

# SHEET INDEX

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OWNER: ROCKWALL RUSTIC RANCH, LLC CAPRICE MICHELLE 1506 SIGNAL RIDGE PL ROCKWALL, TEXAS 75032 214-789-7364 CONTRACTOR:
EASLEY CONCRETE
PO BOX 791
ROYSE CITY, TX 75189
469-236-5999



E3 ENGINEERING 106 NORMA GENE ROYSE CITY, TX 75189 214-773-6767 TX REG. #F-10130

Revised April 2015 — Adjusted detention area & added dumpster pad RECORD DRAWINGS — JULY 2017

DESIGNED SEP DRAWN SEP CHECKED

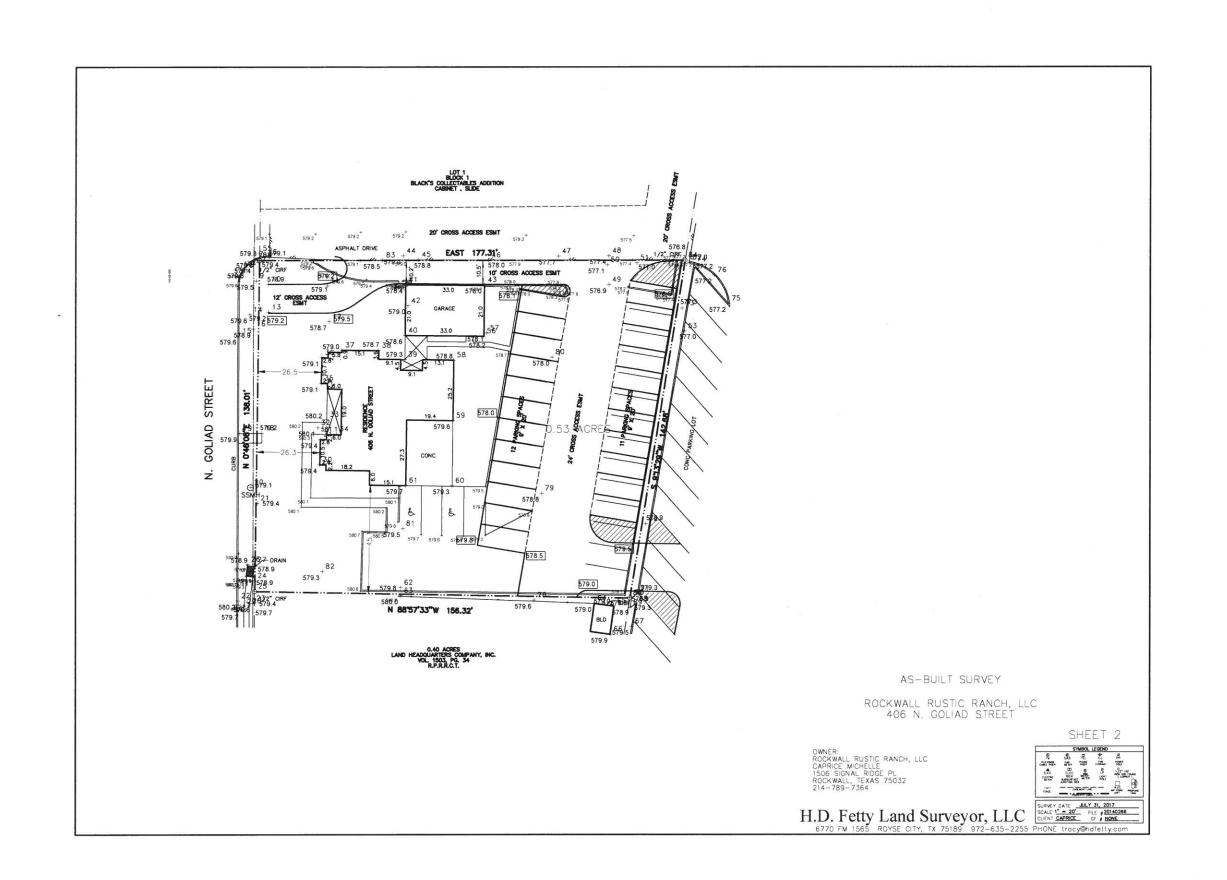
E3 ENGINEERING ENGINEERING CONSULTANTS 106 NORMA GENE, ROYSE CITY, TX 75189 (214) 773-6787 e3eng@comb.com time final ma



SHEET COVER

406 N. GOLIAD ROCKWALL, TX

DATE JANUARY 2015 JOB NO. 14-009 SHEET NO.



