TYPE IIIa CURB
5" - 5 3/4" HEIGHT

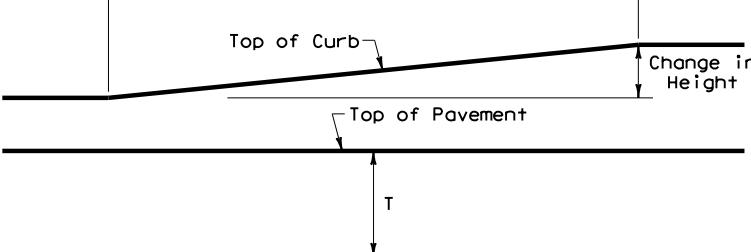
TYPE IIa CURB AND GUTTER
5" - 5 3/4" HEIGHT



EXPANSION JOINT DETAIL

CURB TRANSITION NOTE:
Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans, or as directed by the Engineer.

10'-0" Curb Transition (0" to 2"),
(See Curb Transition Note)

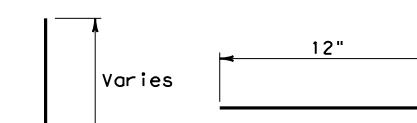


CURB TRANSITION

Note: To be paid for as Highest Curb

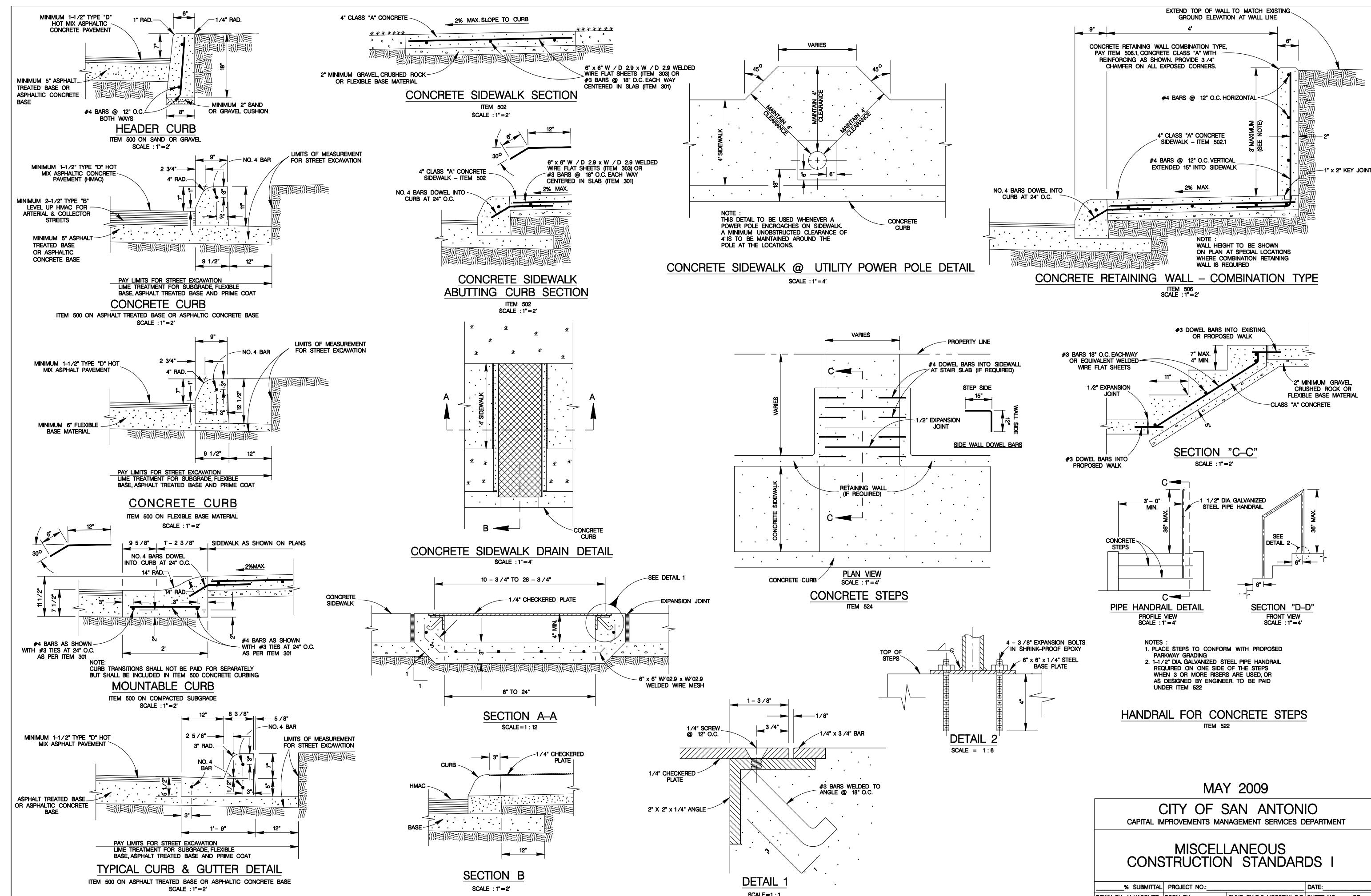
GENERAL NOTES

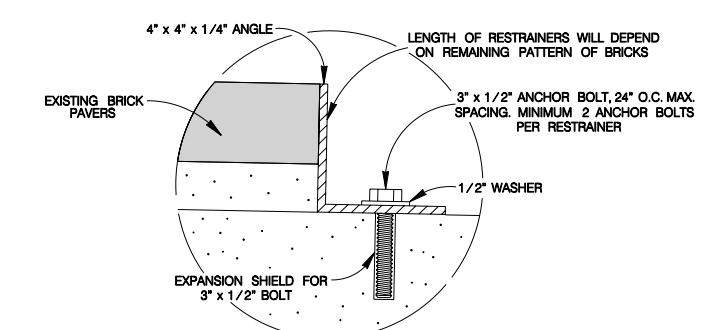
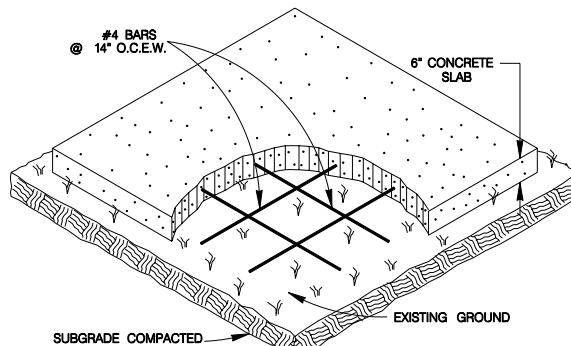
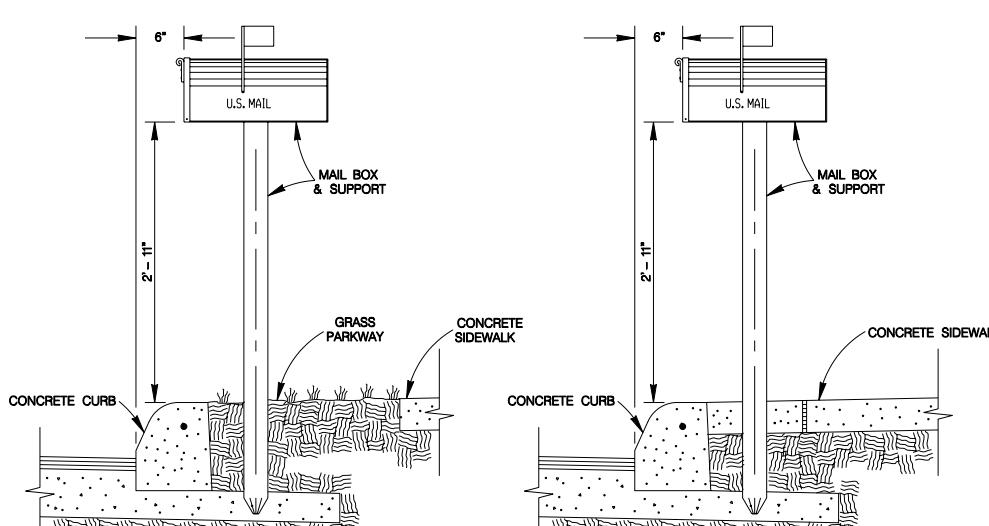
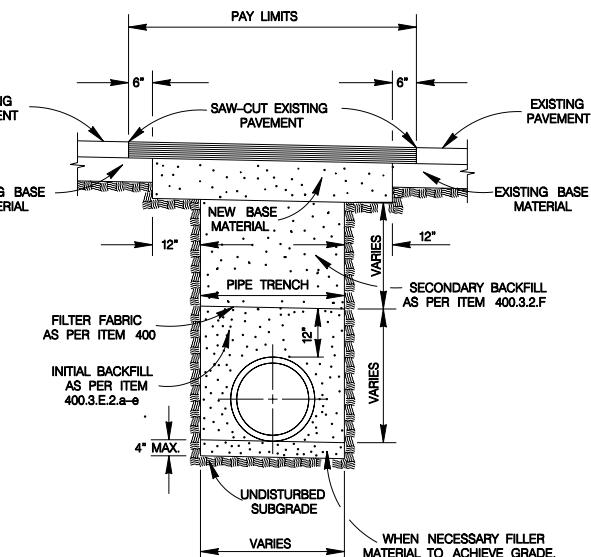
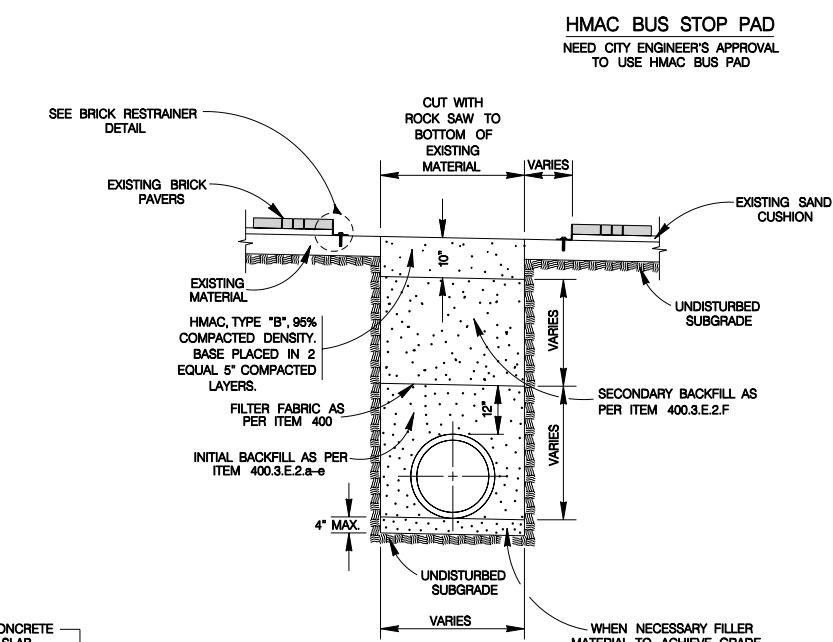
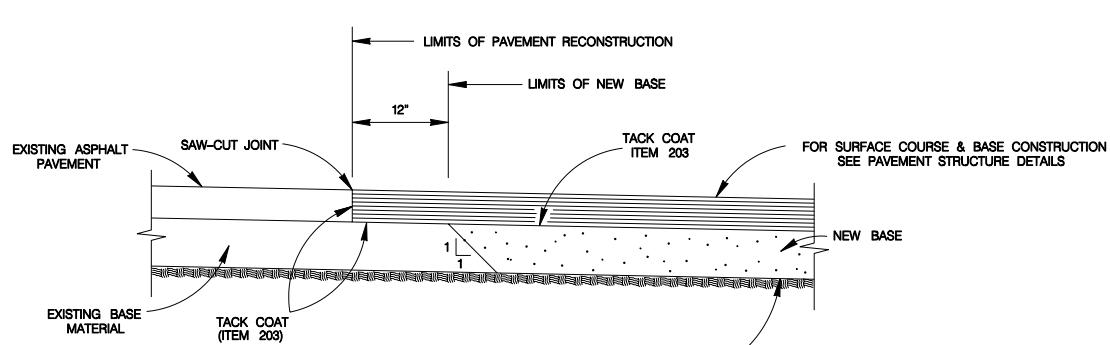
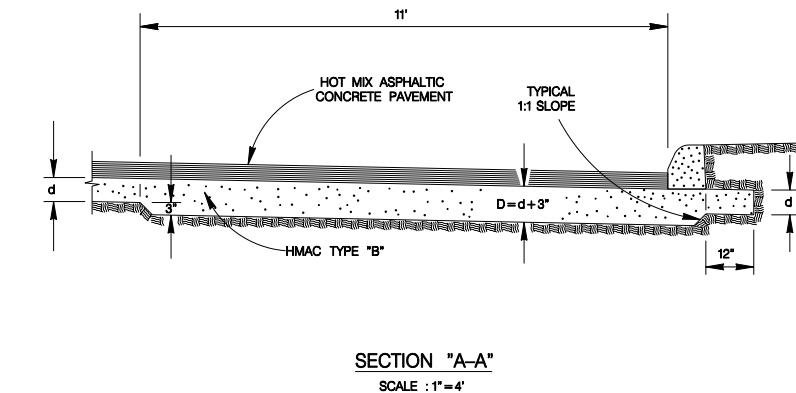
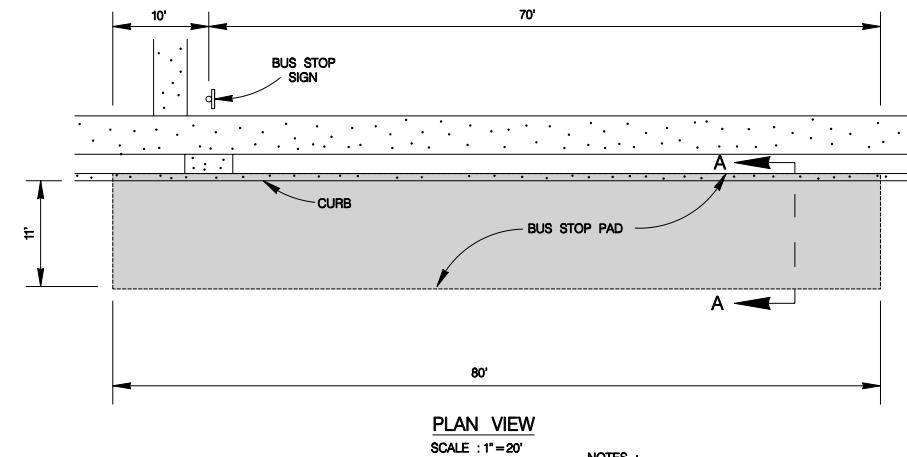
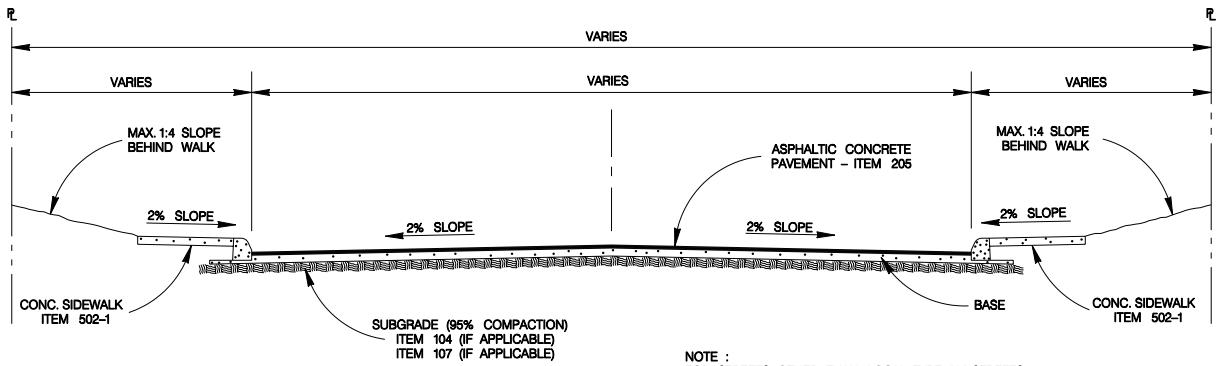
- All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
- Concrete shall be Class A.
- When reinforcing bars are used, they shall be No. 4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
- Round exposed sharp edges with a rounding tool, to a minimum radius of $\frac{1}{4}$ inch.
- All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
- Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and grouted in place, or may be inserted into fresh concrete.
- Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
- Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
- Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
- Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
- One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
- When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
- Bar B placement as needed (typically at four ft. C-C) to support curb reinforcing steel during concrete placement.



BAR B

Texas Department of Transportation		Design Division Standard
CONCRETE CURB AND CURB AND GUTTER		
CCCG-22		
FILE: cccg21.dgn	DN: TXDOT	CK: AN DW: CS CK: KM
© TxDOT: JUNE 2022	REVISIONS	CONT SECT JOB HIGHWAY
DIST	COUNTY	SHEET NO.





MAIL BOX LOCATION
ITEM 513.1
SCALE : 1"=4'

**COMMUNITY
MAIL BOX SLAB**
ITEM 513.2
SCALE : 1"=4'

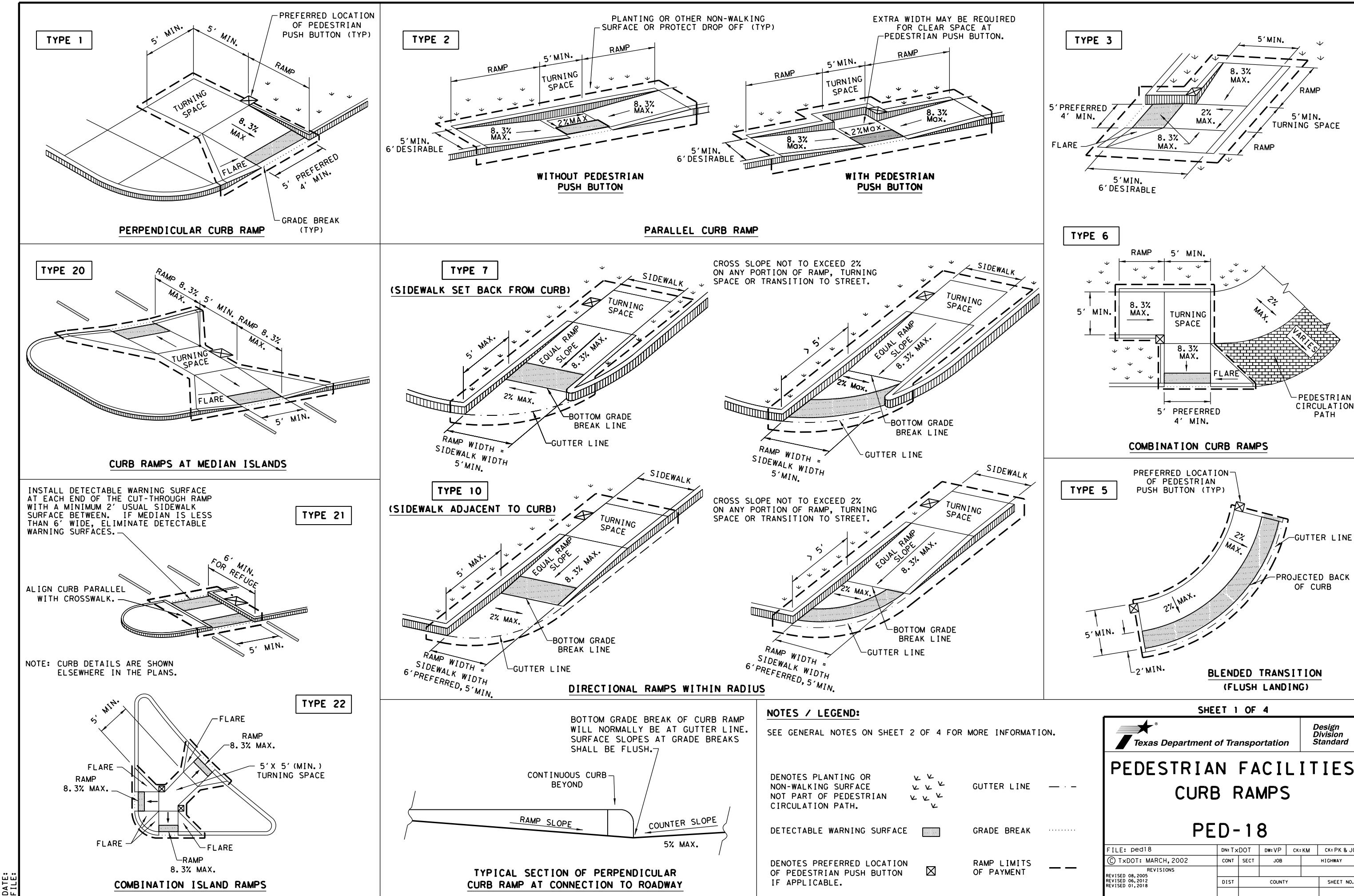
BRICK RESTRAINER DETAIL
SCALE = 1:6

FEBRUARY 2010

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

MISCELLANEOUS
CONSTRUCTION STANDARDS II

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E. SHEET NO.: OF



GENERAL NOTES

CURB RAMPS

- Install a curb ramp or blended transition at each pedestrian street crossing.
- All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
- Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
- 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.
- Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
- Clear 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.
- 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.
- Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
- 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.
- 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.
- 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.
- Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
- Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
- Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
- Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
- Provide a smooth transition where the curb ramps connect to the street.
- 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.
- Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

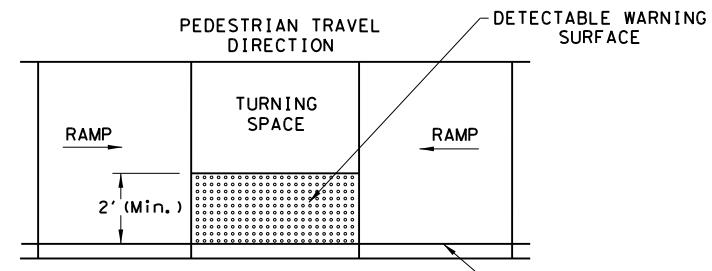
DETECTABLE WARNING MATERIAL

- Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. 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.
- 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.
- Detectable warning surfaces must be firm, stable and slip resistant.
- Detectable warning surfaces shall be a minimum of 24 inches 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.
- Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
- Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

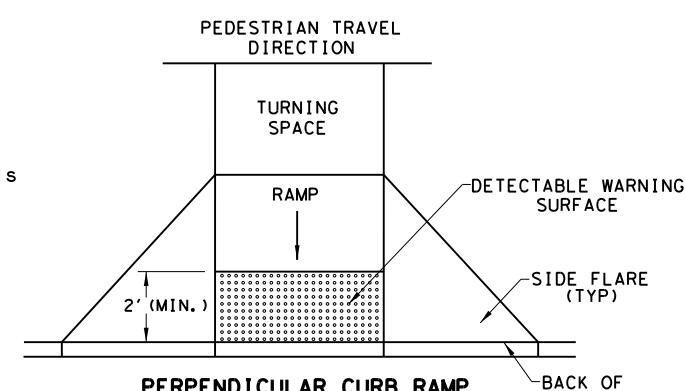
DETECTABLE WARNING PAVERS (IF USED)

- 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.
- Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.
- Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
- 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.
- Street grades and cross slopes shall be as shown elsewhere in the plans.
- Changes in level greater than 1/4 inch are not permitted.
- 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 five percent (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 PROWAG R409.
- Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
- 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".
- Sidewalk details are shown elsewhere in the plans.

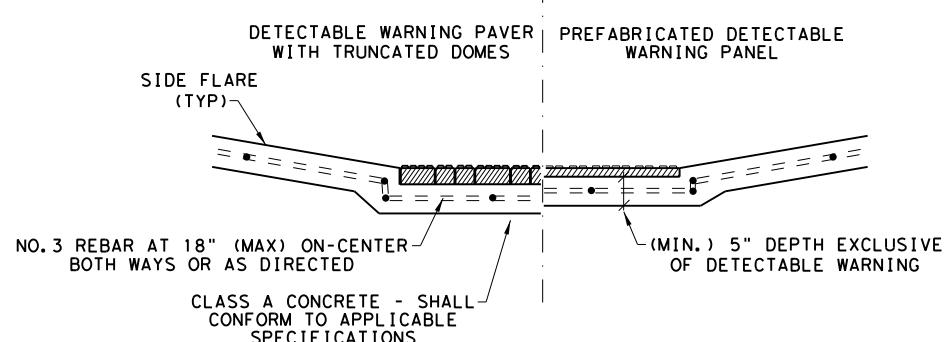
DETECTABLE WARNING SURFACE DETAILS



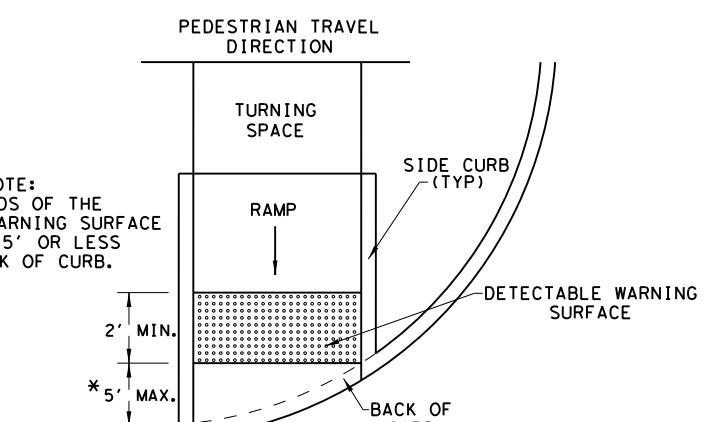
PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



SECTION VIEW DETAIL
CURB RAMP AT DETECTABLE WARNING

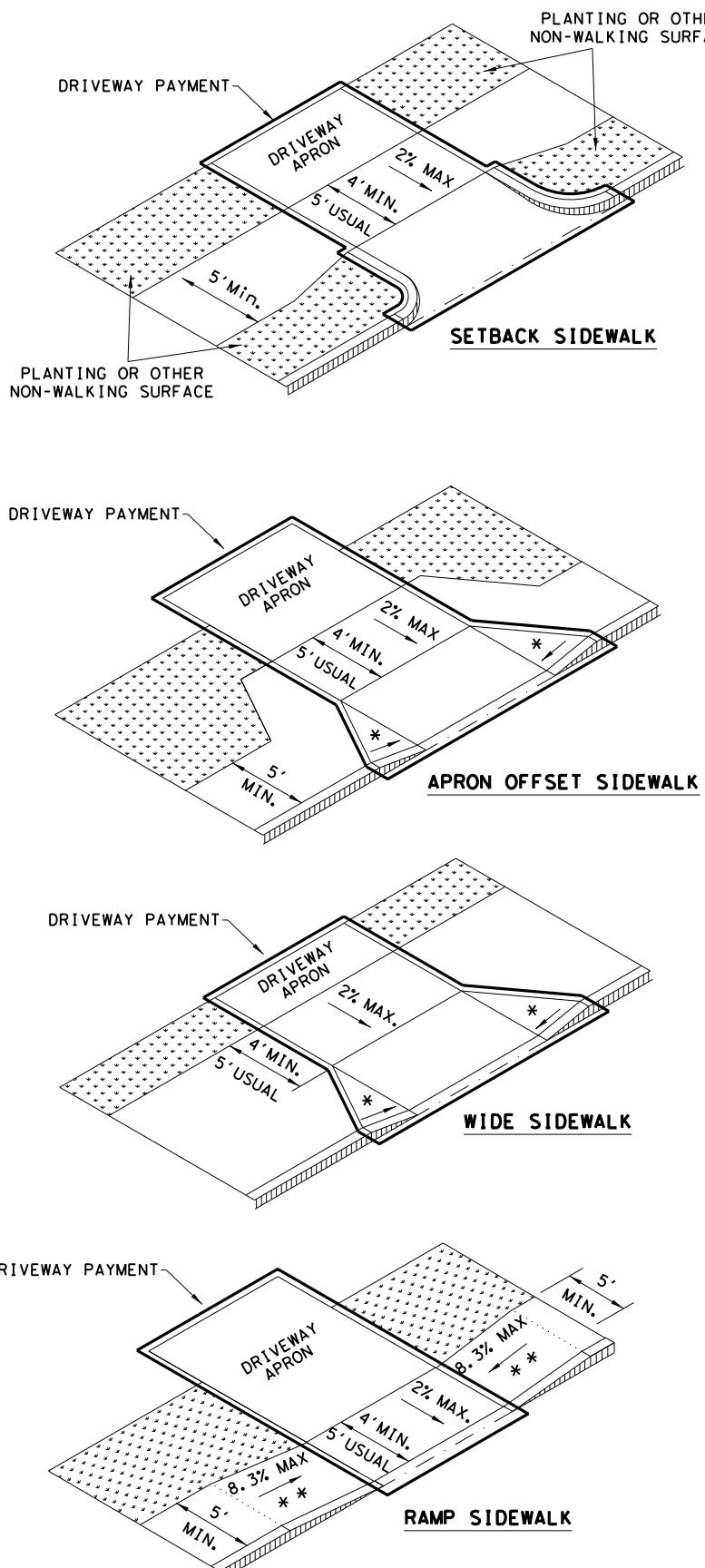


DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

PEDESTRIAN FACILITIES				Design Division Standard
CURB RAMPS				
PED-18				
FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JC
(C) TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 08/2005				
REVISED 06/2012				
REVISED 01/2018				
DIST	COUNTY			SHEET NO.

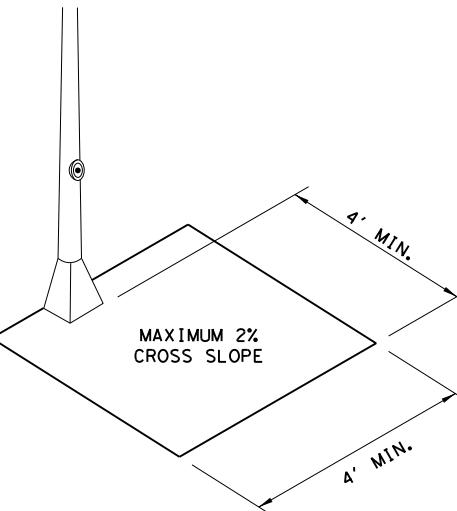
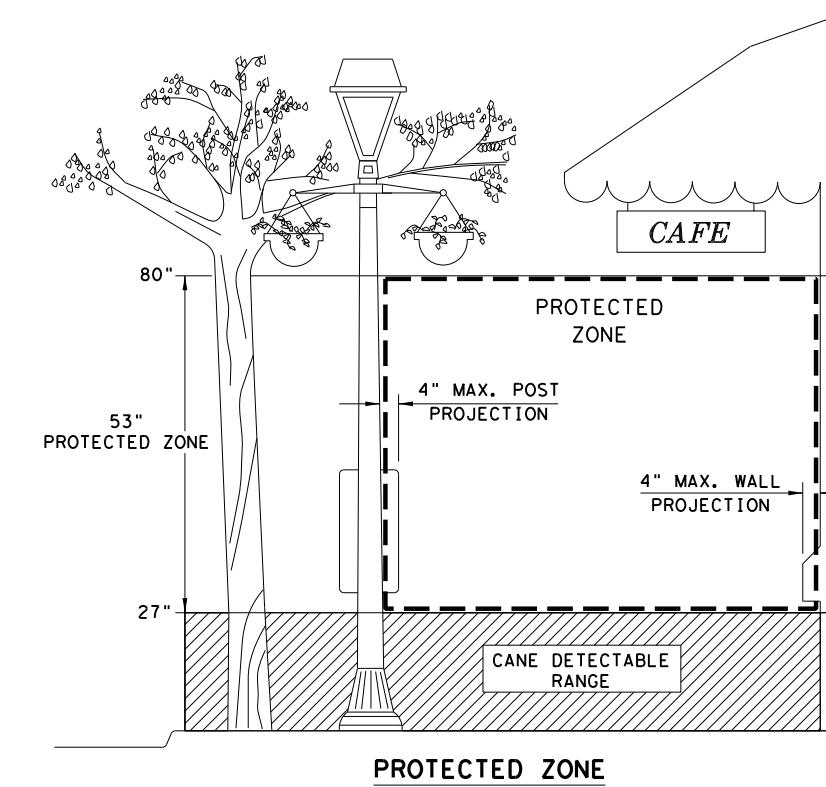
SIDEWALK TREATMENT AT DRIVEWAYS



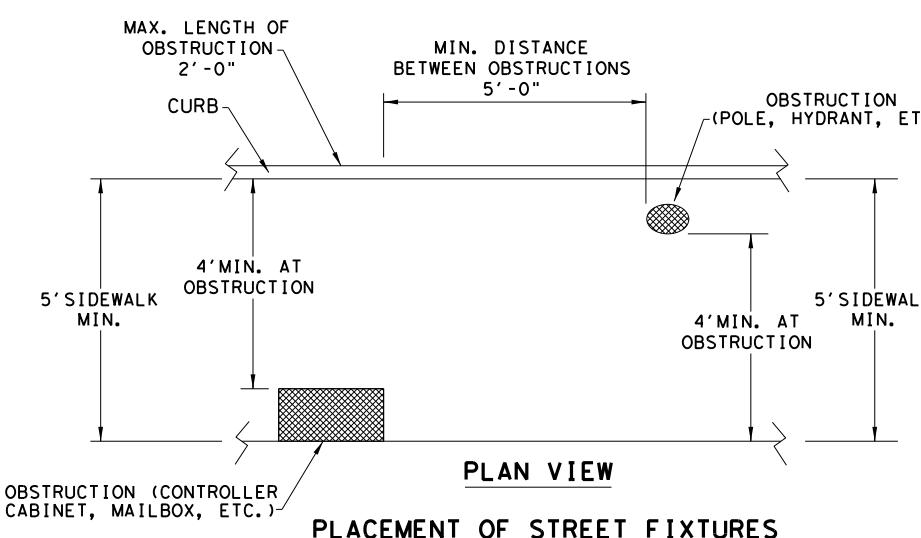
NOTES:

- * WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.
- ** IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

DATE: _____



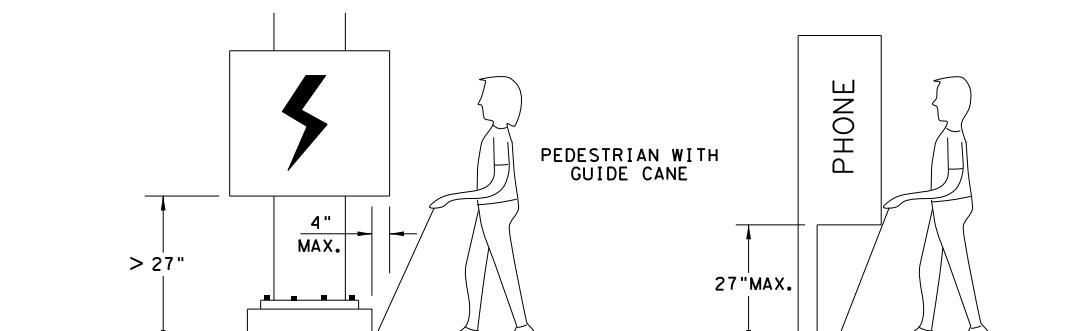
**CLEAR SPACE ADJACENT
TO PEDESTRIAN PUSH BUTTON**



PLAN VIEW

PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE.
MINIMUM 4' X 4' CLEAR GROUND SPACE
REQUIRED AT PUBLIC USE FIXTURES.

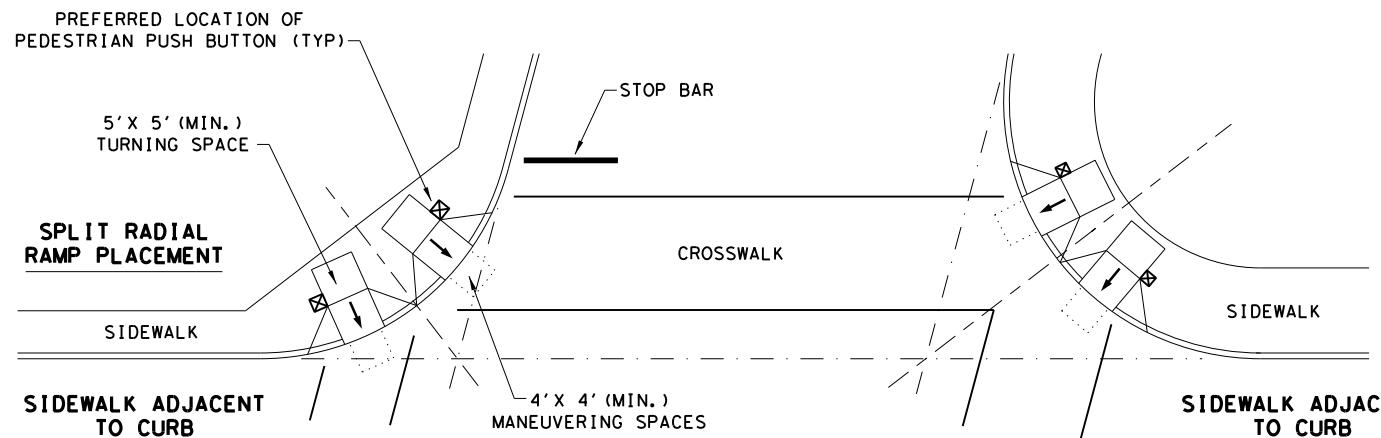


**DETECTION BARRIER FOR
VERTICAL CLEARANCE < 80"**

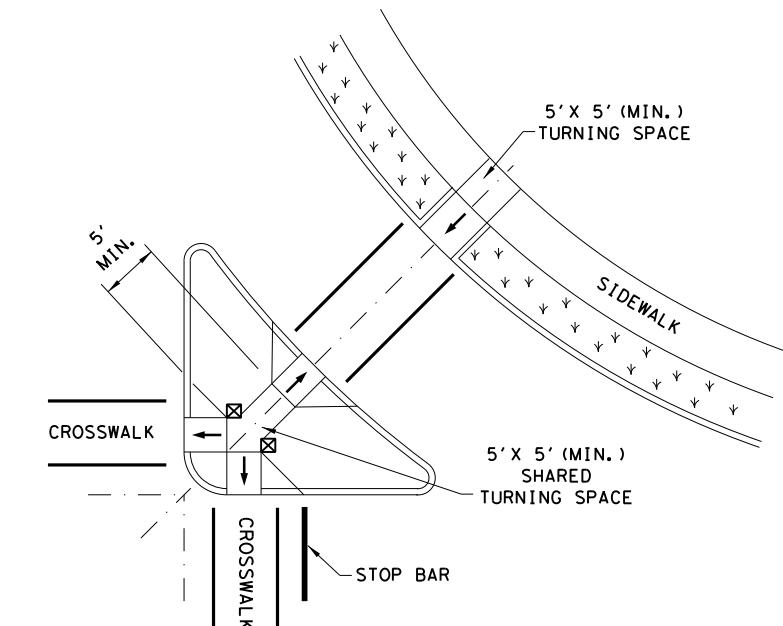
SHEET 3 OF 4

				Design Division Standard
PEDESTRIAN FACILITIES CURB RAMPS				
PED-18				
FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JC
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 08/2005				
REVISED 06/2012				
REVISED 01/2018				
DIST	COUNTY			SHEET NO.

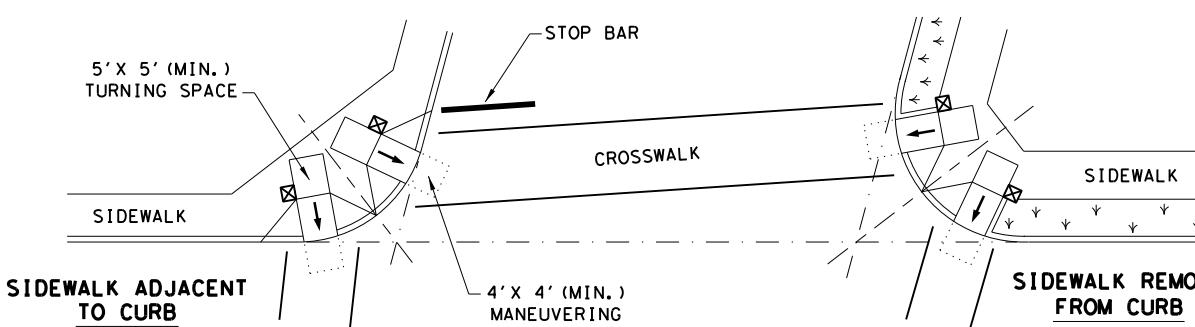
TYPICAL CROSSING LAYOUTS
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



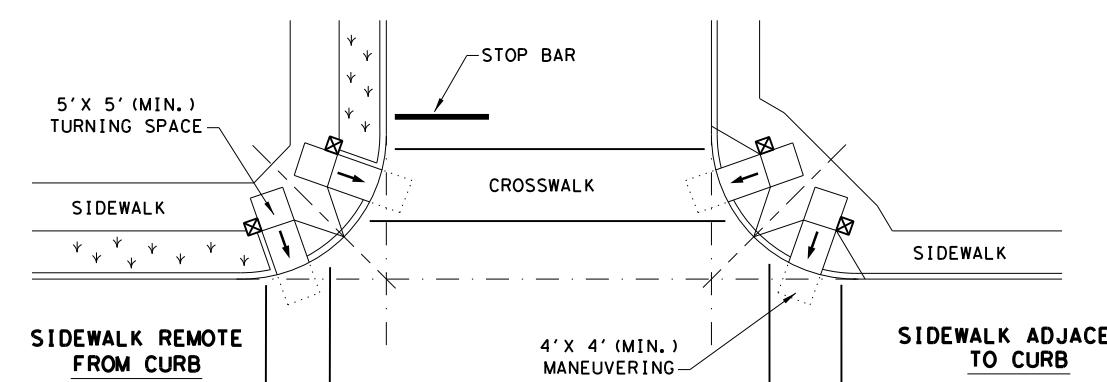
SKEWED INTERSECTION WITH "LARGE" RADIUS



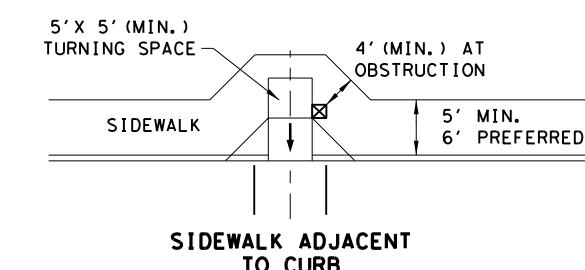
**AT INTERSECTION
W/FREE RIGHT TURN & ISLAND**



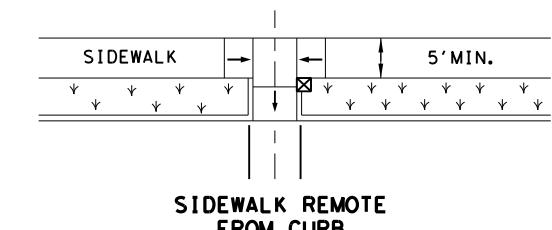
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



**MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS**



SHEET 4 OF 4

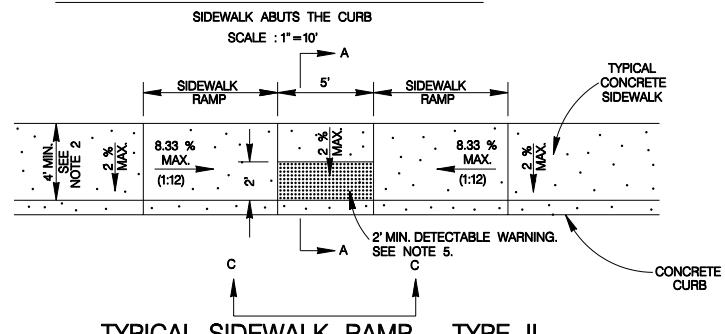
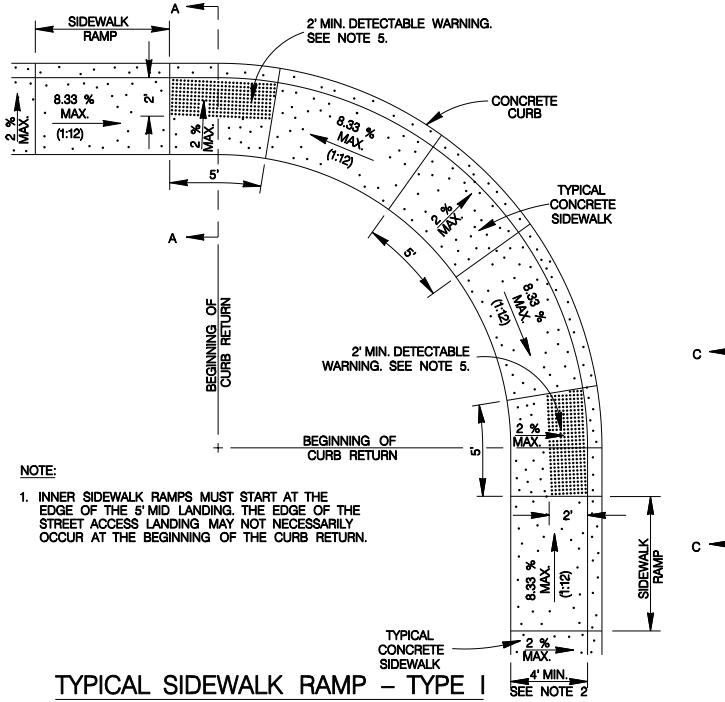
PEDESTRIAN FACILITIES				Design Division Standard
CURB RAMPS				PED-18
FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JC
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 08/2005				
REVISED 06/2012				
REVISED 01/2018				
DATE: FILE:	DIST	COUNTY	SHEET NO.	