#### GENERAL CONSTRUCTION NOTES

1. ANY PROPOSED WATER AND/OR SEWER MAINS AT TIME WILL BE LAID CLOSE TO OTHER EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW THE GROUND. THE CONTRACTOR SHALL MAKE RECESSARY PROMISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, FENCES, TREES, SHRUBS, GAS MAINS, TELEPHONE CABLES, STRUCTURES BOTH ADOVE AND BELOW THE GROUND DUBLING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY OWNERS PRORE TO ANY CONSTRUCTION IN THE AREA AND VERIFY THE ACTUAL LOCATION OF ALL BURNED UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PRESERVE AND PROTECT HALL UNDERGROUND AND OVERTHEAD FACILITIES AND BE RESPONSIBLE FOR ANY DAMAGE HE MAY CAUSE TO THEM. THE CONTRACTOR SHALL CONTRACT THE FOLLOWING AT LEAST 44 HOURS PRORE TO THEM. THE CONTRACTOR SHALL CONTRACT THE FOLLOWING AT LEAST 44 HOURS FROM TO THEM. THE CONTRACTOR SHALL CONTRACT

CITY OF ROCKWALL 972-771-7746
TXI ELECTRIC 800-344-8377
ATMOS ENERGY 800-545-6005
AT&T 800-395-0440
CHARTER COMMUNICATIONS 800-344-8377
TEXAS EXCAVATION SAFETY SYSTEM 800-DIG-TESS

- 2. EXISTING UTILITY DATA IS PROWIDED FOR INFORMATION ONLY. ALTHOUGH THIS DATA IS SHOWN AS ACCURATELY AS POSSIBLE, THE CONTRACTOR IS CAUTIONED THAT THE CITY AND THE ENGINEER NEITHER ASSUMES NOR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THIS DATA. THE CONTRACTOR SHALL KERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING UTILITY CROSSINGS SHOWN ON THE INCLUDED PROFILES ARE FROM RECORD DRAWINGS AND FROM INFORMATION OBTAINED FROM UTILITY COMPANIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD—VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF THESE UTILITIES.
- THESE UTILITIES.