LEGEND:

SHOWS DOWNWARD SLOPE. →

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE). ☑

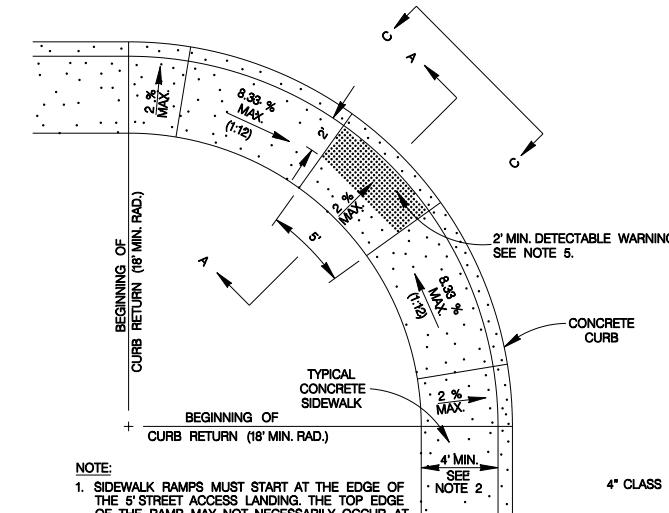
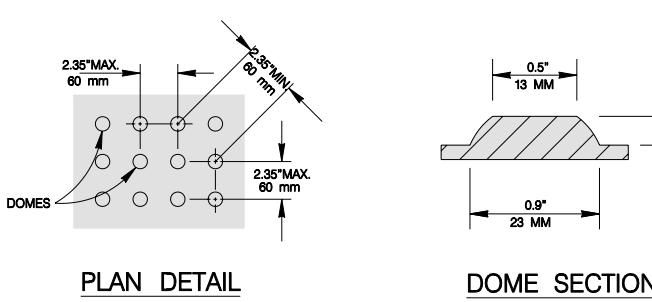
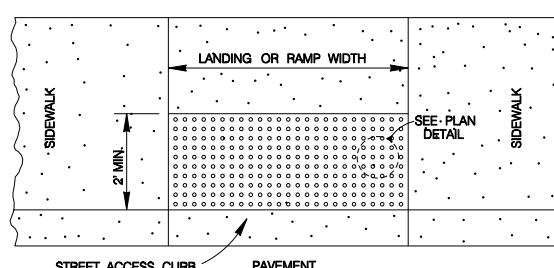
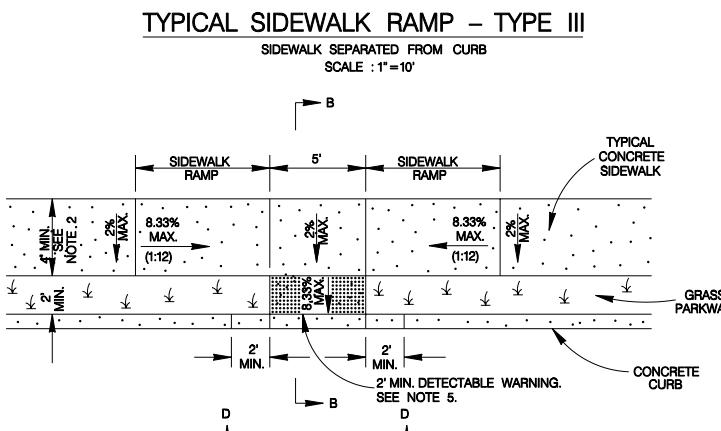
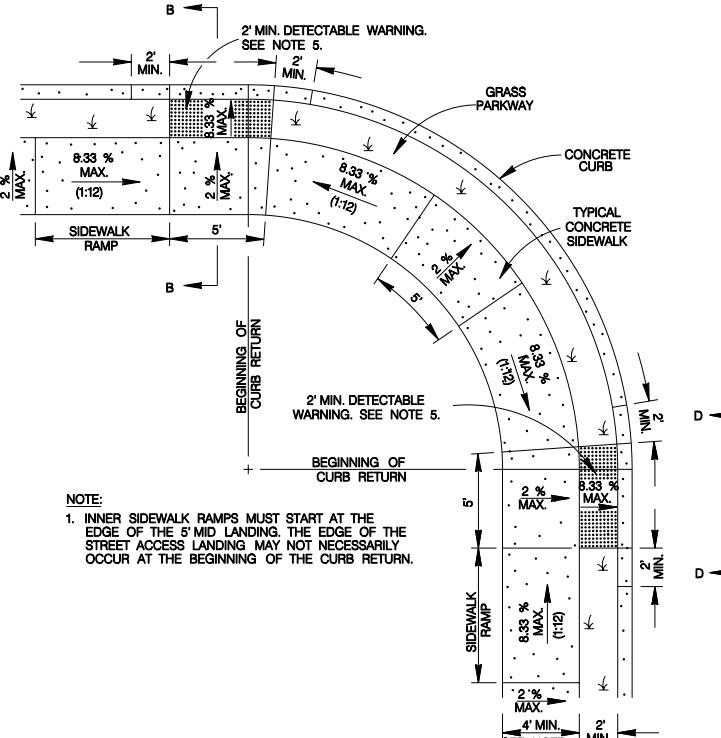
DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH. ↘ ↙ ↘ ↗ ↘ ↙



GENERAL NOTES

- WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
- FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
- FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
- SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.
- ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED, TRUNCATED DOMES, ALIGNED IN A GRID PATTERN WITH A DIAMETER OF NOMINAL 3/8 INCHES (23 MM), HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.38 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL BE A CAST-IN-PLACE TILE CONFORMING TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS OR PAVERS CONFORMING TO TXDOT STANDARD PED-06, PEDESTRIAN FACILITIES.
- DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
- SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
- CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEMS "500 - CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER" AND /OR "502 - CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.
- THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
- SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
- WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
- REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.

- SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
- SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
- THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 1%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33 - 2.67 = 1%). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
- IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 1%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
- ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



SECTION A-A

SCALE : 1'=4"

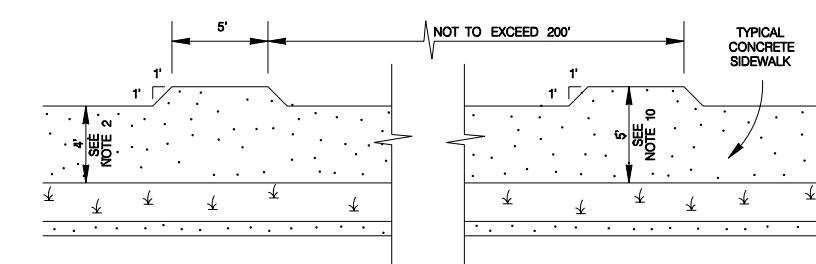
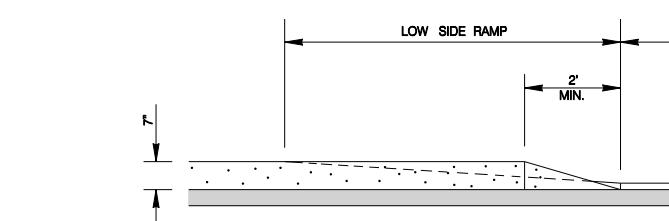
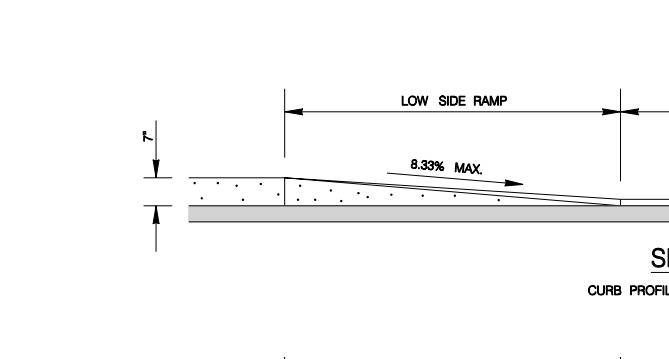
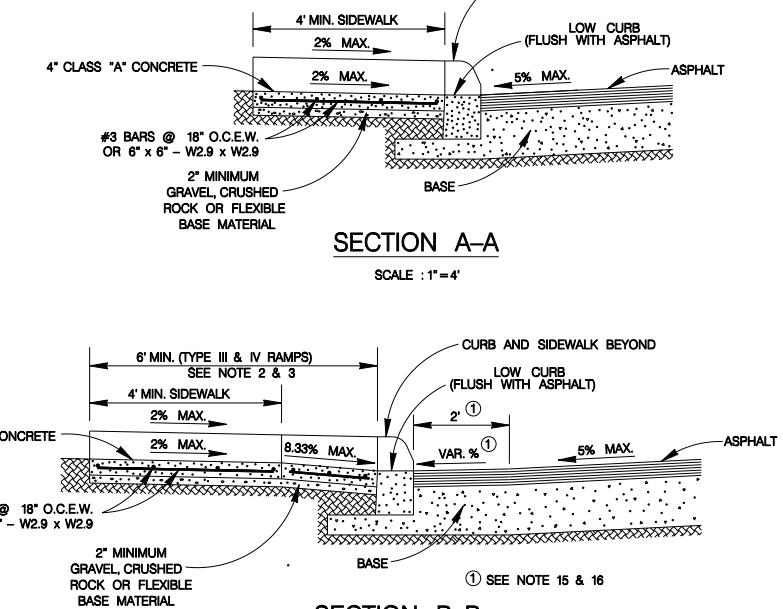


TABLE 1 (SEE NOTE 4)		
GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12)	
	LOW SIDE	HIGH SIDE
1%	5'-6"	7'-2"
2%	5'-0"	6'-4"
3%	4'-6"	10'-0"
4%	4'-2"	12'-6"
5%	3'-10"	16'-8"

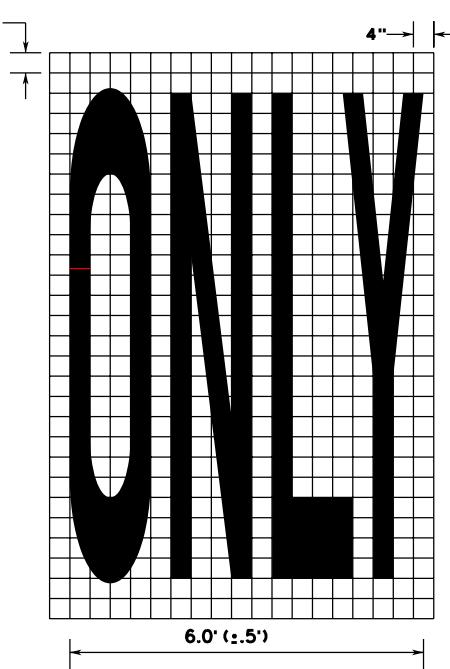
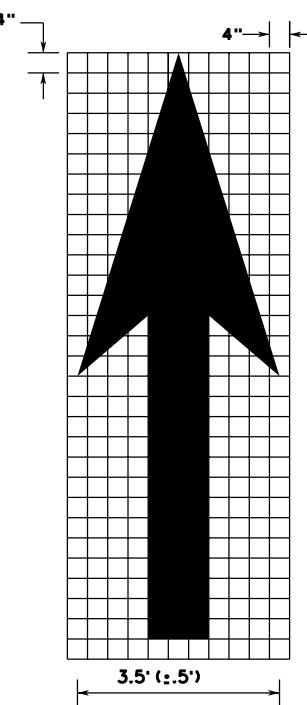
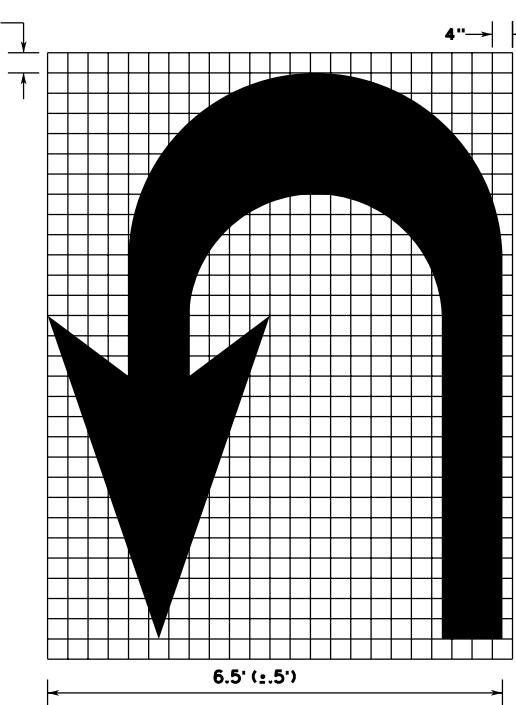
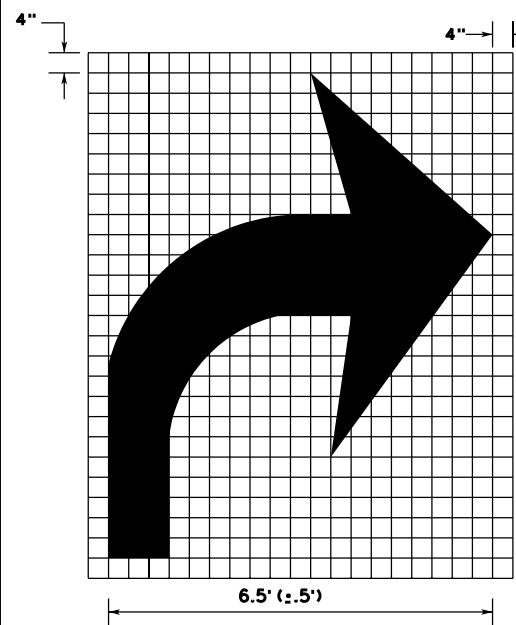
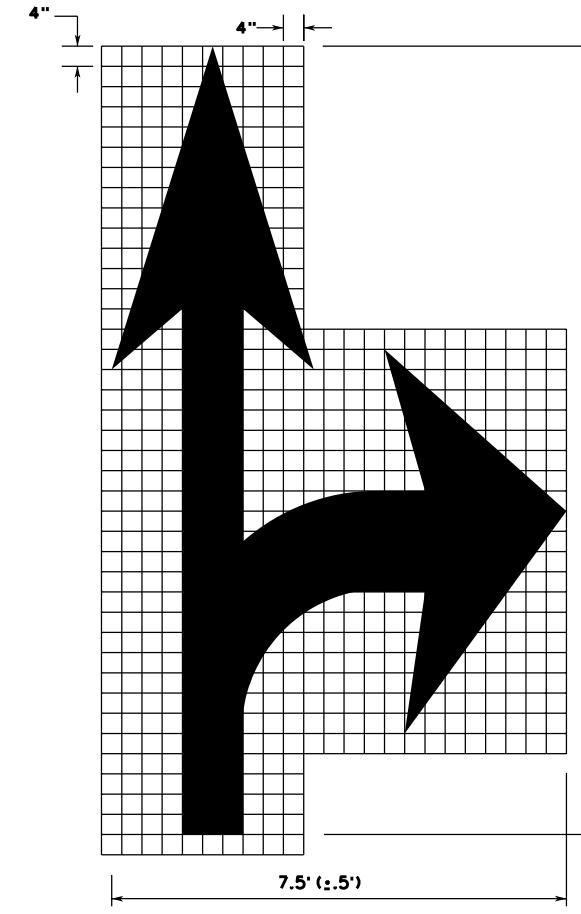
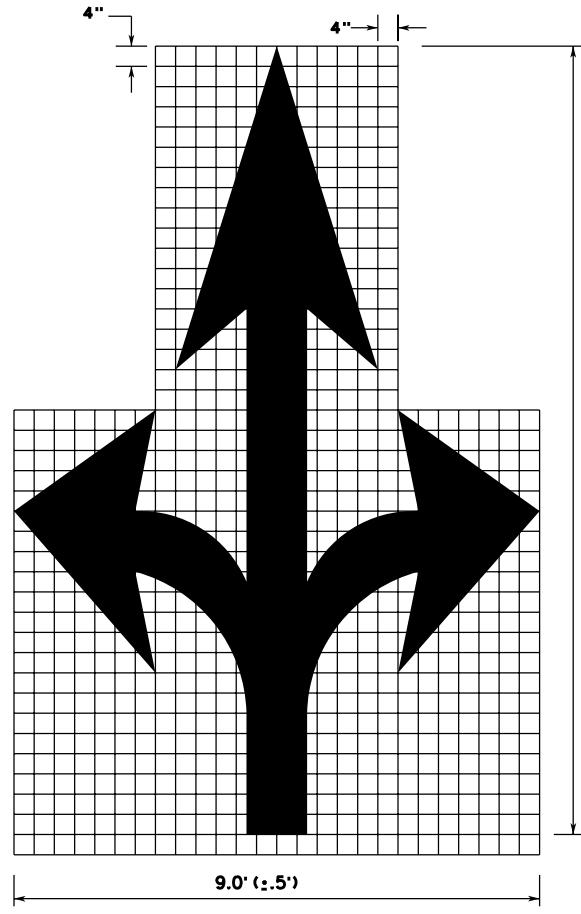
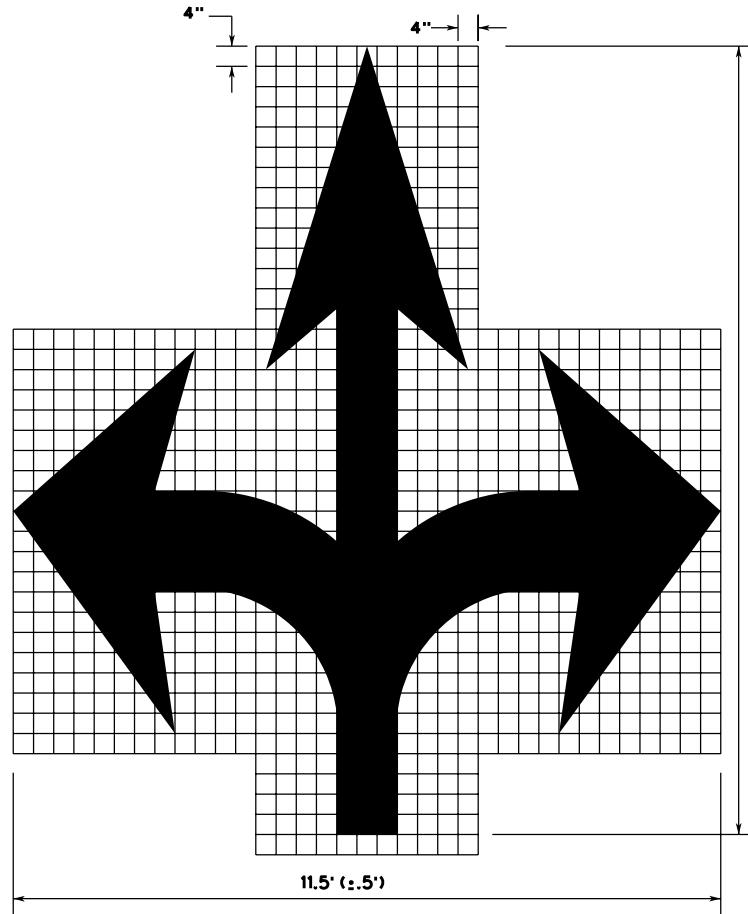
NOTE:
STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY: _____	CHKD. BY: R.S. HOSSEINI, P.E. SHEET NO.: _____ OF _____



NOTES:

1. MINIMUM 8 FOOT WHITE MARKINGS SHALL BE USED, UNLESS OTHERWISE NOTED. IF MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD BE PLACED WITH FIRST WORD NEAREST THE DRIVER.
2. THESE DETAILS ARE STANDARD SIZE FOR NORMAL INSTALLATION; SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD DEPENDING ON CONDITIONS.
3. THE LONGITUDINAL SPACE BETWEEN MARKINGS SHOULD BE 30 FEET.
4. MARKINGS CONSIDERED APPROPRIATE FOR USE WHEN WARRANTED INCLUDE THE FOLLOWING:
 - A. REGULATORY
 - STOP
 - RIGHT (LEFT) TURN ONLY
 - 25 MPH
 - SYMBOL ARROWS
 - B. WARNING
 - STOP AHEAD
 - SIGNAL AHEAD
 - SCHOOL
 - SCHOOL X-ING
 - PED X-ING
 - R X R (SEE RCPM DETAIL)
 OTHER WORDS OR SYMBOLS MAY BE NECESSARY UNDER CERTAIN CONDITIONS
5. UNCONTROLLED USE OF PAVEMENT MARKINGS CAN RESULT IN DRIVER CONFUSION. WORD AND SYMBOL MARKINGS SHOULD BE NO MORE THAN THREE LINES.
6. THE WORD "STOP" SHALL NOT BE USED ON THE PAVEMENT UNLESS ACCOMPANIED BY A STOP LINE AND STOP SIGN. THE WORD "STOP" SHALL NOT BE PLACED ON THE PAVEMENT IN ADVANCE TO A STOP LINE, UNLESS EVERY VEHICLE IS REQUIRED TO STOP AT ALL TIMES.
7. PAVEMENT MARKINGS SHOULD GENERALLY BE NO MORE THAN ONE LANE IN WIDTH, WITH SCHOOL MESSAGES BEING THE EXCEPTION. FOR DETAILS OF SCHOOL AND SCHOOL CROSSING PAVEMENT MARKINGS, REFER TO PART VII OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
8. SPACING BETWEEN LETTERS SHOULD BE APPROXIMATELY 4 INCHES. THE WIDTH OF LETTERS MAY VARY DEPENDING ON THE WIDTH OF THE TRAVEL LANES.
9. LANE-USE ARROW MARKINGS MAY BE USED TO CONVEY EITHER GUIDANCE OR MANDATORY MESSAGES. ARROWS USED TO CONVEY A MANDATORY MOVEMENT MUST BE ACCCOMPANIED BY STANDARD SIGNS AND THE PAVEMENT MARKING WORD "ONLY".
10. PAVEMENT MARKINGS ARE TO BE LOCATED AS SPECIFIED ELSEWHERE IN THE PLANS.

SEPTEMBER 2009

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC ENGINEERING STANDARDS

STANDARD PAVEMENT MARKINGS
(ARROWS)

SHEET 3 OF 16

% SUBMITTAL	PROJECT NO.:	DATE:	
DRWN. BY: LAN		C.B.V.	
DSGN. BY:	CHKD. BY:	M.E.	SHEET NO.: OF

TRUCKS NEXT YIELD MERGE EXIT STOP ONLY

9.5' (±.5') 4" ← 7.5' (±.5') 4" ← 7.0' (±.5') 4" ← 8.0' (±.5') 4" ← 6.5' (±.5') 4" ← 6.5' (±.5') 4" ← 6.0' (±.5') 4" ← 8.0' (±.5')

SCHOOL SIGNAL TURN LANE ENDS PED

9.5' (±.5') 4" ← 8.5' (±.5') 4" ← 6.5' (±.5') 4" ← 6.5' (±.5') 4" ← 7.5' (±.5') 4" ← 5.5' (±.5') 4" ← 8.0' (±.5')

ZONE AHEAD RIGHT LEFT ROUTE X-ING

6.5' (±.5') 4" ← 8.0' (±.5') 4" ← 8.5' (±.5') 4" ← 6.5' (±.5') 4" ← 8.0' (±.5') 4" ← 8.0' (±.5') 4" ← 8.0' (±.5')

1234567890 MPH BUS

6.0' (±.5') 4" ← 6.0' (±.5') 4" ←

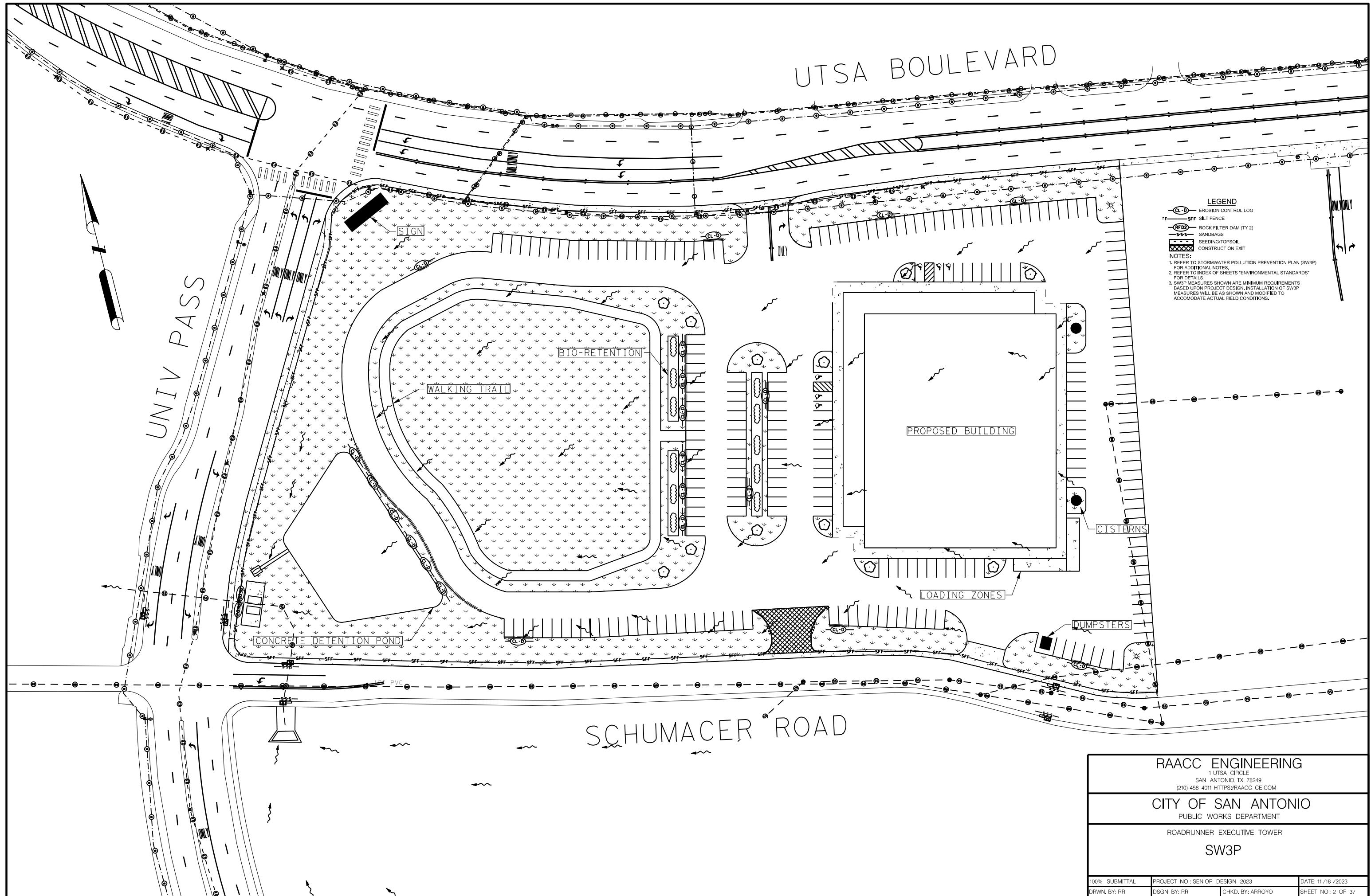
SEPTEMBER 2009

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC ENGINEERING STANDARDS
STANDARD PAVEMENT MARKINGS
(WORDS)

SHEET 2 OF 16

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: LAN	DSGN. BY: C.B.V.	CHKD. BY: M.E.
SHEET NO.: OF		



SITE DESCRIPTION

PROJECT NAME AND LOCATION: _____

CONTACT AND PHONE NO.: _____

PROJECT DESCRIPTION: _____
DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED TEMPORARILY
OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITIES ARE
SCHEDULED TO RESUME AND DONE WITHIN 21 DAYS.

MAJOR SOIL DISTURBING ACTIVITIES: _____

TOTAL PROJECT AREA (ACRES): _____

TOTAL AREA TO BE DISTURBED: _____

WEIGHTED RUNOFF COEFFICIENT:
(AFTER CONSTRUCTION) _____

EXISTING CONDITION OF SOIL, VEGETATIVE
COVER AND % OF VEGETATIVE COVER: _____

DESCRIPTION OF WATER DISCHARGED NOT ASSOCIATED WITH CONSTRUCTION: _____

NAME OF RECEIVING WATERS: _____

IDENTIFY STORMWATER DISCHARGE POINTS: _____

A DESCRIPTION AND TIME FRAME FOR INSTALLATION OF
STABILIZATION PRACTICES IN CONJUNCTION WITH CONSTRUCTION: _____

EROSION AND SEDIMENTATION CONTROLS

SOIL STABILIZATION PRACTICES:

- _____ HYDROMULCHING
- _____ TEMPORARY SEEDING
- _____ PERMANENT PLANTING, SODDING OR SEEDING
- _____ MULCHING
- _____ SOIL RETENTION BLANKET
- _____ BUFFER ZONES
- _____ PRESERVATION OF NATURAL RESOURCES

OTHER:

DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED TEMPORARILY
OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITIES ARE
SCHEDULED TO RESUME AND DONE WITHIN 21 DAYS.

STRUCTURAL PRACTICES:

- _____ SILT FENCES
- _____ HAY BALES
- _____ GRAVEL FILTRATION BAGS
- _____ ROCK BERMS
- _____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- _____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- _____ DIVERSION, DIKE AND SWALE COMBINATIONS
- _____ PAVED FLUMES
- _____ ROCK BEDDING AT CONSTRUCTION EXIT (STABILIZED ENTRANCE)
- _____ TIMBER MATTING AT CONSTRUCTION EXIT (STABILIZED ENTRANCE)
- _____ CHANNEL LINERS
- _____ SEDIMENT TRAPS
- _____ SEDIMENT BASINS
- _____ STORM INLET SEDIMENT TRAP
- _____ STONE OUTLET SEDIMENT STRUCTURES
- _____ CURBS AND GUTTERS
- _____ STORM SEWERS
- _____ VELOCITY CONTROL STRUCTURES
- _____ GEOTEXTILES

OTHER:

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORMWATER MANAGEMENT) ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS: _____

A DESCRIPTION OF MAINTENANCE PROCEDURES FOR CONTROL MEASURES USED:

STORMWATER MANAGEMENT:

A DESCRIPTION OF PERMANENT STORM WATER MANAGEMENT CONTROLS:

OTHER EROSION AND SEDIMENTATION CONTROLS

Maintenance:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER.
IF A REPAIR IS NECESSARY, IT WILL BE DONE AT THE EARLIEST DATE POSSIBLE, BUT NO
LATER THAN 7 CALENDAR DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED
SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREAS
ADJACENT TO CREEKS AND DRAINAGEWAYS SHALL HAVE PRIORITY, FOLLOWED BY
DEVICES PROTECTING STORM SEWER INLETS.

Inspection:

AN INSPECTION WILL BE PERFORMED BY THE CONTRACTOR EVERY 14 DAYS AS WELL AS AFTER EVERY 1/2" OR MORE
OF RAIN (RECORDED ON A NON-FREEZING RAIN GAUGE TO BE LOCATED AT THE PROJECT SITE). AN INSPECTION AND
MAINTENANCE REPORT WILL BE MADE PER INSPECTION. BASED ON THE INSPECTION RESULTS, THE CONTROLS SHALL
BE CORRECTED BEFORE THE NEXT SCHEDULED INSPECTION.

Waste Materials:

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER.
THE DUMPSTER WILL MEET ALL STATE AND LOCAL CITY SOLID WASTE MANAGEMENT REGULATIONS.
ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER.
THE DUMPSTER WILL BE EMPTIED AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION AND THE
TRASH WILL BE HAULED TO A LOCAL DUMP. NO CONSTRUCTION MATERIALS WILL BE BURIED ON SITE.

Hazardous Waste (including Spill Reporting):

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINTS,
ACIDS FOR CLEANING MASONRY SURFACES, GASOLINE, MOTOR OIL, CLEANING SOLVENTS, ASPHALT PRODUCTS,
CHEMICAL ADDITIVES FOR SOIL STABILIZATION OR CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE
EVENT OF A SPILL WHICH MAY BE HAZARDOUS AND MEETS REPORTING REQUIREMENTS, THE NATIONAL RESPONSE
CENTER SHOULD BE CONTACTED AT 800-424-8802, AND ANY REQUIRED CHANGES MADE TO THE SWPPP. IN THE
EVENT OF A LIFE THREATENING SPILL THE SAN ANTONIO FIRE DEPARTMENT SHOULD BE NOTIFIED AS WELL
AS THE APPROPRIATE CITY INSPECTORS.

Sanitary Waste

Offsite Excavation Source Location

Offsite Fill Source Location

Offsite Vehicle Tracking

- _____ HAUL ROADS DAMPED FOR DUST CONTROL
- _____ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAILIN
- _____ EXCESS DIRT ON ROAD TO BE REMOVED DAILY
- _____ STABILIZED CONSTRUCTION ENTRANCE

Other:

CERTIFICATION THAT SITE DISTURBANCE AND / OR DISCHARGES WILL NOT EFFECT LISTED ENDANGERED SPECIES
AND THEIR HABITAT.
WHAT METHOD IS USED TO SATISFY THE ENDANGERED SPECIES REQUIREMENTS? _____

Remarks:

DISPOSAL AREAS, STOCKPILES AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE
AND CONTROL THE AMOUNT OF SEDIMENT THAT ENTERS RECEIVING WATERS. DISPOSAL AREAS SHALL NOT
BE LOCATED IN ANY WETLAND, BODY OF WATER, STREAMBED OR FLOODPLAIN CONSTRUCTION STAGING AREAS
AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE
THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEARED AS SOON AS POSSIBLE OF TEMPORARY
EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING DEBRIS OR OTHER OBSTRUCTION PLACED
DURING CONSTRUCTION OPERATIONS THAT ARE NOT PART OF THE FINISHED WORK.

JANUARY 2005

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

STORM WATER POLLUTION
PREVENTION PLAN (SWP3) NARRATIVE

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY: _____	CHKD. BY: _____
SHEET NO.: _____ OF _____		



Time of Concentration - Pre Development Conditions															
Basin ID	Sheet Flow					Shallow Concentrated Flow					Channel Flow				
	Length (ft)	Mannings "n"	Slope %	P (in)	Tc (min)	Length (ft)	K	Slope %	Tc (min)	Length (ft)	Mannings (n)	Slope %	Channel Hydraulic Radius (ft)	Tc (min)	Tc (min)
1	100	0.011	0.06	4.44	0.663	100	16.13	0.02	0.844	753	0.03	0.03	1.78	0.347	1.853
2	100	0.011	0.06	4.44	0.663	780	16.13	0.02	6.024	283	0.03	0.03	1.85	0.127	6.814
3	100	0.011	0.06	4.44	0.663	532	16.13	0.03	3.174	281	0.03	0.03	1.85	0.126	3.963

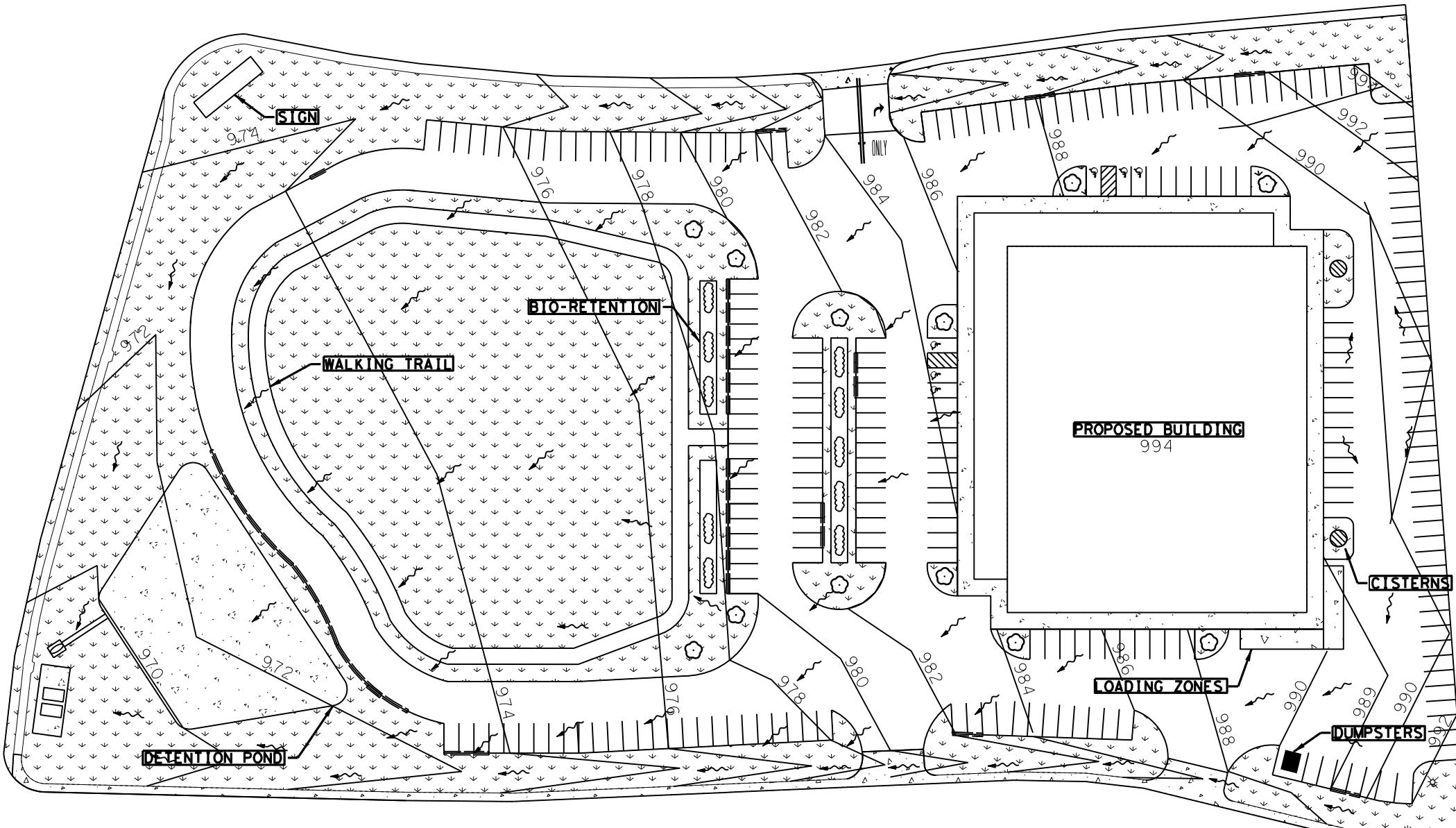
Coeff.	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR	100-YEAR
e	0.8208	0.8043	0.8075	0.7943	0.7893	0.7889
b (in.)	59.68	73.54	90.56	102.29	116.01	133.97
d (min)	9.96	9.56	10.73	10.64	10.41	11.01

Intensity - Pre Development Conditions									
Basin ID	Basin Area (Acres)	Basin C Value	Time of Concentration (Tc)	Intensity 2-yr (in/hr)	Intensity 5-yr (in/hr)	Intensity 10-yr (in/hr)	Intensity 25-yr (in/hr)	Intensity 50-yr (in/hr)	Intensity 100-yr (in/hr)
1.000	8.440	0.700	1.853	7.864	10.376	11.718	13.764	16.042	17.858
2.000	8.440	0.700	6.814	5.897	7.762	8.960	10.554	12.269	13.807
3.000	8.440	0.700	3.963	6.872	9.053	10.340	12.160	14.153	15.842

Q - Pre Development Conditions					
Q 2-yr (cfs)	Q 5-yr (cfs)	Q 10-yr (cfs)	Q 25-yr (cfs)	Q 50-yr (cfs)	Q 100-yr (cfs)
46.458	61.303	69.229	81.317	94.775	105.506
34.841	45.859	52.935	62.350	72.487	81.570
40.598	53.487	61.086	71.840	83.616	93.595

UTSA BOULEVARD

UNIV PASS



SCHUMACER ROAD

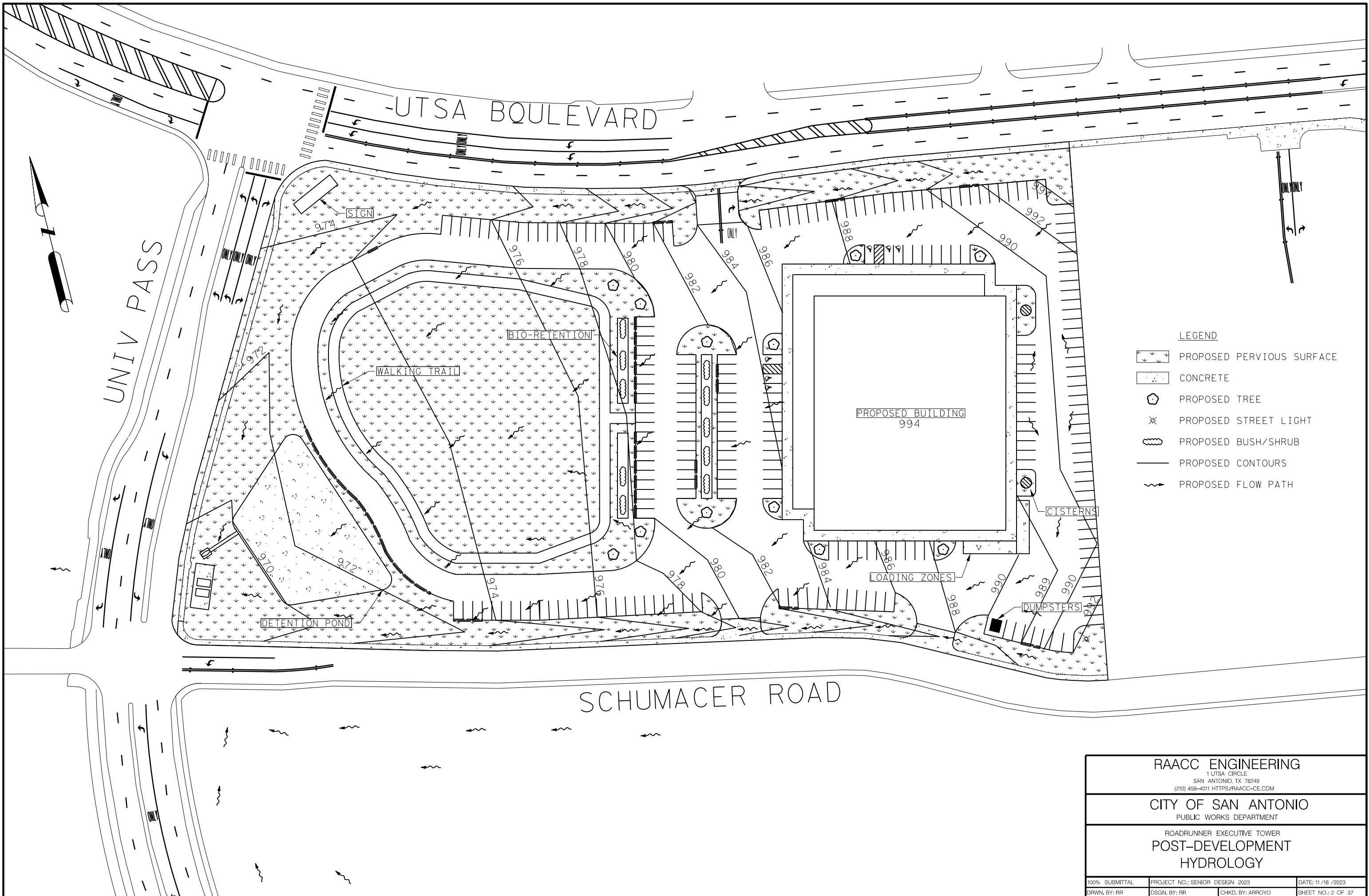
SITE PLAN NOTES:

1. NO CONSTRUCTION OR STORAGE OF MATERIALS SHALL OCCUR IN TxDOT ROW.
2. AS PER SAN ANTONIO GIS, THIS PROPERTY IS LOCATED IN MPC ZONING JURISDICTION.
3. PROPOSED 9'X18' PARKING SPACES
4. PROPOSED 10' CONCRETE SIDEWALK
5. TWO PROPOSED 12'X50' LOADING SPACES
3. PROPOSED TREES WILL BE A CALIPER SIZE OF 2".
4. PROPOSED BUSHES WILL BE DROUGHT RESISTANT.
5. FOR ELEVATIONS REFER TO GRADING PLAN.

LEGEND	
	PROPOSED PERVIOUS SURFACE
	CONCRETE
	PROPOSED TREE
	PROPOSED STREET LIGHT
	PROPOSED BUSH/SHRUB

RAACC ENGINEERING
1 UTSA CIRCLE
SAN ANTONIO, TX 78249
(210) 458-4011 [HTTPS://RAACC-CE.COM](https://raacc-ce.com)

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
ROADRUNNER EXECUTIVE TOWER
GRADING PLAN



Time of Concentration - Post Development Conditions															
Basin ID	Sheet Flow					Shallow Concentrated Flow				Channel Flow					Total
	Length (ft)	Mannings "n"	Slope %	P (in)	Tc (min)	Length (ft)	K	Slope %	Tc (min)	Length (ft)	Mannings (n)	Slope %	Channel Hydraulic Radius (ft)	Tc (min)	Tc (min)
1	100	0.011	0.04	4.44	0.780	621	20.32	0.03	2.941	71	0.035	0.03	10	0.012	3.732
2	100	0.011	0.04	4.44	0.780	105	20.32	0.02	0.609	877	0.035	0.02	10	0.162	1.550
3	100	0.011	0.04	4.44	0.780	163	20.32	0.02	0.945	664	0.035	0.03	10	0.113	1.838

Coeff.	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR	100-YEAR
e	0.8208	0.8043	0.8075	0.7943	0.7893	0.7889
b (in.)	59.68	73.54	90.56	102.29	116.01	133.97
d (min)	9.96	9.56	10.73	10.64	10.41	11.01

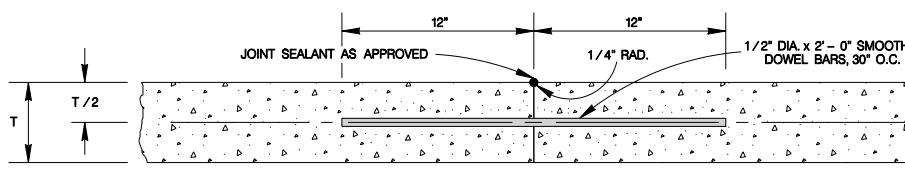
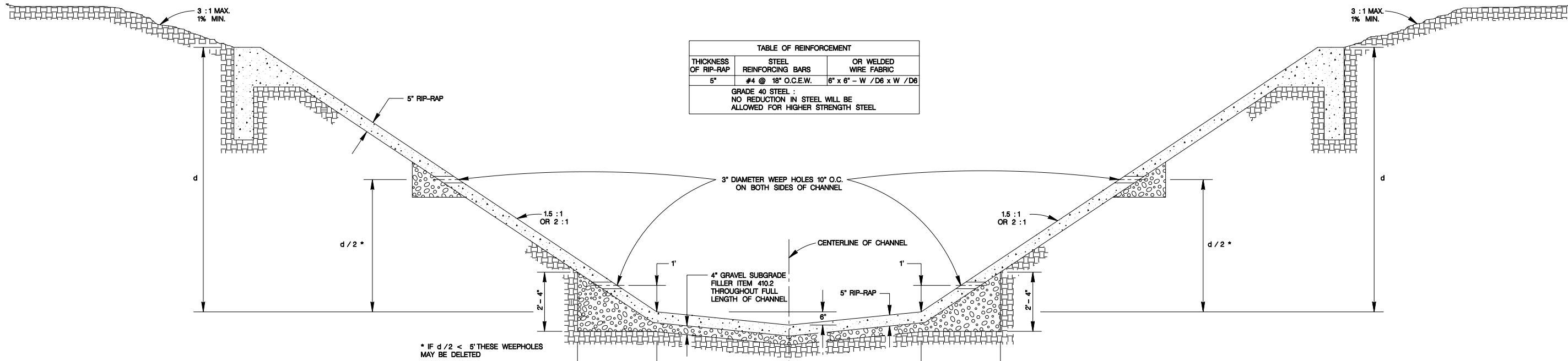
Intensity - Post Development Conditions									
Basin ID	Basin Area (Acres)	Basin C Value	Time of Concentration (Tc)	Intensity 2-yr (in/hr)	Intensity 5-yr (in/hr)	Intensity 10-yr (in/hr)	Intensity 25-yr (in/hr)	Intensity 50-yr (in/hr)	Intensity 100-yr (in/hr)
1	8.44	0.9	3.732	6.966	9.179	10.472	12.314	14.335	16.037
2	8.44	0.9	1.550	8.033	10.603	11.951	14.035	16.362	18.197
3	8.44	0.9	1.838	7.872	10.388	11.730	13.777	16.058	17.875

Q - Post Development Conditions					
Q 2-yr (cfs)	Q 5-yr (cfs)	Q 10-yr (cfs)	Q 25-yr (cfs)	Q 50-yr (cfs)	Q 100-yr (cfs)
52.917	69.726	79.548	93.539	108.886	121.818
61.020	80.544	90.779	106.610	124.285	138.227
59.797	78.905	89.098	104.654	121.976	135.780