  3. THE LOCATION OF ALL SANITARY SEWER, WATER, STORM SEWER, TELEPHONE, CAS, ELECTRIC, CABLE TILEVISION UTILITIES, DRIVEWAYS, RETAINING WALLS, STRUCTURES, ETC., WHICH MAY BE SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL WERRY THE EXACT SIZE, LOCATION, ELEVATION, AND CONFIGURATION OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTING ALL ACTIVE SERVICES THAT ARE NOT SHOWN. CONTRACTOR SHALL CORDINATE WITH APPROPRIATE UTILITY COMPANIES AND PROPERTY OWNERS TO MARK AND LOCATE ALL UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION. SUCH VERTIFICATION SHALL BE CONSIDERED AS SUBSIDIARY TO THE COST OF THE PROJECT AND NO ADDITIONAL COMPENSATION MILL BE ALLOWED.
- . CONTRACTOR'S PERSONNEL SHALL WEAR IDENTIFYING CLOTHING OR HATS AT ALL TIMES. THE CONTRACTOR SHALL ALSO HAVE IDENTIFICATION ON ALL VEHICLES.
- 5. THE CONTRACTOR SHALL REMOVE ALL FENCES, LOCATED WHITH EASEMENTS, INTER-FERNIO WITH CONSTRUCTION OBSERVATION AND PROVIDE TEMPORARY FENCING DURING CONSTRUCTION. REMOVED FENCES, WOODEN OR CHAIN LINK, SHALL BE REPLACED WITH A NEW FENCE OR UNDAMAGED ORIGINAL FENCING. ALL AFFECTED PROFERTY OWNERS SHALL BE NOTIFED PRIOR TO CONSTRUCTION. REMOVAL AND REPLACEMENT OF EXIST-ING AND TEMPORARY FENCES SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REPLECIED IN THE UNIT BID PRICES FOR VARIOUS TIEMS LISTED IN THE PROPO-SAL.
- 6. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCH SAFETY. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED WORK THILDING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGNEER FOR THIS PROJECT. A TRENCH SAFETY PLAN SHALL BE SUB-MITTED AT THE PRE-CONSTRUCTION MEETING.
- SOD SHALL BE REPLACED IN ALL AREAS DISTURBED BY CONSTRUCTION. SOD SHALL MATCH EXISTING GRASSES.
- B. NO SEPARATE PAY ITEM WILL BE MADE FOR THE REMOVAL AND DISPOSAL OF EXISTING PUBLIC FACILITIES (PPES, VALVES, ETC.) WITHIN A PROPOSED UTILITY TRENCH UNLESS OTHERWISE INDICATED WITHIN THE PROJECT SPECIFICATIONS. ITEMS TO BE REMOVED OR ABANDONED OUTSIDE OF A PROPOSED UTILITY TRENCH SHALL BE PAID FOR PER A SEPARATE PAY ITEM.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA, INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION CREW AND GENERAL PUBLIC AND THE SAFETY OF PUBLIC AND PRIVATE PROPERTY. CONTRACTOR SHALL PROVDE TEMPORARY SANITARY SEWER FACILITIES TO AFFECTED PROPERTY OWNERS, IF NECESSARY. NOT A SEPARATE PAY ITEM.
- PROPERTY OWNERS, IF NECESSARY. NOT A SEPARATE PAY ITEM.

  0. WHEN IT IS REQUIRED THAT A CONTRACTOR WORK IN PRIVATE PROPERTY, THE CONTRACTOR SHALL DISTRIBUTE LETTERS TO ALL AFFECTED PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING WORK ON EACH PROPERTY. THE LETTER SHALL INCLUDE NAMES AND TELEPHORE MUMBERS OF CONTRACTOR CONTRACTS, A DESCRIPTION OF THE WORK TO BE EXCHANGED TO THE CITY INSPECTOR. DISTRIBUTION OF LETTERS SHALL BE CONSCIENCED TO THE COST OF PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