RAACC ENGINEERING
1 UTSA CIRCLE
SAN ANTONIO, TX 78249
(210) 458-4011 [HTTPS://RAACC-CE.COM](https://raacc-ce.com)

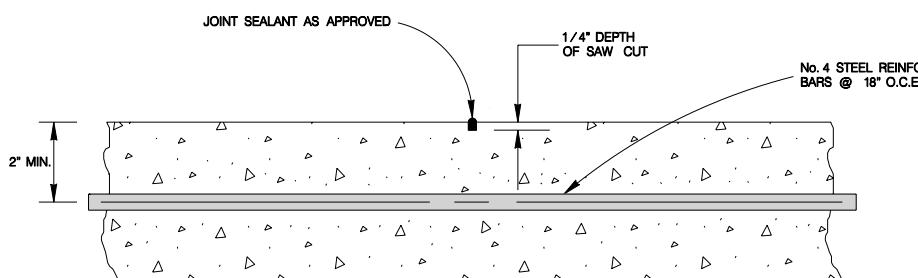
CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
ROADRUNNER EXECUTIVE TOWER
POST-DEVELOPMENT
HYDROLOGIC CALCULATIONS

100% SUBMITTAL	PROJECT NO.: SENIOR DESIGN 2023	DATE: 11/18/2023
DRWN. BY: RR	DSGN. BY: RR	CHKD. BY: ARROYO
SHEET NO.: 2 OF 37		



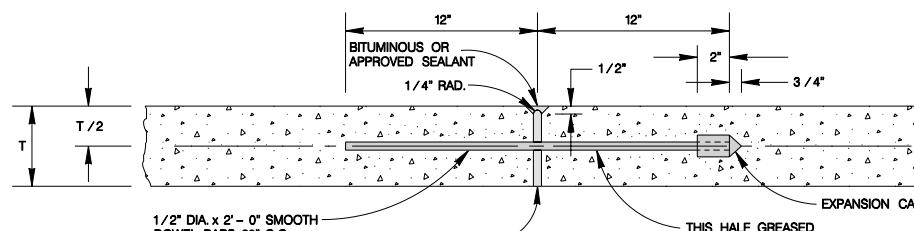
CONVERSE CONTRACTION OR CONSTRUCTION JOINT

SCALE : 1" = 1"



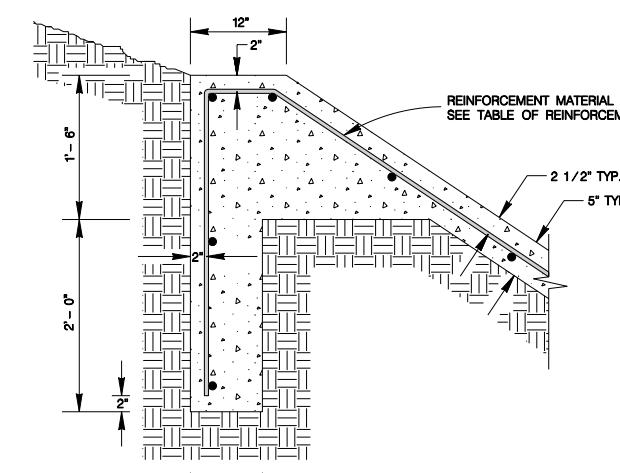
"SAW CUT" CONTRACTION JOINT

SCALE : 1" = 6"



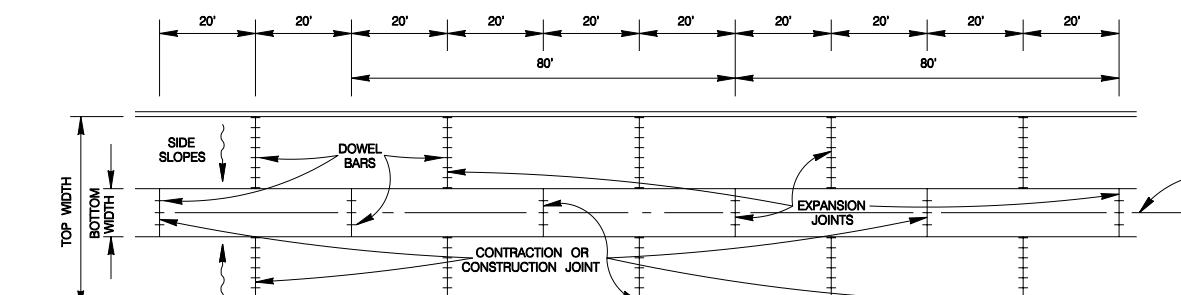
TRANSVERSE EXPANSION JOINT

SCALE : 1" = 1"



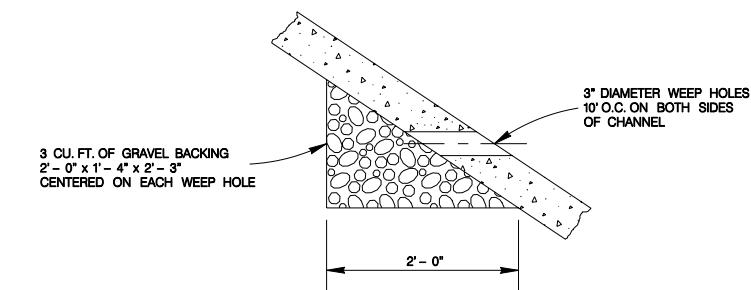
REINFORCEMENT DETAIL

TOE-DOWN
SCALE : 1" = 2"



EXPANSION AND CONTRACTION JOINTS
FOR CONCRETE CHANNEL LINING

SCALE : 1" = 40'



WEEP HOLES DETAILS FOR SIDE SLOPES

SCALE : 1" = 2"

GENERAL NOTES

1. CONCRETE FOR CHANNEL RIP-RAP SHALL BE CLASS "A" 3000 P.S.I.
2. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS UNLESS OTHERWISE SHOWN.
3. ALL REINFORCEMENT STEEL SHALL MEET ASTM DESIGNATIONS AS CALLED FOR IN THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
4. NEW RIP-RAP SHOULD BE ATTACHED TO EXISTING RIP-RAP BY NO. 4 BARS DOWELED 6" INTO EXISTING RIP-RAP. THESE BARS ARE TO BE SPACED 18" O.C. AND HAVE A LENGTH OF 18".

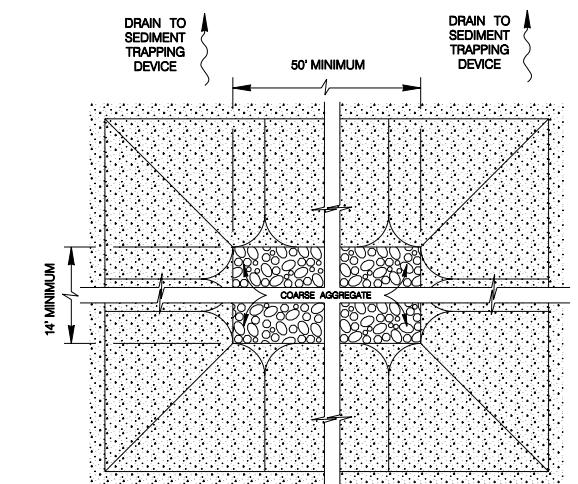
MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

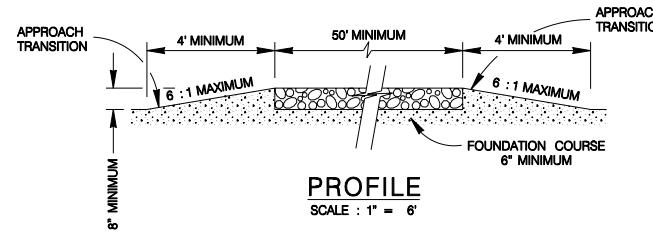
TYPICAL CONCRETE CHANNEL RIP-RAP STANDARDS

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY: _____	CHKD. BY: _____

SHEET NO.: OF _____



PLAN
SCALE : 1" = 6'



PROFILE
SCALE : 1" = 6'

GENERAL NOTES

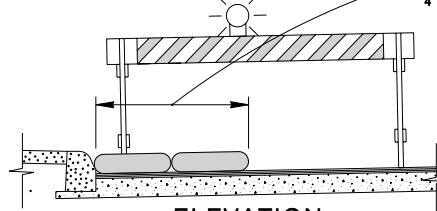
1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

CONSTRUCTION EXIT - TYPE 1



PLAN

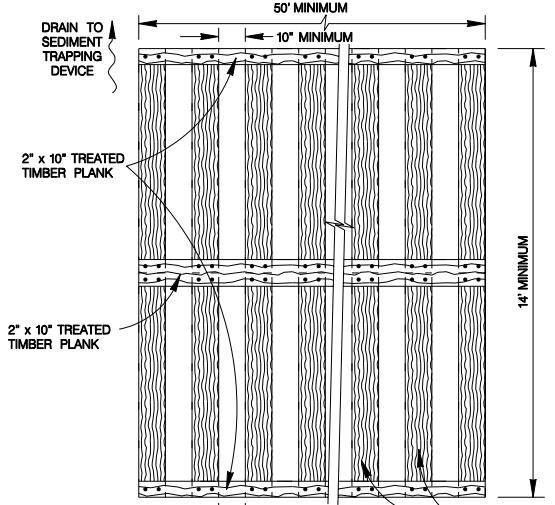
SCALE : 1" = 5'
PERPENDICULAR DISTANCE FROM FACE OF CURB 4' MAXIMUM



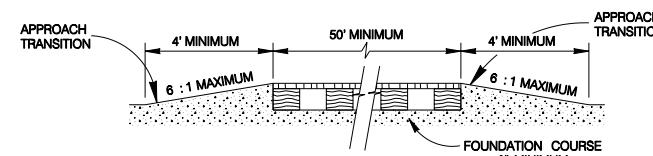
ELEVATION

SCALE : 1" = 5'
NOTE:
STRADDLE GRAVEL FILTER BAGS WITH TYPE 1 BARRICADES MOUNTED
WITH TYPE "A" FLASHING WARNING LIGHT. SEE BARRICADE CONSTRUCTION
SIGN DETAILS. PLACE FLASHING LIGHTS AWAY FROM GUTTER, FLUSH WITH
OUTSIDE EDGE OF BAG CONFIGURATION.

GRAVEL FILTER BAGS



PLAN
SCALE : 1" = 6'



PROFILE
SCALE : 1" = 6'

GENERAL NOTES

1. THE LENGTH OF THE TYPE 2 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
2. THE TREATED TIMBER PLANKS SHALL BE ATTACHED TO THE RAILROAD TIES WITH 1/2" x 6" MIN. LAG BOLTS. OTHER FASTENERS MAY BE USED AS APPROVED BY THE ENGINEER.
3. THE TREATED TIMBER PLANKS SHALL BE #2 GRADE MIN. AND SHOULD BE FREE FROM LARGE AND LOOSE KNOTS.
4. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
6. THE CONSTRUCTION EXIT SHOULD BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
7. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

CONSTRUCTION EXIT - TYPE 2

3/4" GRAVEL CONTAINED IN PERVIOUS BURLAP BAGS OR SYNTHETIC NET BAGS (1/8" MESH) APPROX. 24" LONG, 12" WIDE AND 6" HIGH

G ->

CONCRETE BLOCKS (6" x 8" x 16")

G ->

PLACE GRAVEL FILTER BAGS SO THAT NO GAPS ARE EVIDENT

VARIES WITH INLET LENGTH

G ->

2" x 4" TREATED WOOD STUD EXTENDED INTO CONCRETE BLOCKS

G ->

PAVEMENT

G ->

OVERFLOW

RUNOFF

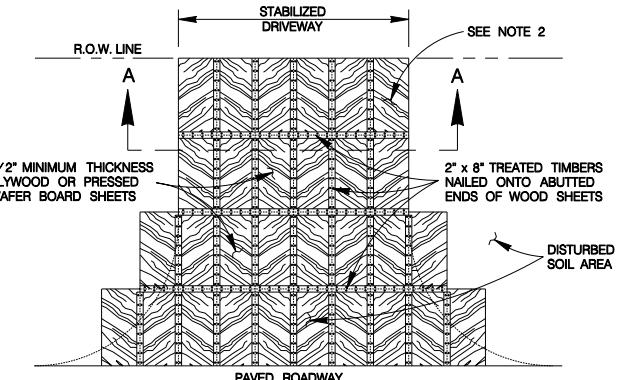
FILTERED RUNOFF

G ->

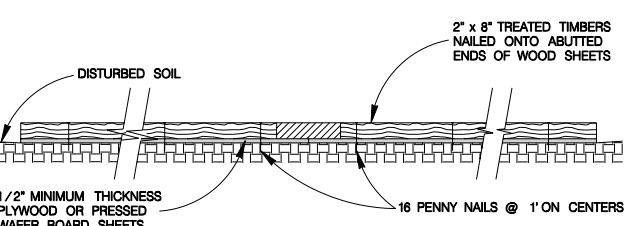
NOTE:
GRAVEL FILTERS CAN BE USED ON PAVEMENT OR BARE GROUND.

SCALE : 1" = 5'

CURB INLET GRAVEL FILTER



PLAN
SCALE : 1" = 20'

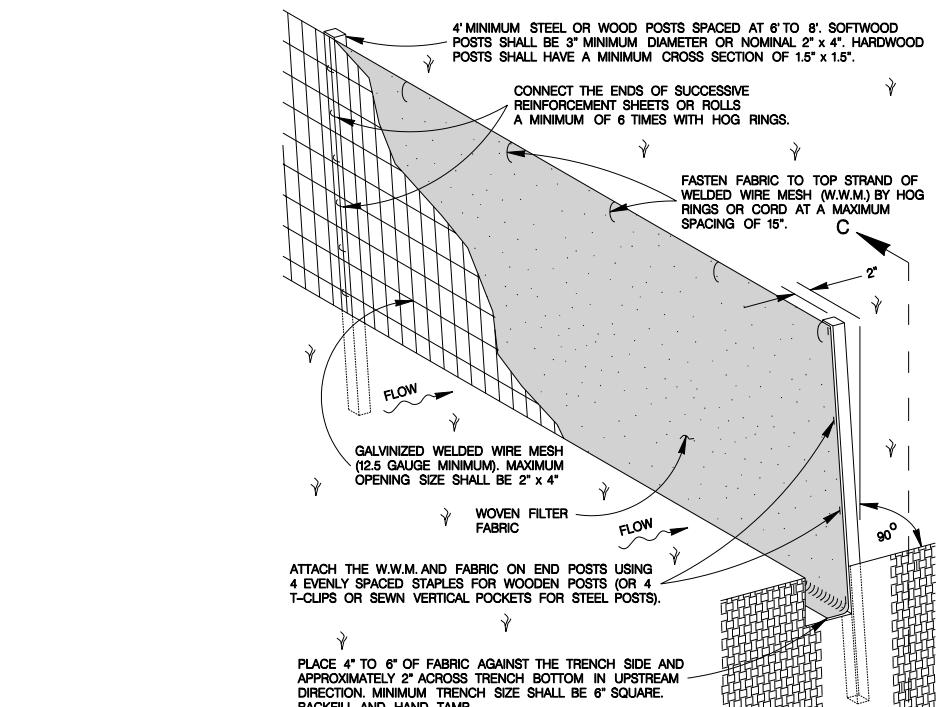


SECTION A-A
SCALE : 1" = 2'

GENERAL NOTES

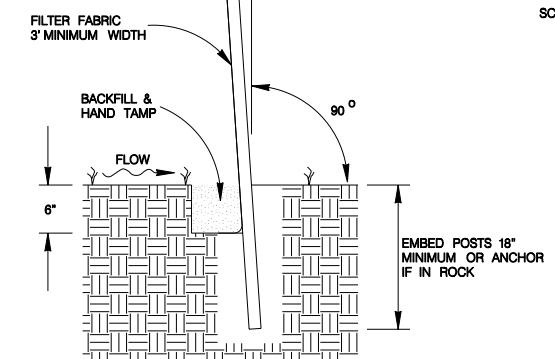
1. THE LENGTH OF THE TYPE 3 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
2. THE TYPE 3 CONSTRUCTION EXIT MAY BE CONSTRUCTED FROM OPEN GRADED CRUSHED STONE WITH A SIZE OF 2 TO 4 INCHES SPREAD A MINIMUM OF 4 INCHES THICK TO THE LIMITS SHOWN ON THE PLANS.
3. THE TREATED TIMBER PLANKS SHALL BE #2 GRADE MIN. AND SHOULD BE FREE FROM LARGE AND LOOSE KNOTS.
4. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

CONSTRUCTION EXIT - TYPE 3



ISOMETRIC VIEW

SCALE : 1" = 2'



SECTION C-C

SCALE : 1" = 2'

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED.

SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 100 GPM / FT SQUARED. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES.

GENERAL NOTES

1. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

TEMPORARY SEDIMENT CONTROL FENCE

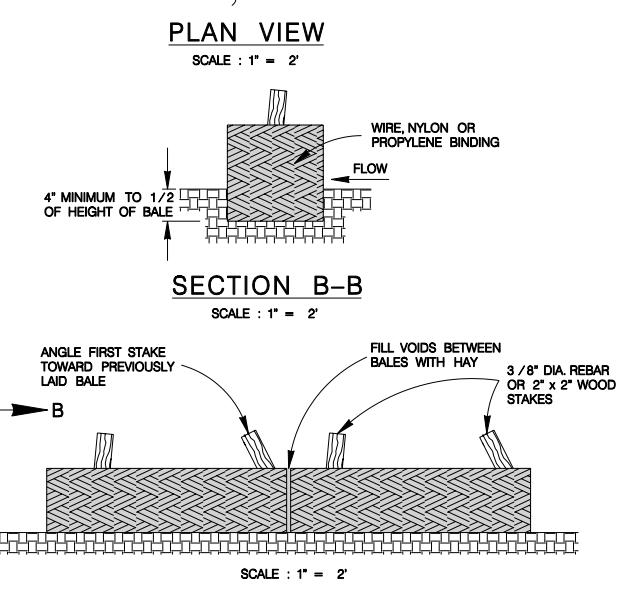
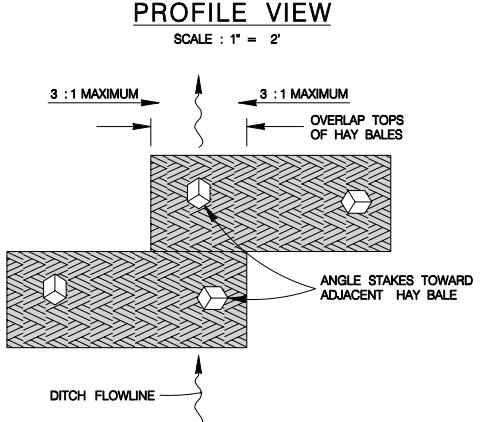
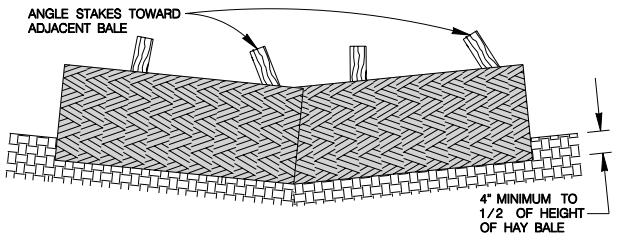
JANUARY 2005

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 1

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY: _____	CHKD. BY: _____
SHEET NO.: _____		OF _____



BALED HAY USAGE GUIDELINES

A BALED HAY INSTALLATION MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERTURN RUNOFF. A TWO YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED. THE INSTALLATION SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 5 GPM / FT SQUARED OF CROSS SECTIONAL AREA. BALED HAY MAY BE USED AT THE FOLLOWING LOCATIONS:

- WHERE THE RUNOFF APPROACHING THE BALED HAY FLOWS OVER DISTURBED SOIL FOR LESS THAN 100'. IF THE SLOPE OF THE DISTURBED SOIL EXCEEDS 10%, THE LENGTH OF SLOPE UPSTREAM OF THE BALED HAY SHOULD BE LESS THAN 50'.
- WHERE THE INSTALLATION WILL BE REQUIRED FOR LESS THAN 3 MONTHS.
- WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1/2 ACRE.

FOR BALED HAY INSTALLATIONS IN SMALL DITCHES, THE FOLLOWING ADDITIONAL CONDITIONAL CONSIDERATIONS APPLY:

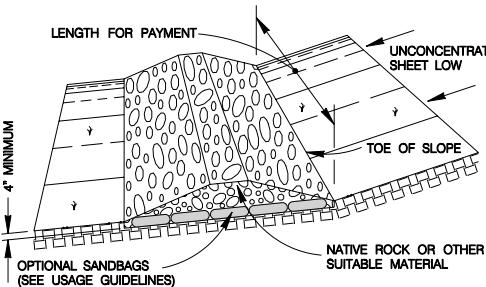
- THE DITCH SIDESLOPES SHOULD BE GRADED AS FLAT AS POSSIBLE TO MAXIMIZE THE DRAINAGE FLOW RATE THRU THE HAY.
- THE DITCH SHOULD BE GRADED LARGE ENOUGH TO CONTAIN THE OVERLAPPING DRAINAGE WHEN SEDIMENT HAS FILLED TO THE TOP OF THE BALED HAY.

BALES SHOULD BE REPLACED USUALLY EVERY 2 MONTHS OR MORE OFTEN DURING WET WEATHER WHEN LOSS OF STRUCTURAL INTEGRITY IS ACCELERATED.

GENERAL NOTES

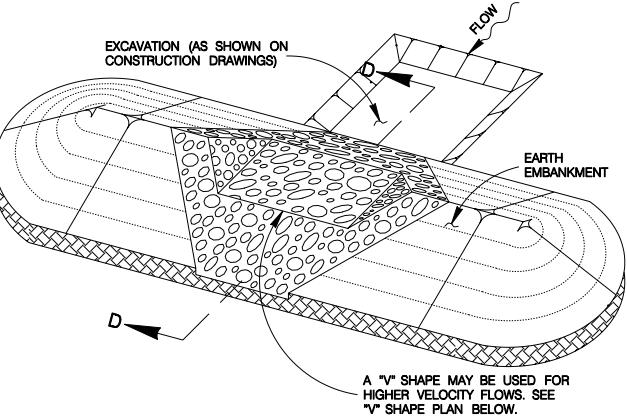
- HAY BALES SHALL BE A MINIMUM OF 30" IN LENGTH AND WEIGH A MINIMUM OF 50 LBS.
- HAY BALES SHALL BE BOUND BY EITHER WIRE OR NYLON OR POLYPROPYLENE STRING. THE BALES SHALL BE COMPOSED ENTIRELY OF VEGETABLE MATTER.
- HAY BALES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4" AND, WHERE POSSIBLE, ONE-HALF THE HEIGHT OF THE BALE.
- HAY BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED WITH BINDINGS PARALLEL TO THE GROUND.
- HAY BALES SHALL BE SECURELY ANCHORED IN PLACE WITH 3/8" DIA. REBAR OR 2" x 2" WOOD STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE SHALL BE ANGLED TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
- THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

BALED HAY FOR EROSION CONTROL



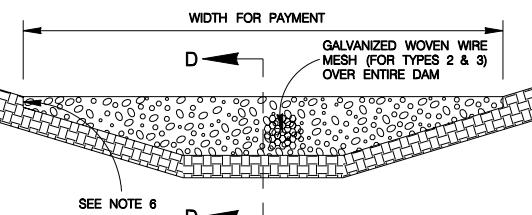
TYPE 1 FILTER DAM AT TOE OF SLOPE

SCALE : 1" = 10'



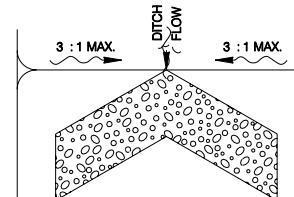
TYPE 1 & 2 FILTER DAM AT SEDIMENT TRAP

SCALE : 1" = 10'



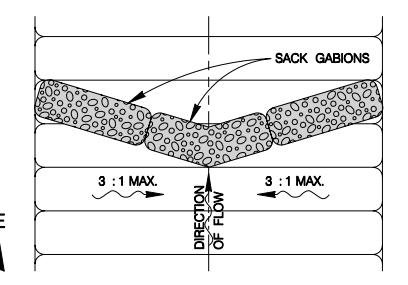
TYPE 1, 2 & 3 FILTER DAM AT CHANNEL SECTIONS

SCALE : 1" = 6'



"V" SHAPE PLAN VIEW

NOT TO SCALE



PLAN VIEW

SCALE : 1" = 10'

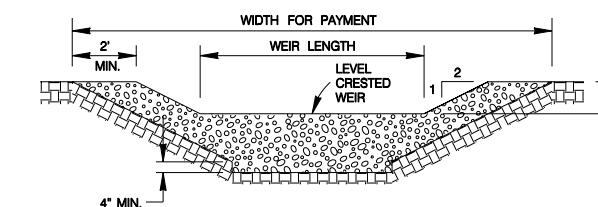
SECTION E-E

SCALE : 1" = 10'

TYPE 4 FILTER DAM AT DITCHES & SMALLER CHANNELS PLAN VIEW

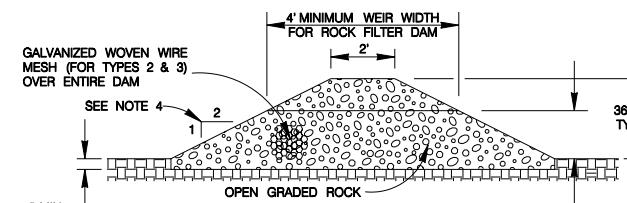
SCALE : 1" = 6'

ROCK FILTER DAMS



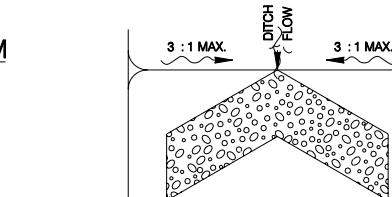
PROFILE OF TYPE 1 & 2 FILTER DAM AT SEDIMENT TRAP

SCALE : 1" = 6'



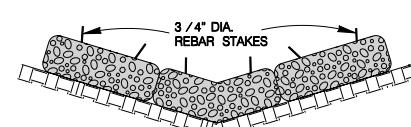
SECTION D-D

SCALE : 1" = 6'



"V" SHAPE PLAN VIEW

NOT TO SCALE



TYPE 4 SACK GABION DETAIL

SCALE : 1" = 6'



SECTION F-F

SCALE : 1" = 6'

ROCK FILTER DAM USAGE GUIDELINES

ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLOAD RUNOFF AND / OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 60 GPM / FT SQUARED OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.

TYPE 1 (18" HIGH WITH NO WIRE MESH):

TYPE 1 MAY BE USED AT THE TOE OF SLOPES, AROUND INLETS, IN SMALL DITCHES AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED HIGH VELOCITY FLOWS (APPROXIMATELY 8 FT. SEC. OR MORE) IN WHICH AGGREGATE WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

TYPE 2 (18" HIGH WITH WIRE MESH):

TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.

TYPE 3 (36" HIGH WITH WIRE MESH):

TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.

TYPE 4 (SACK GABIONS):

TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.

GENERAL NOTES

- IF SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, FILTER DAMS SHOULD BE PLACED NEAR THE TOE OF SLOPES WHERE EROSION IS ANTICIPATED, UPSTREAM AND / OR DOWNSTREAM AT DRAINAGE STRUCTURES, AND IN ROADWAY DITCHES AND CHANNELS TO COLLECT SEDIMENT.
- MATERIALS (AGGREGATE, WIRE MESH, SANDBAGS, ETC.) SHALL BE AS INDICATED BY THE SPECIFICATION FOR ROCK FILTER DAMS FOR EROSION AND SEDIMENTATION CONTROL.
- THE ROCK FILTER DAM DIMENSIONS SHALL BE AS INDICATED ON THE STORM WATER POLLUTION PREVENTION PLANS.
- SIDE SLOPES SHOULD BE 2:1 OR FLATTER. DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDE SLOPES OF 6:1 OR FLATTER.
- MAINTAIN A MINIMUM OF 1' BETWEEN TOP OF ROCK FILTER DAM WEIR AND TOP OF EMBANKMENT FOR FILTER DAMS AT SEDIMENT TRAPS.
- FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4" INTO THE EXISTING GROUND.
- THE SEDIMENT TRAP FOR PONDING OF SEDIMENT-LADEN RUNOFF SHALL BE OF THE DIMENSIONS SHOWN ON THE PLANS.
- ROCK FILTER DAM TYPES 2 & 3 SHALL BE SECURED WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1" DIAMETER HEXAGONAL OPENINGS. THE AGGREGATE SHALL BE PLACED ON THE MESH TO THE HEIGHT AND SLOPES SPECIFIED. THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. IN STREAM USE, THE MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
- SACK GABIONS SHOULD BE STAKED DOWN WITH 3/4" DIA. REBAR STAKES.
- FLOW OUTLET SHOULD BE ONTO A STABILIZED AREA (VEGETATION, ROCK, ETC.).
- THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

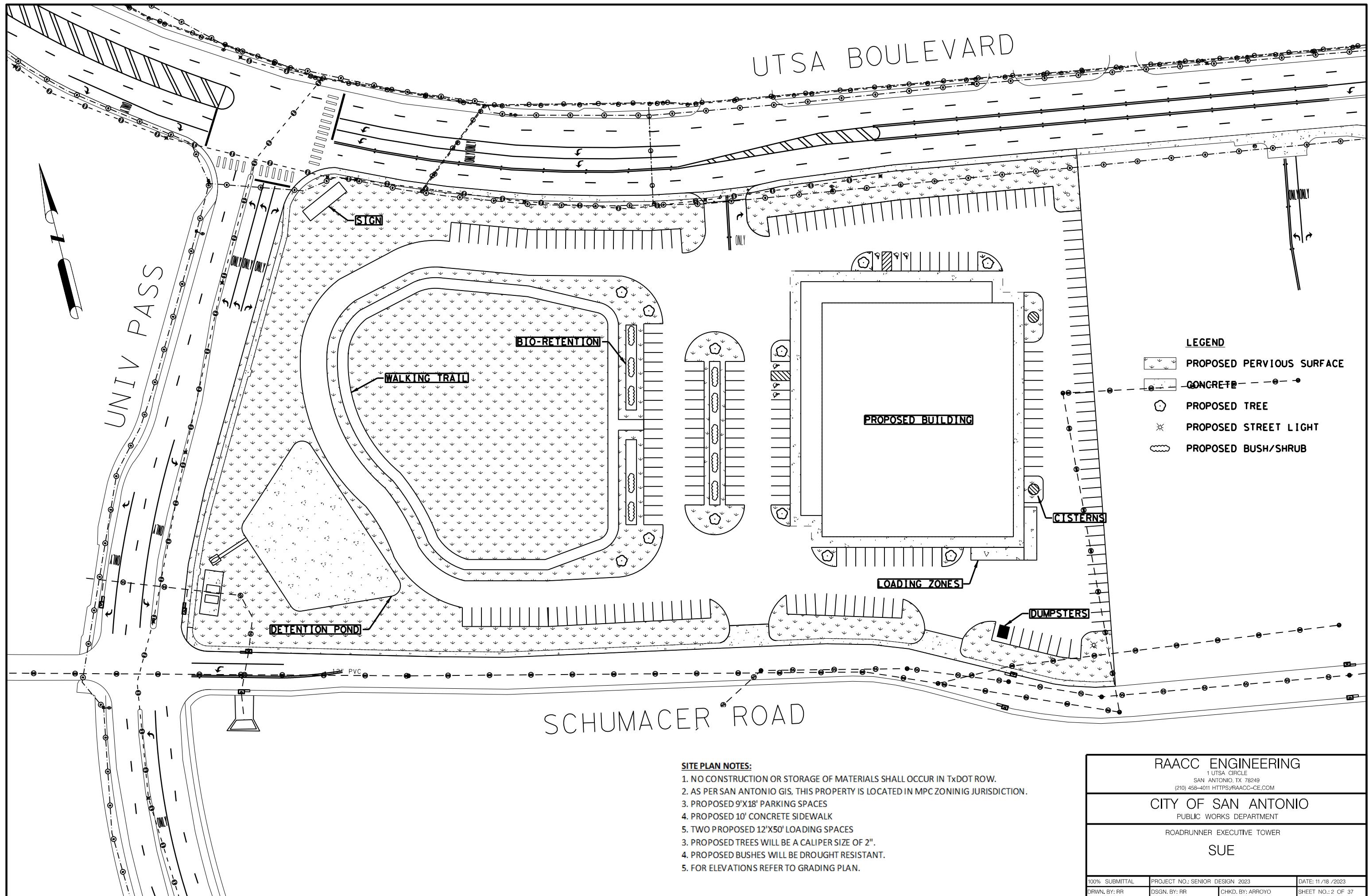
JANUARY 2005

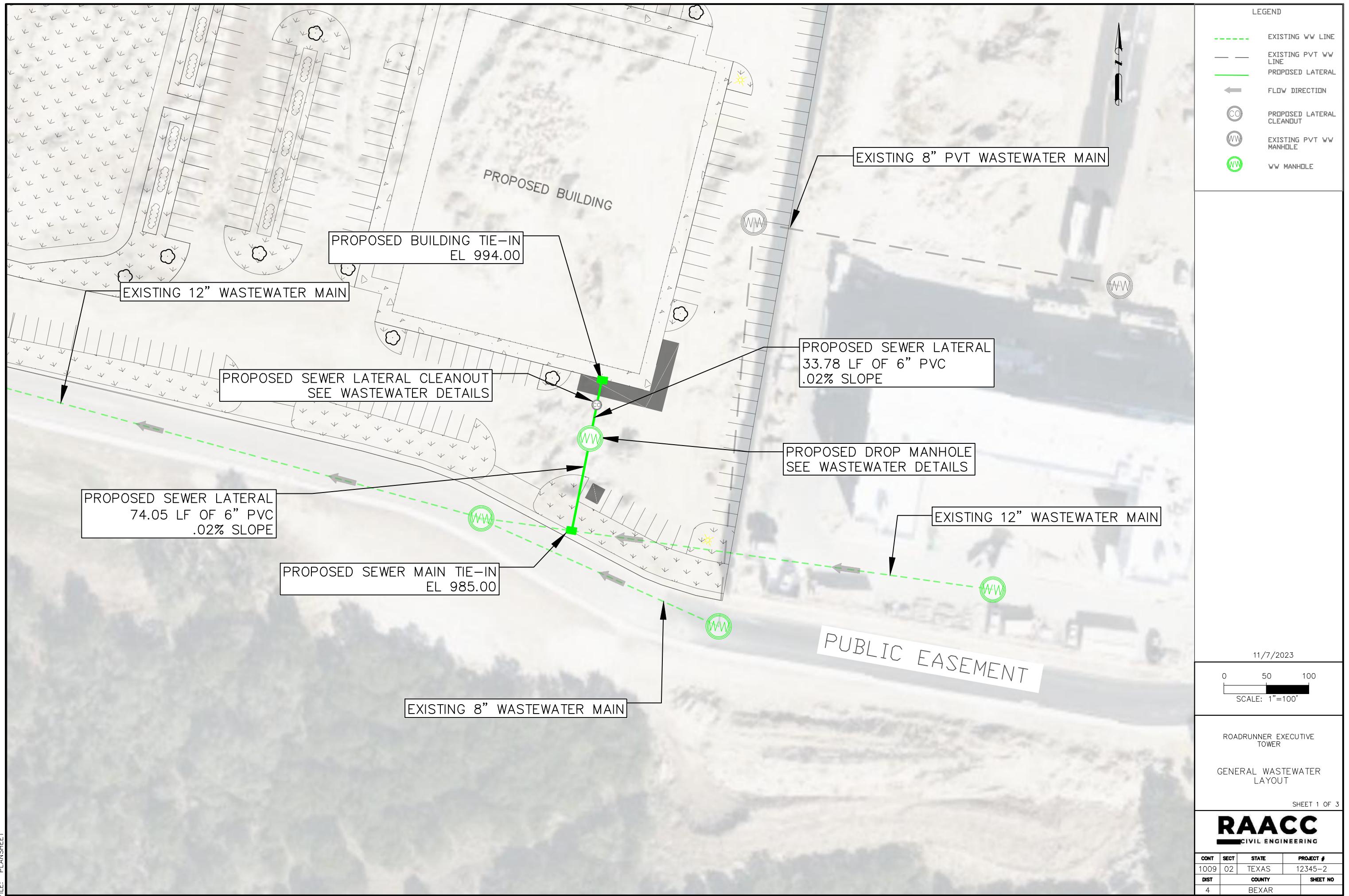
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

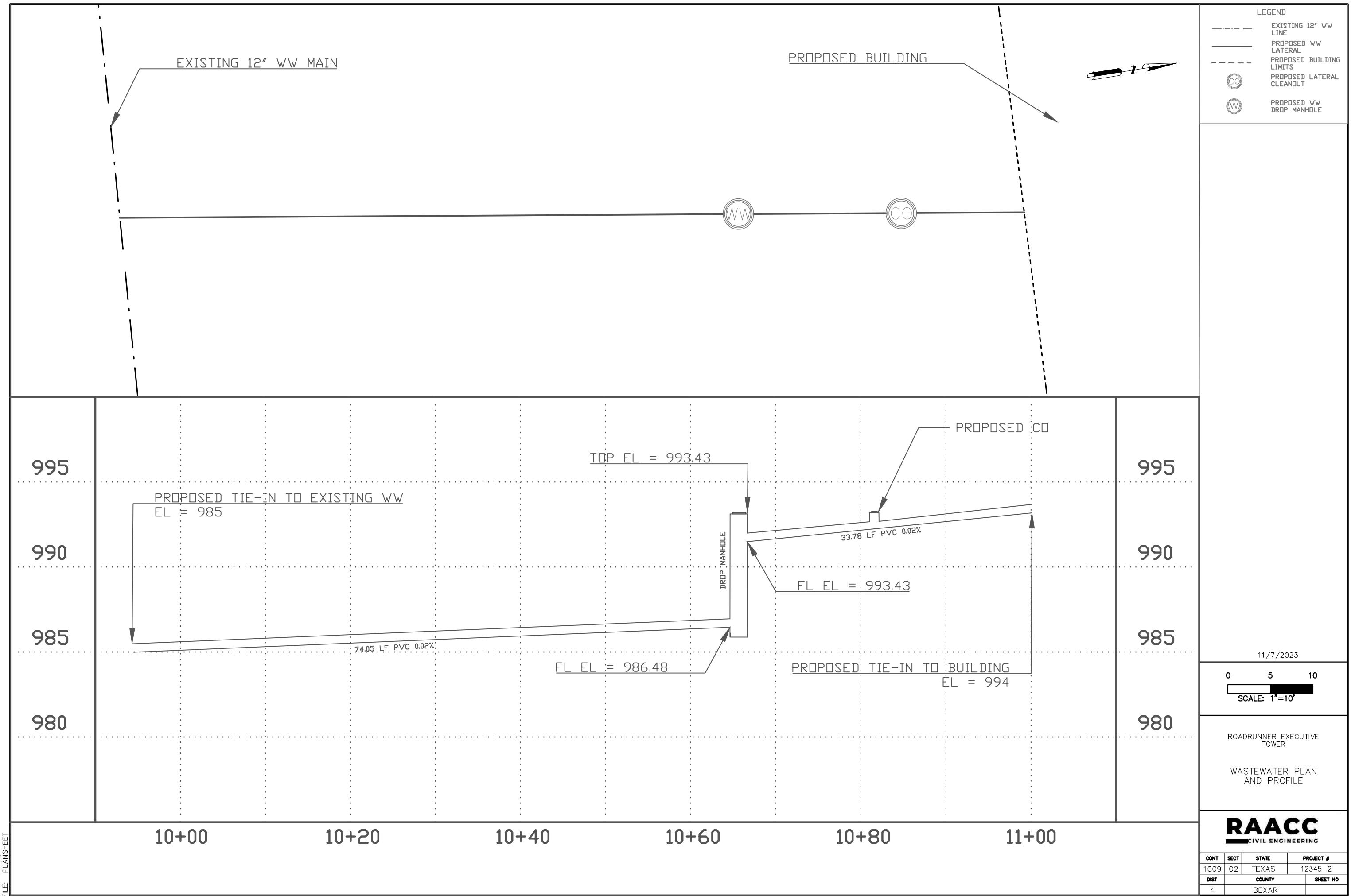
TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 2

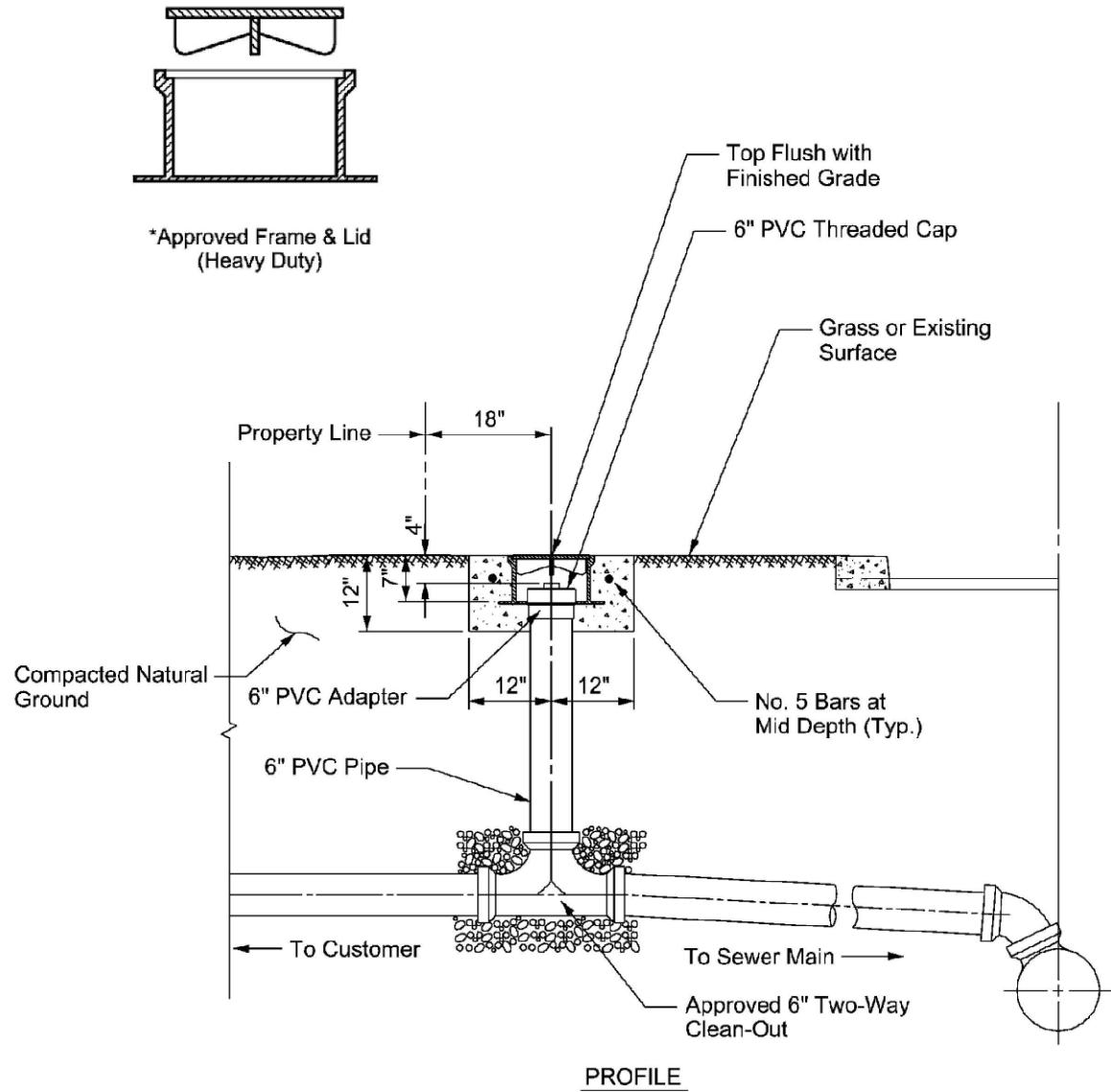
% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY:

SHEET NO.: OF

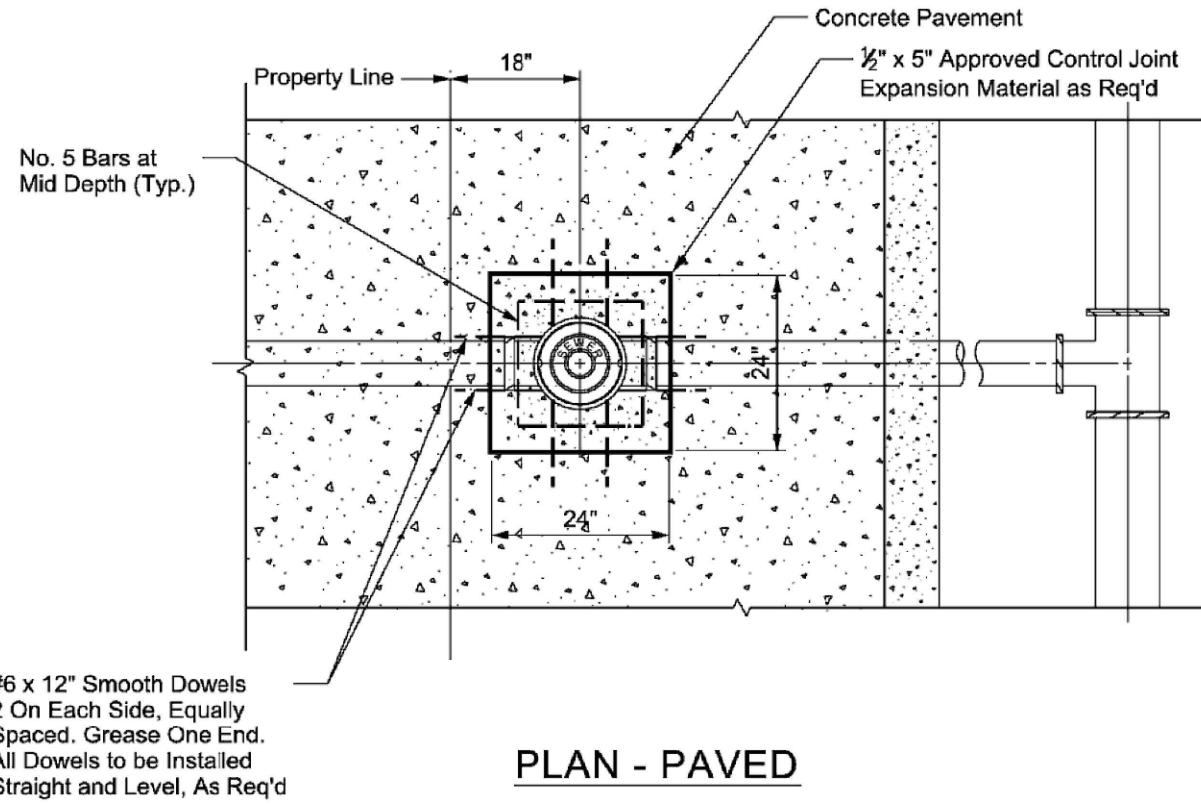








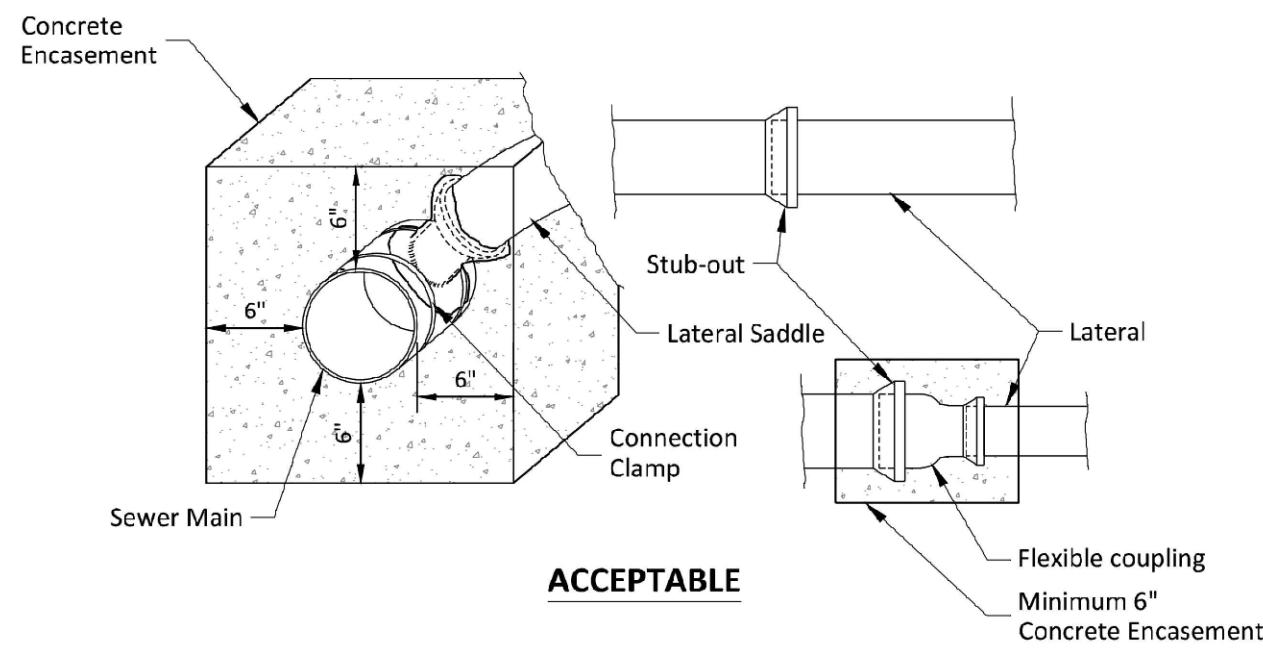
TYPICAL CLEANOUT DETAIL



TYPICAL CLEANOUT DETAIL

PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

Note:
The saddle shall be permanently bonded to the existing main by the use of compounds or clamps as recommended by the manufacturer.