- ONCE THE PIPE HAS BEEN INSTALLED OR REHABILITATED, THE CONTRACTOR SHALL IM-MEDIATLY COMMENCE SURFACE RESTORATION. SURFACE RESTORATION MUST BE COM-PLETED TO THE OWNER'S SATISFACTION WITHIN TEN (10) WORKING DATS. FAILURE TO MAINTAIN SITE RESTORATION, AS NOTED ABOVE, MAY RESULT IN DEFERMENT OF PURTHER PIPE INSTALLATION ACTIVITIES.
- 12. THE CONTRACTOR SHALL PRESERVE AND PROTECT OR REMOVE AND REPLACE (WITH PRIOR APPROVAL OF CITY PARKS AND COMMUNITY SERVICES AND/OR AFFECTED PROPERTY OWNERS) ALL TREES, SHUBBS, HEDGES, RETAINING WALLS, LANDSCAPING, BUILDINGS, WALKS, ETC., IN OR NEAR PROPUSED CONSTRUCTION AREA. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND NOT A SEPARATE PAY ITEM.
- 13. CONTRACTOR SHALL PROTECT CONCRETE CUBB AND GUTTER, DRIVEWAYS, AND SIDEWALKS THAT ARE NOT DESIGNATED FOR REMOVAL REMOVAL AND REPLACEMENT OF THESE ITEMS SHALL BE AS DESIGNATED. AT LOCATIONS WHERE THE CUBB AND GUTTER ARE TO BE REPLACED, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE RE-ESTABLISHMENT OF EXISTING STREET AND GUTTER GRADES. ESTABLISHMENT OF GRADES SHALL BE PERFORMED PRIOR TO CONSTRUCTION AND IS NOT A SEPARATE PAY ITEM, BUT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT PRICE.
- 14. ALL EMBEDMENT AND BACKFILL SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKWALL STANDARDS. ALL PAVEMENT REPAIR SHALL CONFORM TO THE CITY OF ROCKWALL STANDARDS
- 15. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT AREA ALL SURPLUS MATERIAL. THIS SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM. SURPLUS MATERIALS FROM EXCAVATION INCLUDING DIRT, TRASH, ETC. SHALL BE PROPERTY DISPOSED OF AT A SITE ACCEPTABLE TO THE CITY'S FLOOD PLAIN ADMINISTRATOR IF WITHIN THE CITY LIMITS, IF THE LOCATION IS NOT WITHIN THE TUTY LIMITS, THE CONTRACTOR SHALL PROVIDE A LETTER STATING SO. NO EXCESS EXCAVATED MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG NATURAL DRAINES WAY WITHOUT WRITTEN PERMISSION FROM THE AFFECTED PROPERTY OWNER AND THE CITY'S FLOOD FLAIN ADMINISTRATION FROM THE AFFECTED PROPERTY OWNER AND THE CITY'S FLOOD FLAIN ADMINISTRATION FROM THE AFFECTED PROPERTY OWNER AND THE CITY'S FLOOD FLAIN ADMINISTRATION FROM THE AFFECTED PROPERTY OWNER AND THE CITY'S FLOOD FLAIN ADMINISTRATION FROM THE AFFECTED PROPERTY OWNERS AND THE CITY'S FLOOD FLAIN ADMINISTRATION PROPERTY.
- 16. IT IS RECOMMENDED THE CONTRACTOR VIDEO ALL POTENTIALLY IMPACTED PRIVATE PROPERTY AREAS PRIOR TO WORK. MDEOS SHOULD INCLUDE THE DATE, NOTATION A AUDIO DENTIFICATION OF PROPERTY ADDRESS AND THE IMPACTED UTILITY TYPE AND SIZE. ANY PRE-CONSTRUCTION WIDEO TARNS OF IMPACTED PROPERTIES SHALL BE CONSIDERED SUBSIDIARY TO THE PROSECT.
- 17. COSTS ASSOCIATED WITH PROPOSED CONNECTIONS TO EXISTING FACILITIES SHALL BE INCLUDED IN EACH RESPECTIVE BID ITEM. NO SEPARATE PAY, EXCEPT AS SPECIFICALLY INDICATED WITHIN THESE PLANS OR THE CONTRACT DOCUMENTS.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE STREETS AND SIDEWALKS ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS ARISING FROM THE CONSTRUCTION ACTIVITY.
- CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM TO 6:00 PM UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER. IN THE CASE OF ARTERIAL STREETS, 9:00 AM TO 4:00 PM ONLY.
- 20. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER AND SEWER CONNECTIONS TO ALL HOMES AND BUSINESSES IN WORKING GROER AT ALL TIMES, EXCEPT FOR BRIEF PRE-MOTIFED INTERRUPTIONS IN WATER SERVICES. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN UNREINSTATED OVERNIGHT.
- TWO-WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES. ONE LANE OF TRAFFIC AROUND CONSTRUCTION OPERATIONS IN PROGRESS WITH ADEQUATE SAFEGUARDS WILL BE ACCEPT-ABLE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 22. CONTRACTOR SHALL CONTACT LOCAL SCHOOLS PRIOR TO BEGINNING CONSTRUCTION TO INFORM PRINCIPALS AND ADMINISTRATORS OF CONSTRUCTION IN THE AREA. A NOTE ON THE SCHOOL MAQUEE IS SUCCESTED TO INFORM PARENTS AND STUDENTS OF CONSTRUCTION AND CONSTRUCTION DURATION AND POSSIBLE ALTERNATE ROUTES AROUND CONSTRUCTION SITES.
- CONSTRUCTION STEES.