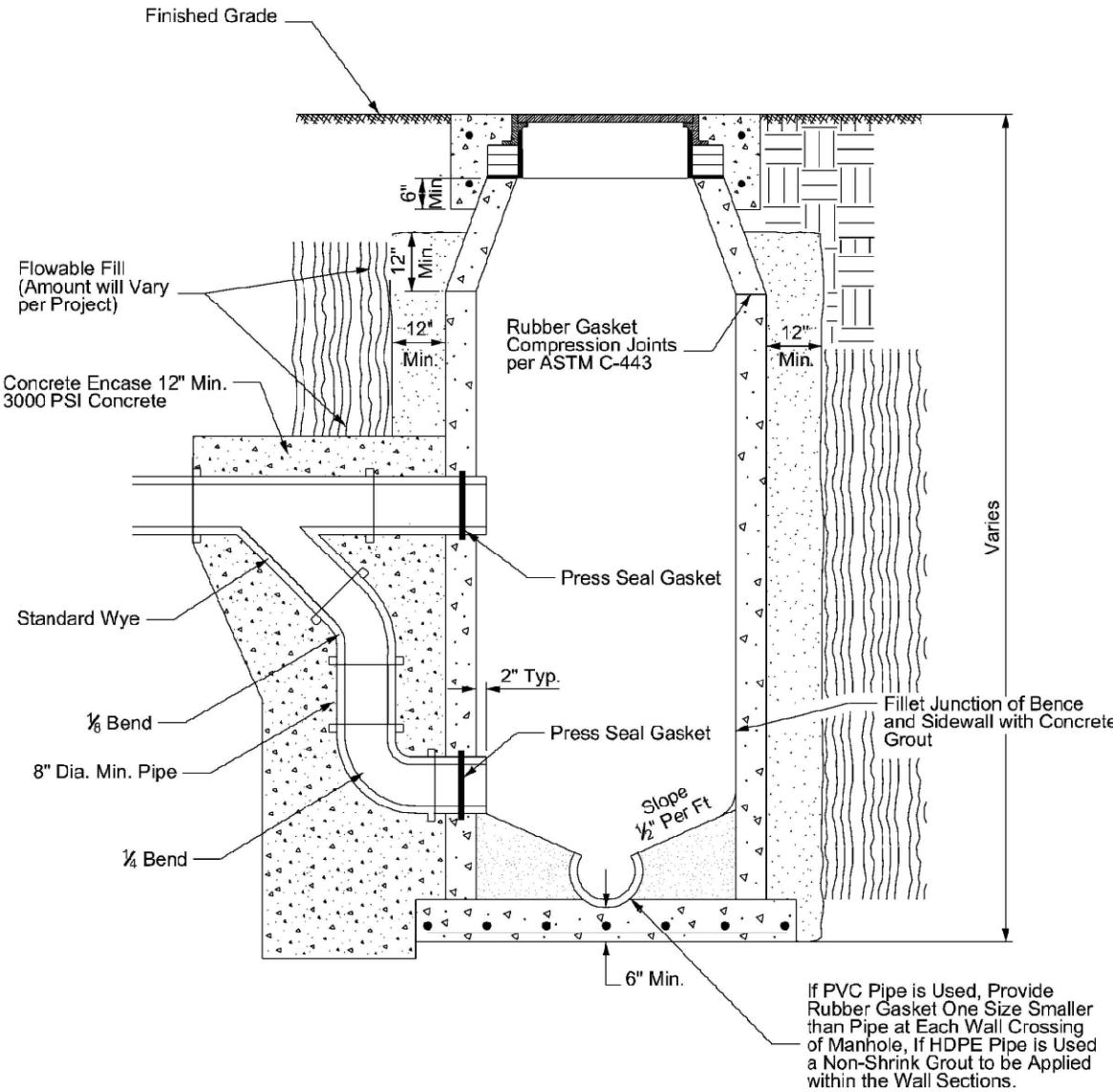


LATERAL CONNECTION

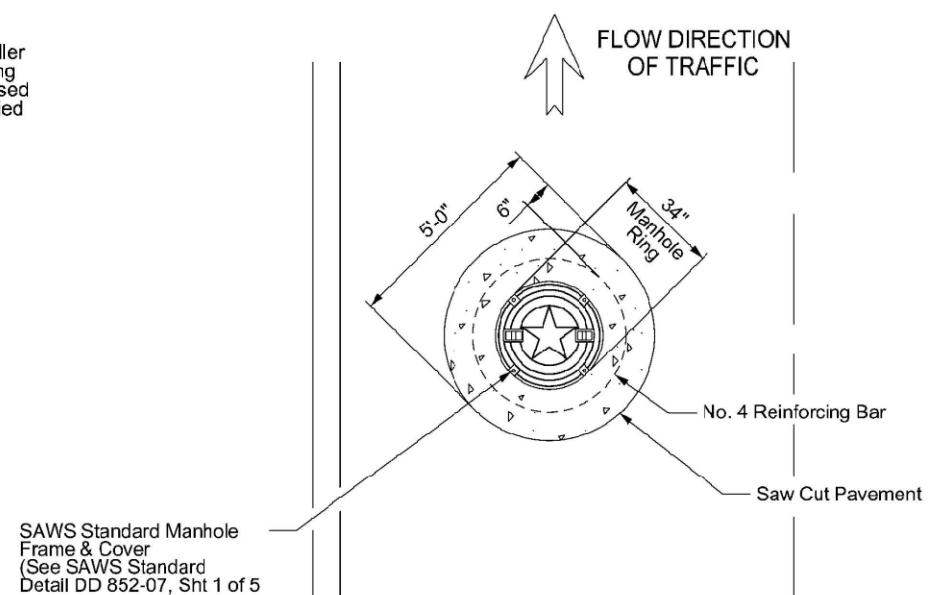
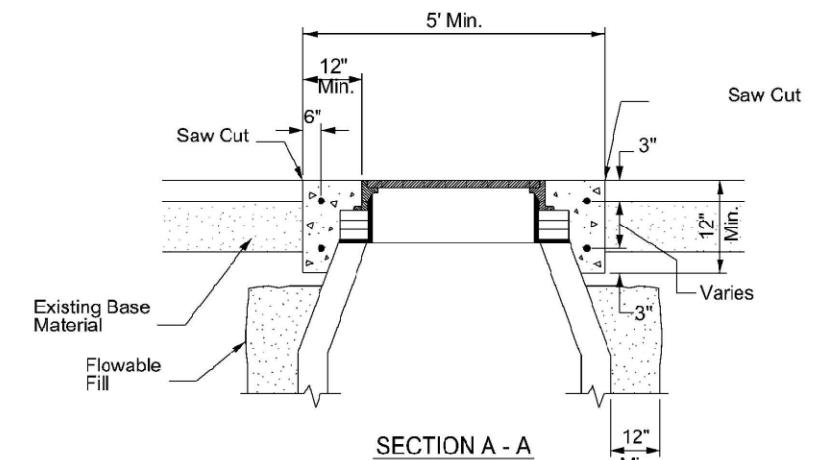
1009	02	TEXAS	12345-2
DIST	COUNTY	SHEET NO	
4	BEXAR		

NTS
ROADRUNNER EXECUTIVE TOWER
WASTEWATER LATERAL DETAILS
RAACC
CIVIL ENGINEERING

11/7/2023

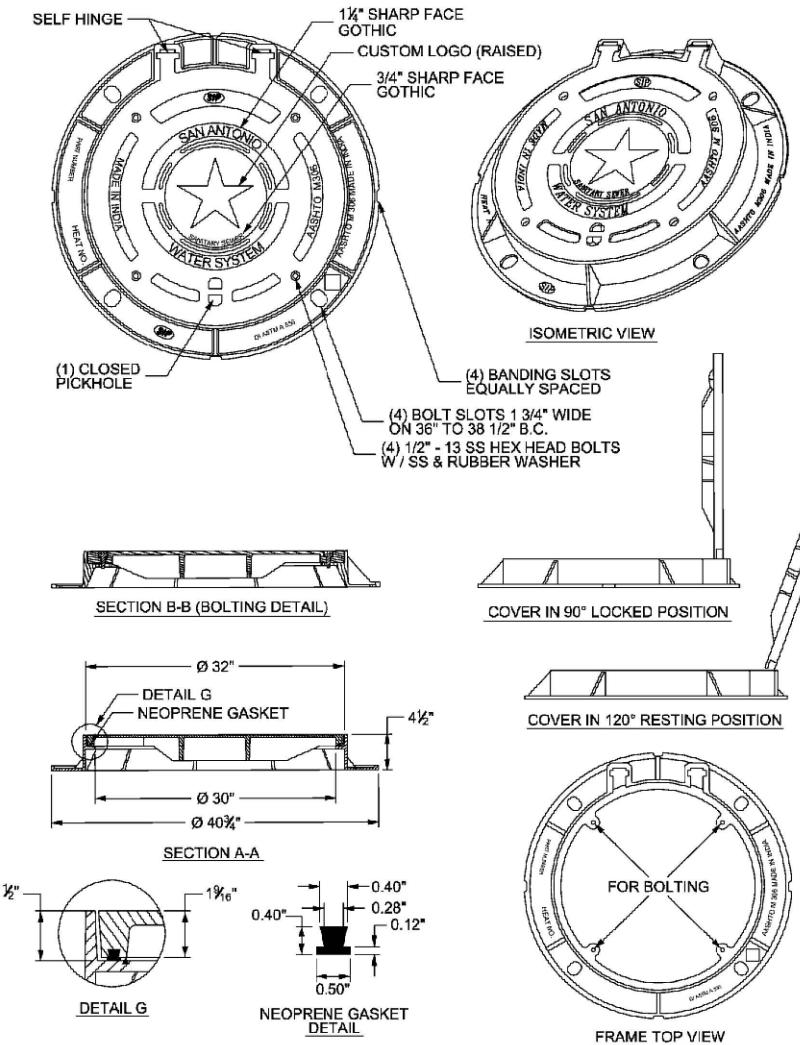


DROP MANHOLE DETAIL



NOTE:

1. The Concrete Shall be 4000 PSI Minimum and Reinforced with No. 4 Bars as Shown.
2. The Concrete Shall Extend to Edge of Saw Cut Pavement.
3. Manhole Ring Encasement is Required on all Manholes.
4. Manhole Lid shall Open in the Direction of Traffic or Downstream in Parkway

MANHOLE RING
ENCASEMENT DETAIL

11/7/2023

NTS

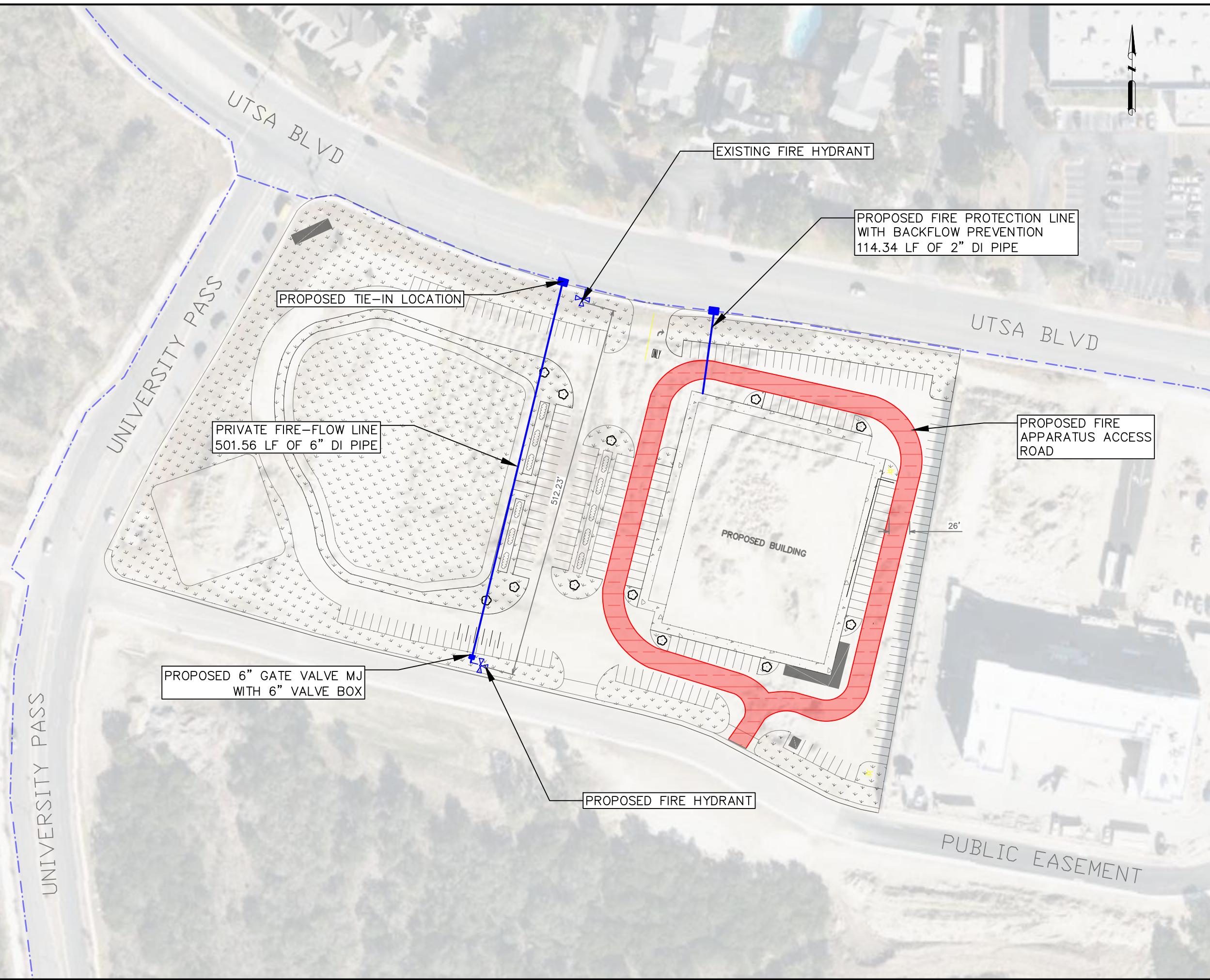
ROADRUNNER EXECUTIVE TOWER

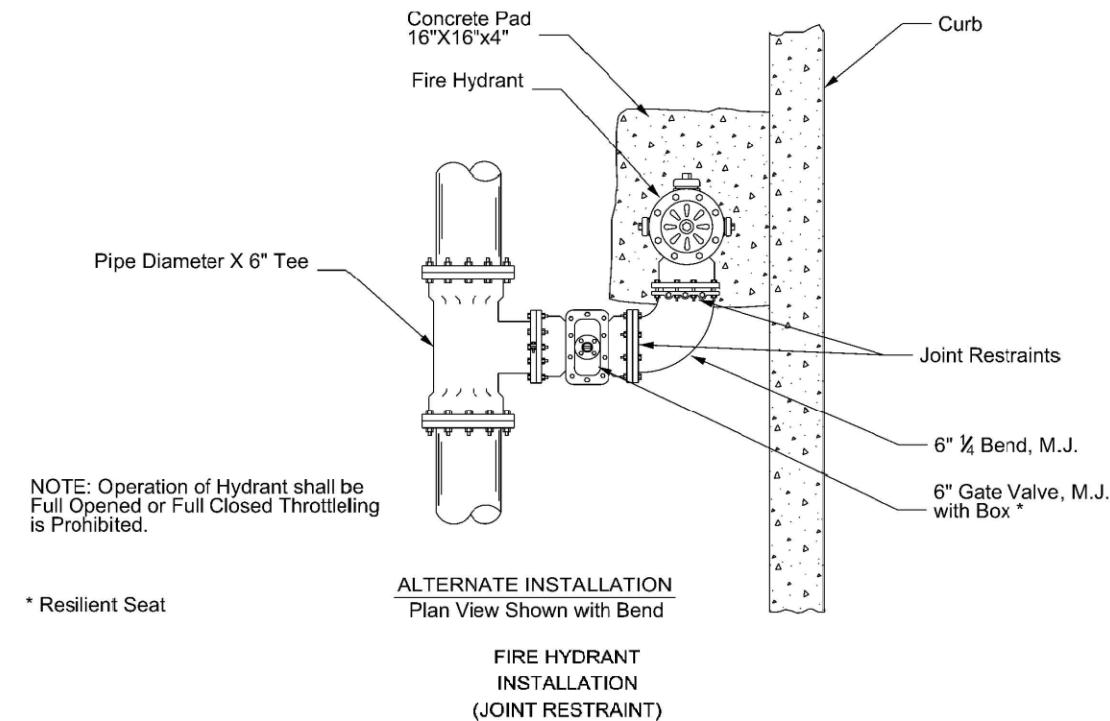
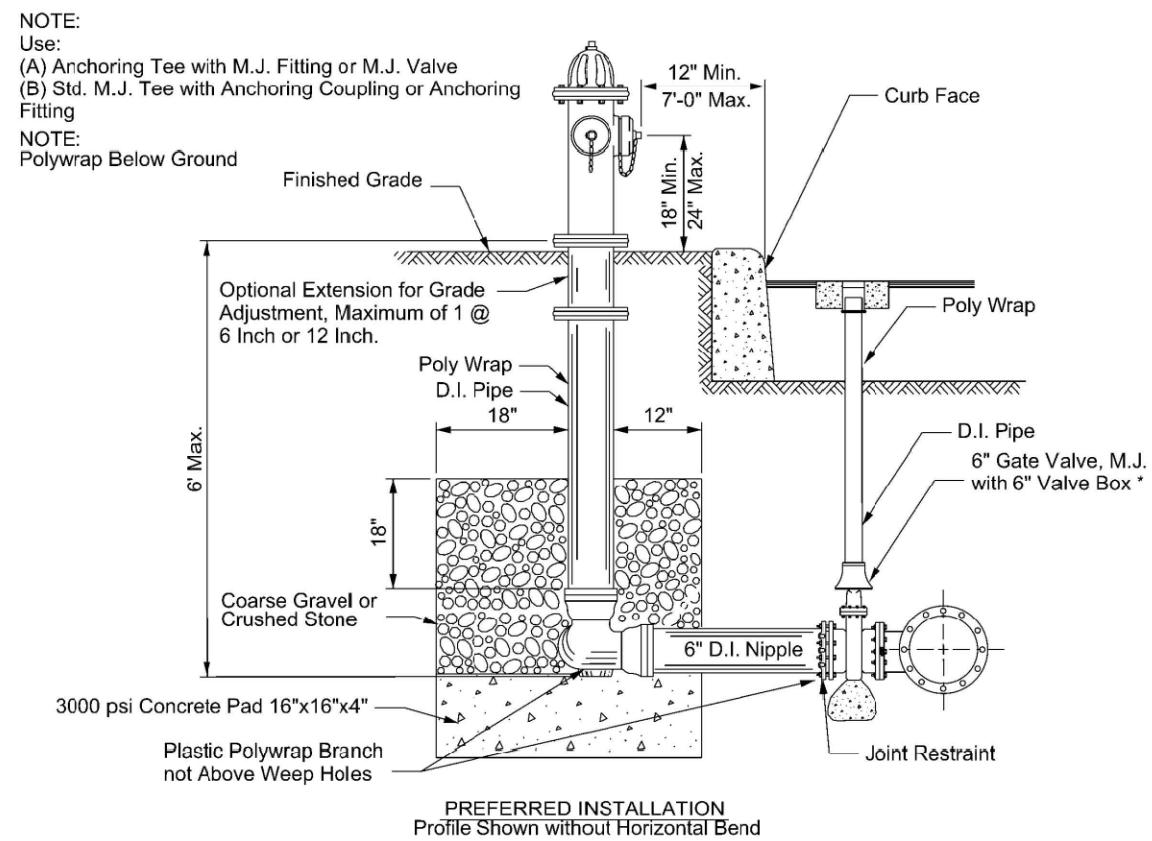
WASTEWATER LATERAL DETAILS

RAACC
CIVIL ENGINEERING

CONT	SECT	STATE	PROJECT #
1009	02	TEXAS	12345-2
4	BEXAR		







11/7/2023

NTS			
ROADRUNNER EXECUTIVE TOWER			
FIRE PROTECTION DETAILS			
RAACC CIVIL ENGINEERING			
CONT	SECT	STATE	PROJECT #
1009	02	TEXAS	12345-2
DIST	COUNTY		SHEET NO
4	BEXAR		

GENERAL CONSTRUCTION

1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
- A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage."
 - C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction."
 - D. Current City of San Antonio "Standard Specifications for Construction."
 - E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
 - 2. The Contractor shall obtain SAWS Standard Details from SAWS website, https://apps.saws.org/business_center/specs/constspecs/constspecs_2020/index.cfm unless otherwise noted within design plan.
 - 3. The Contractor is to notify and make arrangements with the SAWS Construction Inspection Division at 210-233-3500 (during regular SAWS working hours), and provide notification procedures the Contractor will use to notify affected home residents and/or property owners two (2) weeks prior to excavation. Outside of regular SAWS working hours the SAWS EOC should be contacted at 210-704-7297.
 - 4. If necessary, Contractor will coordinate use of SAWS premises at no additional cost to SAWS. Such efforts include, but are not limited to, obtaining security identification badges required for access to SAWS facilities.
 - 5. Locations and depths of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
 - 6. The Contractor shall verify the exact location of underground utilities and drainage structures prior to construction whether shown on plans or not. As-builts for SAWS infrastructure can be obtained at website below. Contractor shall coordinate physical locates for SAWS infrastructure through the SAWS Inspector. Please allow up to 7 business days for locates requesting pipe location markers on SAWS infrastructure. The following contact information are supplied for verification purposes:

San Antonio Water System:
Request as-builts: <https://www.saws.org/service/locates-service/>
COSA Drainage 210-206-8433
COSA Traffic Signal Operations 210-207-7720
Texas State Wide One Call Locator 1-800-545-6005 or 811

 - 7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition as a result of damages done by the project's construction.
 - 8. Contractor shall not make use of dumpsters or waste bins that are intended to serve residents and/or businesses.
 - 9. All work in Texas Department of Transportation and Bexar County right-of-way shall be done in accordance with respective construction specifications and permit.
 - 10. The Contractor shall comply with City of San Antonio or other governing Municipality's tree ordinances when excavating near trees.
 - 11. All work within the 100-year Floodplain shall be done in accordance with Floodplain Development Permit.
 - 12. Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the San Antonio Water System.
 - 13. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays.
Weekend Work: Contractors are required to submit request to the SAWS Inspection Construction department by 12:00pm on the Wednesday prior to the weekend being requested. Request should be sent to constworkreq@saws.org. Any and all SAWS utility work installed without weekend approval will be subject to be uncovered for proper inspection at no cost to SAWS.
 - 14. PRE-CON SITE VIDEO: Before the start of any construction, The site must be video recorded by the contractor with one copy submitted to SAWS Inspections. A pre-site video will provide accurate documentation of the existing conditions (NSPI).