  2.3. THE CONTRACTOR SHALL FURNISH A TRAFFIC CONTROL PLAN FOR ALL WORKING AREAS

  10. THE CITY TRAFFIC ENGINEER FOR APPROVAL PRIOR TO THE PRE-GONSTRUCTION
  MEETING. THO—WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES. ONE LANE OF
  TRAVEL AROUND CONSTRUCTION OPERATIONS IN PROGRESS WITH ADEQUATE SATEGUARDS
  WIL BE ACCEPTABLE ON MINOR STREETS ONLY. ALL BARRICADES, WARNING SIGNS,
  LIGHT DEWICES, ETC., FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRANS MUST CONFORM TO THE TEXAS MAINLA OF UNIFORM TRAFFIC CONTROL DEWICES

  AS CURRENTLY AMENDED, TEXAS STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION. THE COST FOR TRAFFIC CONTROL DEWICES

  PORTATION. THE COST FOR TRAFFIC CONTROL SHALL BE SUBSIDIARY TO THE UNIT
  PRICES FOR THIS PROJECT.
- 24. TWO (2) PERMANENT PAINTED DRIVE ADDRESSES MUST BE INSTALLED AT THE BASE OF THE CURB ON EACH SIDE OF EVERY DRIVEWAY. ADDRESS SIGNS SHALL BE POSTED IN A POSTION TO BE PLAINLY WISBLE AND LEGIBLE. NUMBERS SHALL BE AT LEAST 3" IN HEIGHT AND CONTRAST.

# GENERAL CONSTRUCTION NOTES

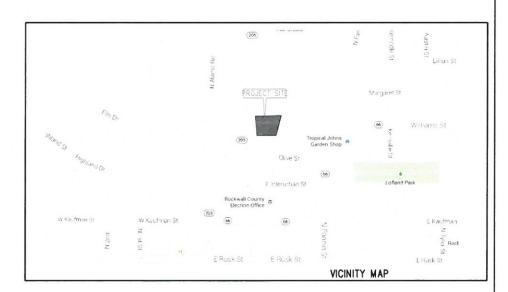
- . CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER AND SEWER CONNECTIONS IN WORKING ORDER AT ALL TIMES. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN OUT OF SERVICE OVERNICHT.
- CONTRACTOR SHALL BECOME FAMILIAR WITH THE TERMS AND CONDITIONS SET FORTH IN TEMPORARY CONSTRUCTION EASEMENTS. INDRESS AND EGRESS IS ALLOWED ON PRIVATE PROPERTY IN GORBET TO ACCESS TEMPORARY CONSTRUCTION EASEMENTS. IN THE AREAS WHERE NO CONSTRUCTION EASEMENTS ARE AVAILABLE, CONTRACTOR SHALL LIMIT ACTIVITIES TO WITHIN THE EXISTING UTILITY EASEMENTS.
- CONTRACTOR SHALL VERIFY THE ELEVATION, CONFIGURATION AND LOCATION OF EXIST-ING UNES PRIOR TO CONSTRUCTION. SUCH VERIFICATION SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ALL GRASS AREAS DAMAGED BY CONSTRUCTION SHALL RECEIVE 4° OF TOPSOIL AND SOUD SODDING. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING TOPSOIL WHEN-EVER POSSIBLE.
- S. THE CONTRACTOR SHALL MAKE NECESSARY PROVISION FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, CAS MAINS, TELEPHONE CABLES, SANITARY SEWER LINES, ELECTRIC CABLES, DRIANGE PIPES, UTILITY SERVES, SAN D. ALL OTHER UTILITIES, AND THE STRUCTURES BOTH ABOVE AND BELOW GROUND DURING CONSTRUCTION. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES DONE TO SUCH EXISTING FACILITIES AS A RESULT OF THE CONTRACTOR'S OPERATIONS.
- 6. CONTRACTOR SHALL SUBMIT WRITTEN REQUEST TO THE ENGINEER FOR APPROVAL OF ALL AREAS TO BE USED FOR STAGING, MOBILIZATION, EQUIPMENT AND MATERIAL STORAGE AND GENERAL PROJECT CONSTRUCTION MANAGEMENT. REQUEST SHALL BE SUBMITTED TO THE ENGINEER WITHIN FIVE (3) DAYS OF NOTICE TO PROCEED.

- CONTRACTOR SHALL HAVE UTILITY COMPANIES LOCATE AND MARK ALL UNDERGROUND FACILITIES BEFORE BEGINNING EXCAVATION.
- 8. THE CONTRACTOR SHALL CLEAN UP AND RESTORE THE AREA OF OPERATIONS TO A CONDITION AS GOOD AS OR BETTER THAN THAT WHICH EXISTED PRIOR TO THE PROJECT.
- 9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE EXISTING STORM DRAIN SYSTEM UNTIL THE PROPOSED SYSTEM IS IN SERVICE. IN NO CASE SHOULD THE CON-TRACTOR LEAVE THE EXISTING STORM SERVE OUT OF SERVICE WHEREBY RUNOFF WOULD CAUSE DAMAGE TO ADJACENT HOMEOWNERS.
- 10. NO EQUIPMENT OR MATERIAL SHALL BE DEPOSITED ON PRIVATE PROPERTY MITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNERS. IF THE CONTRACTOR PLACES EACH SHALL IN THE WARR WITHOUT WRITTEN PERMISSION, HE WILL BE RESPONSIBLE FOR ALL DAMAGES RESULTING FROM SUCH FILL AND HE SHALL REMOVE THE MATERIALS AT HIS OWN COST, IF THE REQIRECE SO DIRECTS.
- 11. THE LOCATION OF DRIVEWAYS, STEPS, RETAINING WALL, ETC., AND ALL WATER, SANITARY SEWER, STORM SEWER, TELEPHONE, GAS, ELECTRIC, AND CABLE TELEMISON UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE. ACCURATE LOCATIONS SHALL BE VERRIED AT THE TIME OF CONSTRUCTION AFTER CONSULTATION WITH THE PROPERTY OWNERS AND THE RESPECTIVE UTILITY COMPARIES.
- 12. THE CONTRACTOR SHALL CONSTRUCT ALL DRAINAGE STREAMS FROM THE DOWNSTREAM END TO ALLOW CONTINUED STORM DRAIN SERVICE. IF THE CONTRACTOR CHOOSES TO CONSTRUCT THE SYSTEM OTHERWISE, HE SHALL PRESENT PROPOSED CONSTRUCTION STAGING AT THE PRE-CONSTRUCTION MEETING.
- 13. THE ADJUSTMENT AND/OR RELOCATION OF SPRINKLER HEAD ENCOUNTERED SHALL BE PAID FOR UNDER MISCELLANEOUS UTILITY ADJUSTMENT PAY ITEM IN THE PROPOSAL SECTION OF THE SPECIFICATIONS AND CONTRACT DOCUMENTS.

#### EROSION CONTROL GENERAL NOTES

CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR. THE READ THE AT ANY THE CROWN THE ACT OF SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES. INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE, AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGE-MAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OF DEPOSITE ON SA RESULT OF EROSION CONTROL MEASURES.