15. POWER POLE BRACING: Contractors should be advised that there are existing overhead utility poles along the project corridor. Contractors should further be advised that if the distance from the outside face of a utility trench to the face of a utility pole is less than 5 feet, said utility pole is subject to bracing, based on a determination made by utility pole owner. It is advisable for the contractor to review the construction documents, and visit the construction site to determine potential impacts.

16. CONSTRUCTION SEQUENCING: It is the Contractor's sole responsibility to schedule sequencing for removal and installation of existing and proposed SAWS utilities in conjunction with general project construction. Sequence of construction activities shall be considered in order to minimize the extent and duration of disturbances.

17. Contractor shall comply with applicable regulations including, but not limited to, those overseen by the U.S. Occupational Safety and Health Administration (OSHA). OSHA information and related materials may be obtained at <https://www.osha.gov/> or at the OSHA San Antonio Office located at Fountainhead Tower, Suite 605 8200 W. Interstate 10 San Antonio, TX 78230 which is also reachable by phone at (210) 472-5040.

18. TRENCH EXCAVATION SAFETY PROTECTION: Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work areas in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures. The Contractor's implementation of the systems, programs and/or procedures shall provide for adequate trench excavation safety protection that complies with, as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

WATER

19. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Inspection and/or SAWS Production groups at least twenty-five (25) Calendar Days in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.

20. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), maybe located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Payment for such work is to be made under Item No. 3000, "Handling Asbestos Cement Pipe". AC pipe removed on construction projects for tie-in(s) should be in length of 26 linear feet (LF). Lengths of 13 LF should be removed where AC pipe is being removed and crossing pipes, conduits, or boxes.

21. VALVE REMOVAL: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)

22. DIVISION VALVES: Division Valves shown on plans or not shown on plans but found in the field shall only be operated by SAWS Distribution and Collection staff and only with prior written approval of the SAWS Director of Production and Operations and proper coordination with all SAWS departments. Contractor shall provide written notification to the Inspector a minimum of twenty-five (25) Calendar Days in advance to start the coordination process and will be informed by the Inspector when the division valve will be operated by the SAWS Distribution and Collection staff. The Division Valve can only be operated by SAWS Distribution and Collection staff member not the inspector or the contractor. Operation of a Division Valve without the express prior written approval of the SAWS Distribution and Collection staff will constitute a material breach of any written SAWS contract or permit in addition to subjecting the Contractor to liability for any and all fines, fees, or other damages, direct or consequential, that may arise from or be caused by the operation of the valve without prior written permission. Please be informed that the approval of the operation or opening or closing of a division valve can take several weeks for approval. Division Valves will also have a valve lid labeled Division Valve and a locking mechanism installed with a key. The lock and key mechanism will be paid for by the contractor but will be installed by SAWS Distribution and Collection staff.

SEWER

23. The Contractor is responsible for ensuring that no sanitary sewer overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:

A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at 210-704-SAWS (210-704-7297). Provide the address of the spill and an estimated volume or flow.

B. Attempt to eliminate the source of the SSO.

C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.

D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.

E. Clean the affected sewer mains and remove any debris.

F. Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours.

Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA. No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.

24. The Contractor shall provide bypass pumping of sewage around each segment of pipe to be replaced, in accordance with SAWS Standard Specification Item No. 865, "Bypass Pumping Small Diameter Sanitary Sewers" and Standard Specification Item No. 864-S2, "Bypass Pumping Large Diameter Sanitary Sewers" as applicable. Payment for such work will be made under the appropriate bid item associated with Sanitary Sewer Bypass Pumping in accordance with SAWS Standard Specifications 865 and 864-S2.

25. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at 210-233-3500 and/or SAWS Production groups at least two weeks or more in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.

26. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade of the project's improvements (NSPI).

27. SMART MANHOLE COVERS: The Contractor shall notify SAWS EOC at 210-704-SAWS (210-233-7297) and either America Espinoza at 210-233-2934 or Jose A. Martinez at 210-233-3071 a minimum of 72 hours, not counting weekends or SAWS holidays, before working on the pipe or manhole, in order to have SAWS remove the Smart Cover. Any damage done to the Smart Cover will be charged to the Contractor through a change order.

28. FLOW METERS IN MANHOLES: The Contractor shall notify Bobby Johnson at 210-233-3493 or Abel Borunda at 210-233-3704 a minimum of 72 hours, not counting weekends or SAWS holidays, before working on the pipe or manhole, in order to have SAWS remove the Flow Meter in the manhole. Any damage done to the Flow Meter will be charged to the Contractor through a change order.

11/7/2023

NTS

ROADRUNNER EXECUTIVE TOWER

GENERAL UTILITY NOTES

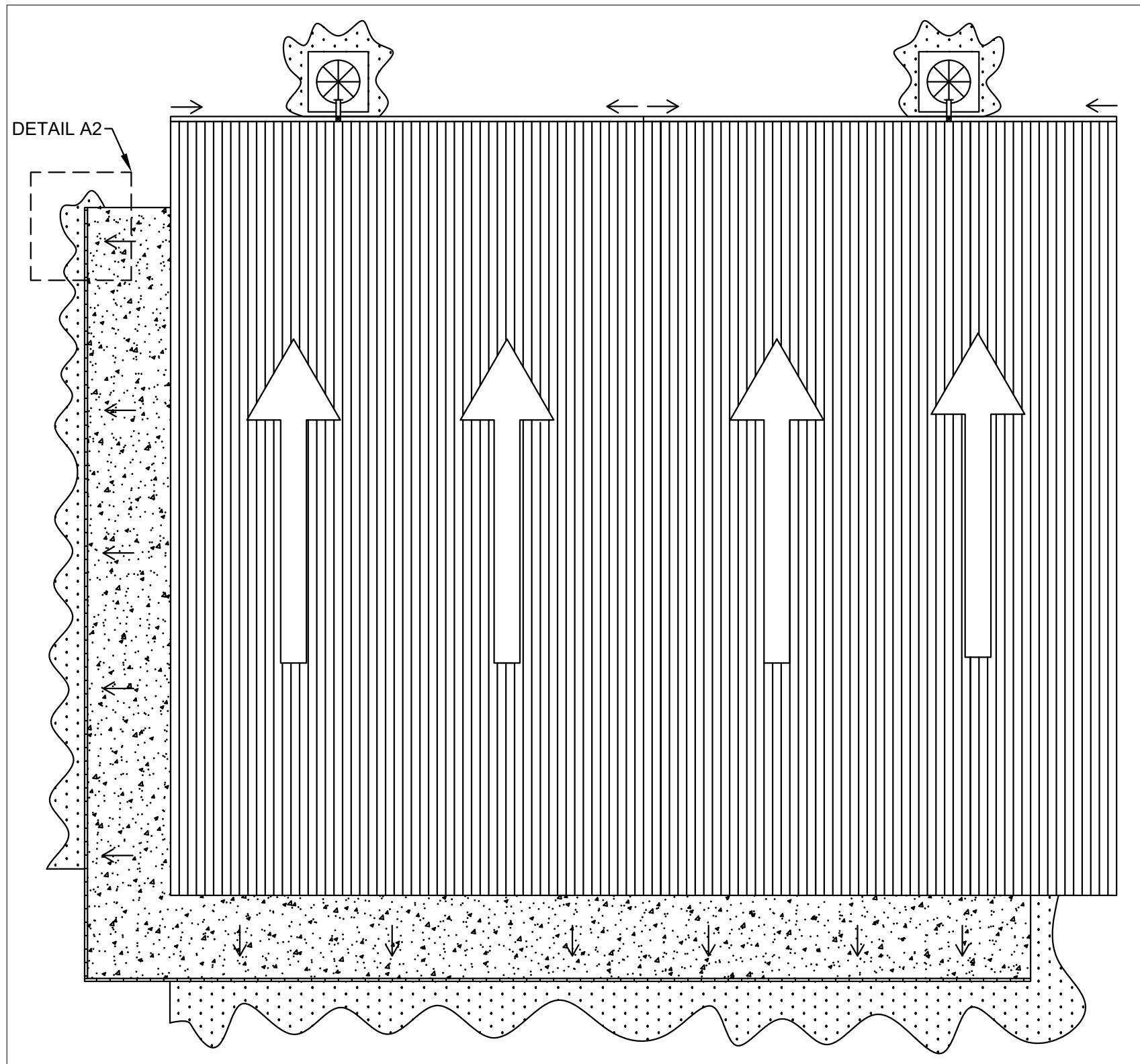
RAACC

CIVIL ENGINEERING

CONT	SECT	STATE	PROJECT #
1009	02	TEXAS	12345-2
DIST	COUNTY	SHEET NO	
4	BEXAR		

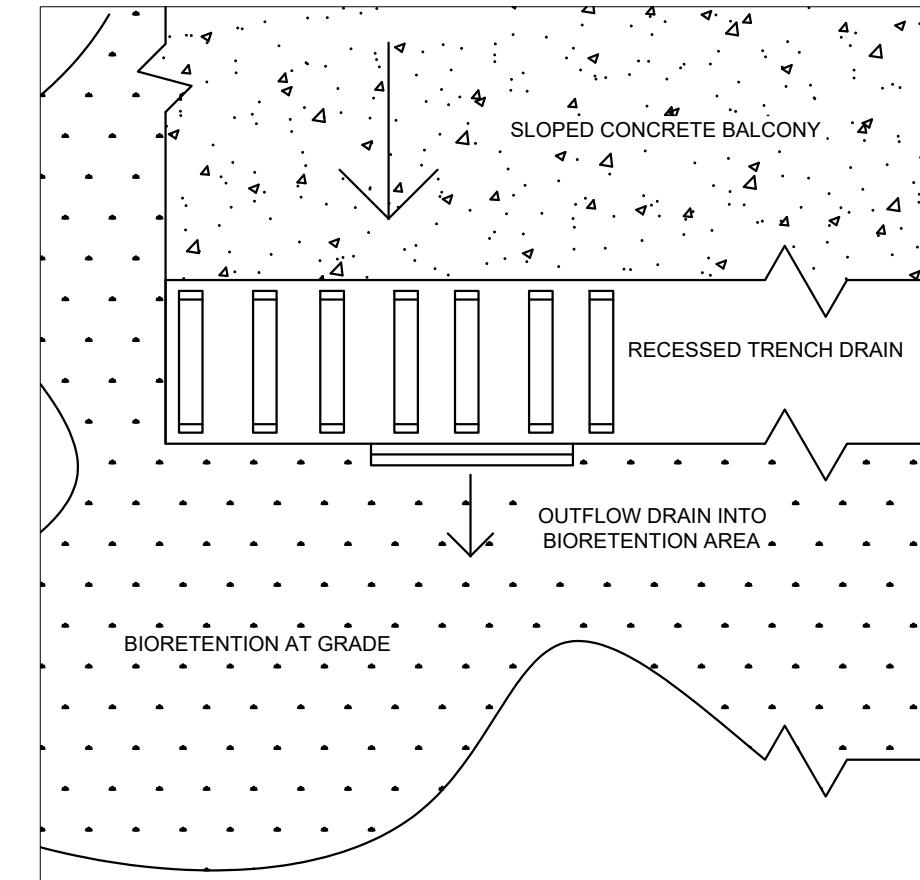
ROOF FLOW PLAN

(SCALE: 1" = 20')

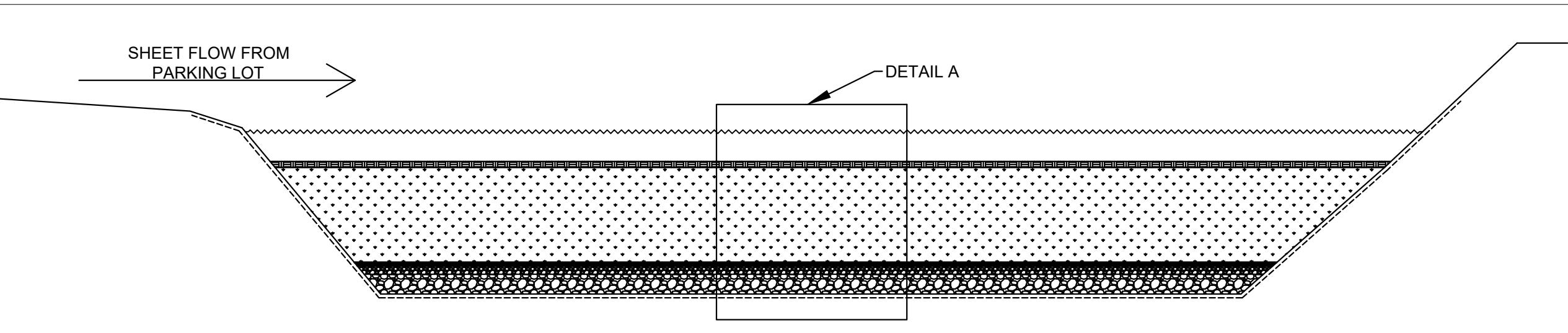
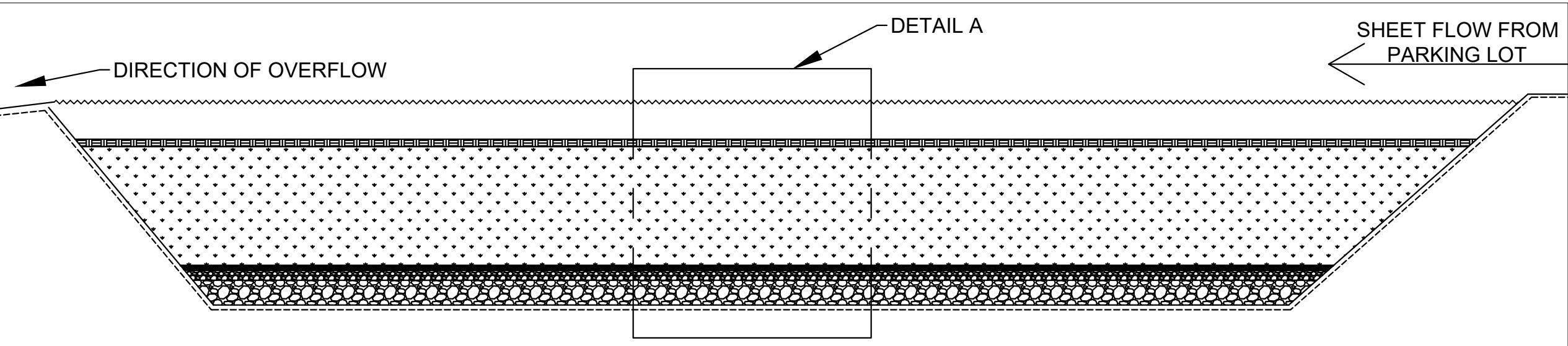


DETAIL A2

(TYP, N.T.S.)



CONT	SECT	STATE	PROJECT #
1009	02	TEXAS	12345-2
DIST	COUNTY	SHEET NO	
4	BEXAR		



C BRYANT

LID NOTES

LANDSCAPING NOT SHOWN. REFERENCE LANDSCAPING PLAN (BY OTHERS).

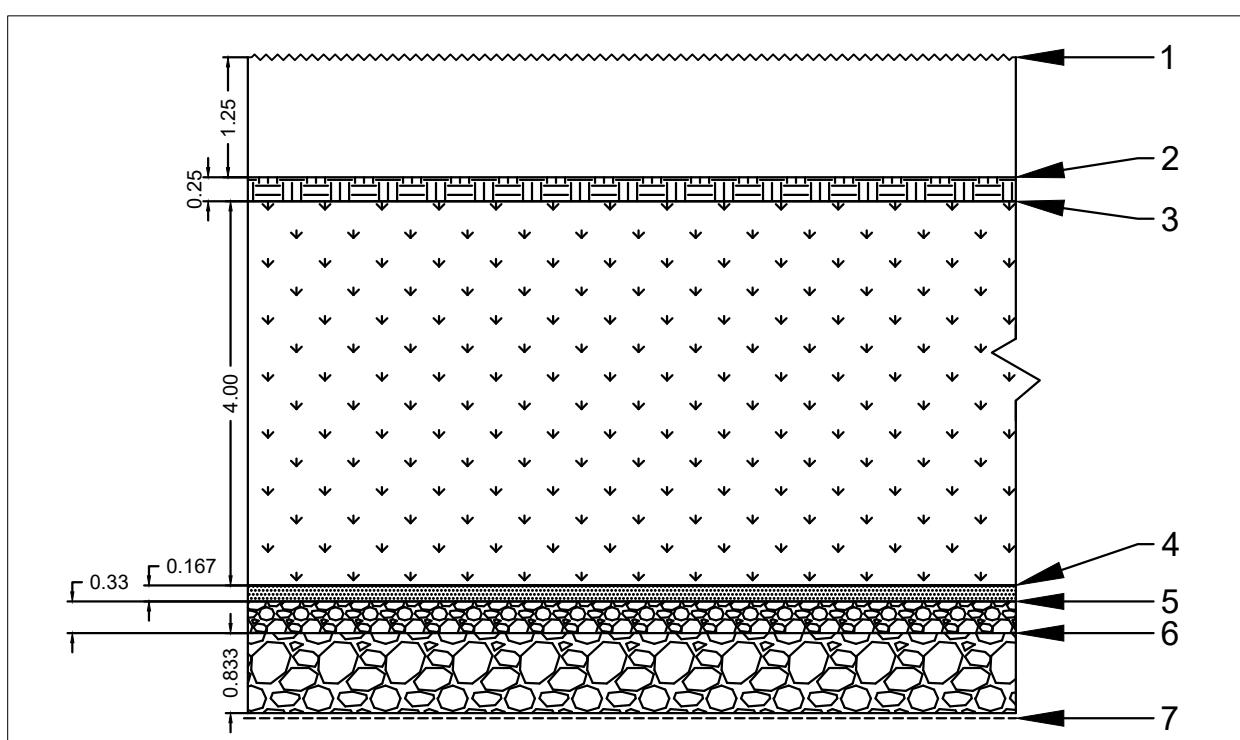
MAXIMUM ALLOWABLE PONDING DEPTH IS 18".

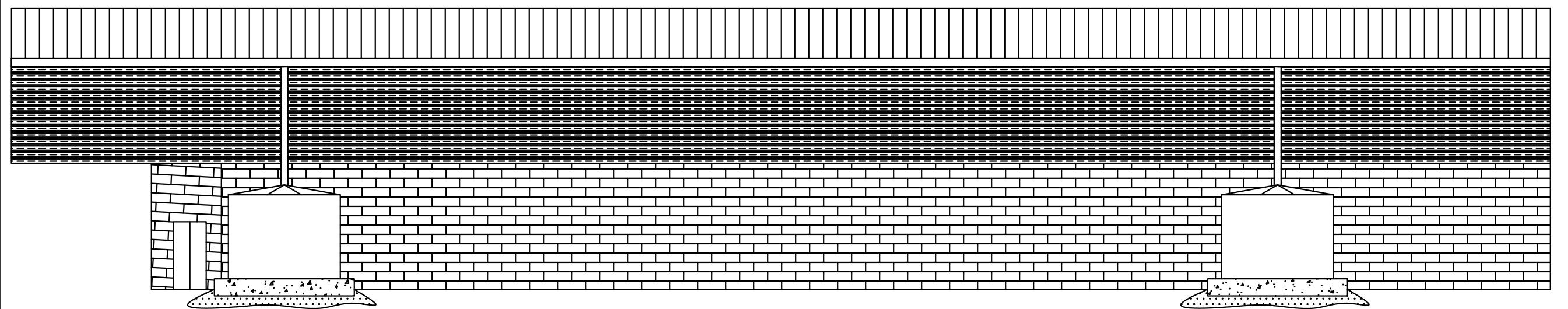
BIORETENTION TO INCLUDE RIVER STONE BUFFER ADJACENT TO PARKING LOT.

BOSWALE TO INCLUDE VEGETATED BUFFER ADJACENT TO PARKING LOT.

CONTRACTOR TO AVOID COMPACTION OF EXISTING SOIL IN BIODETENTION AND BIOSWALE AREAS THROUGHOUT CONSTRUCTION.

DETAIL A
(TYP.)

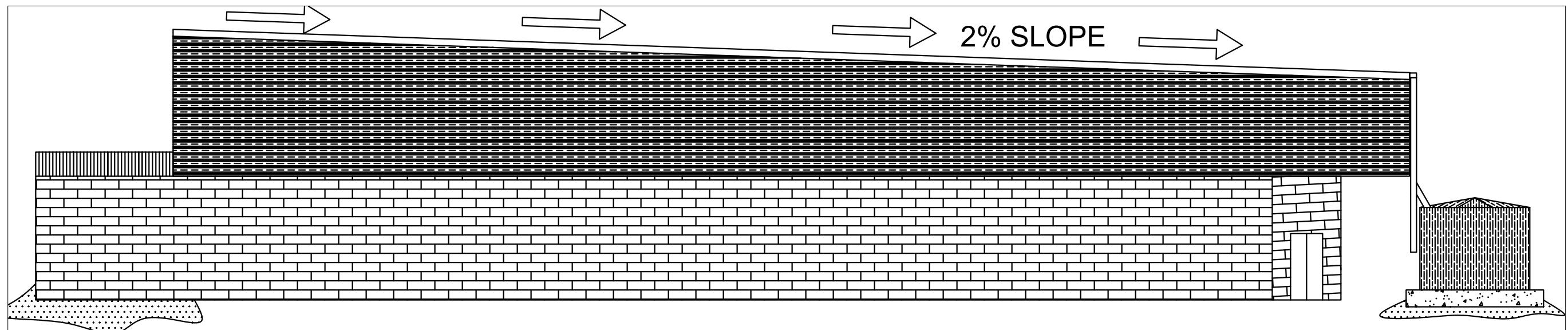




WEST ELEVATION

(SCALE: 1" = 16')

C'BRYANT



11/17/2023

SOUTH ELEVATION

(SCALE: 1" = 16')

MODEL NAME: ROADRUNNER EXECUTIVE TOWER
DATE: 11/17/2023
FILE: PLANSHEET

ROADRUNNER EXECUTIVE
TOWER

WEST AND SOUTH
ELEVATIONS

RAACC
CIVIL ENGINEERING

CONT	SECT	STATE	PROJECT #
1009	02	TEXAS	12345-2
DIST	COUNTY	SHEET NO	
4	BEXAR		