BENCHMARK: RIM OF SSMH LOCATED ON THE EAST SIDE OF SH 205 AND BEING 100' SOUTH OF NORTWEST CORNER. ELEV. = 579.15



E3 ENGINEERING
106 NORMA GENE
ROYSE CITY, TX 75189
214-773-6767 TX REG. #F-10130

RECORD DRAWINGS - JULY 2017

DESIGNED SEP DRAWN

SEP CHECKED SEP

E3 ENGINEERING
ENGINEERING CONSULTANTS
106 NORMA GENE, ROYSE CITY, TX 75189
(214) 773-6767 636ng@ccum. the firm in

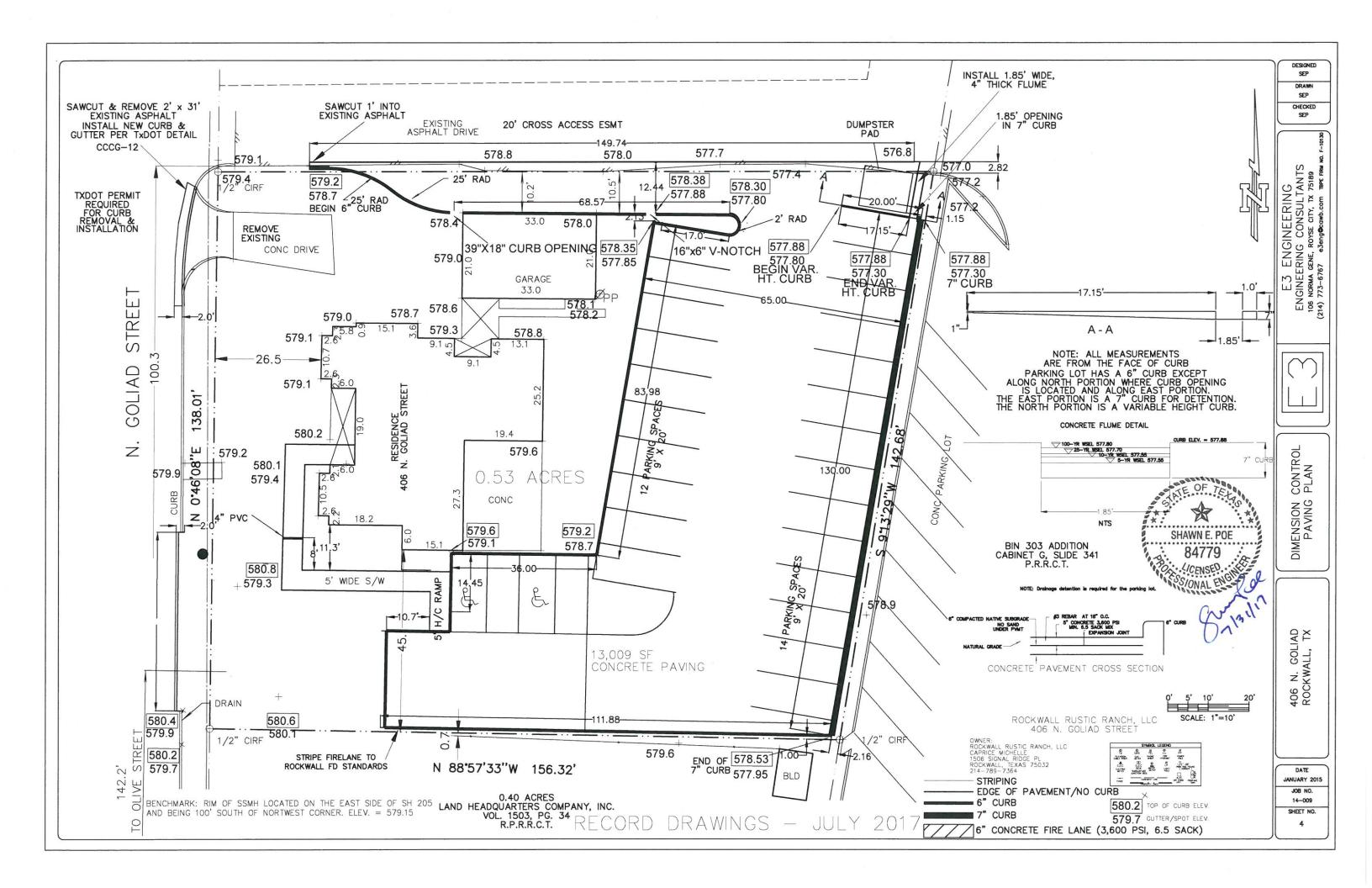


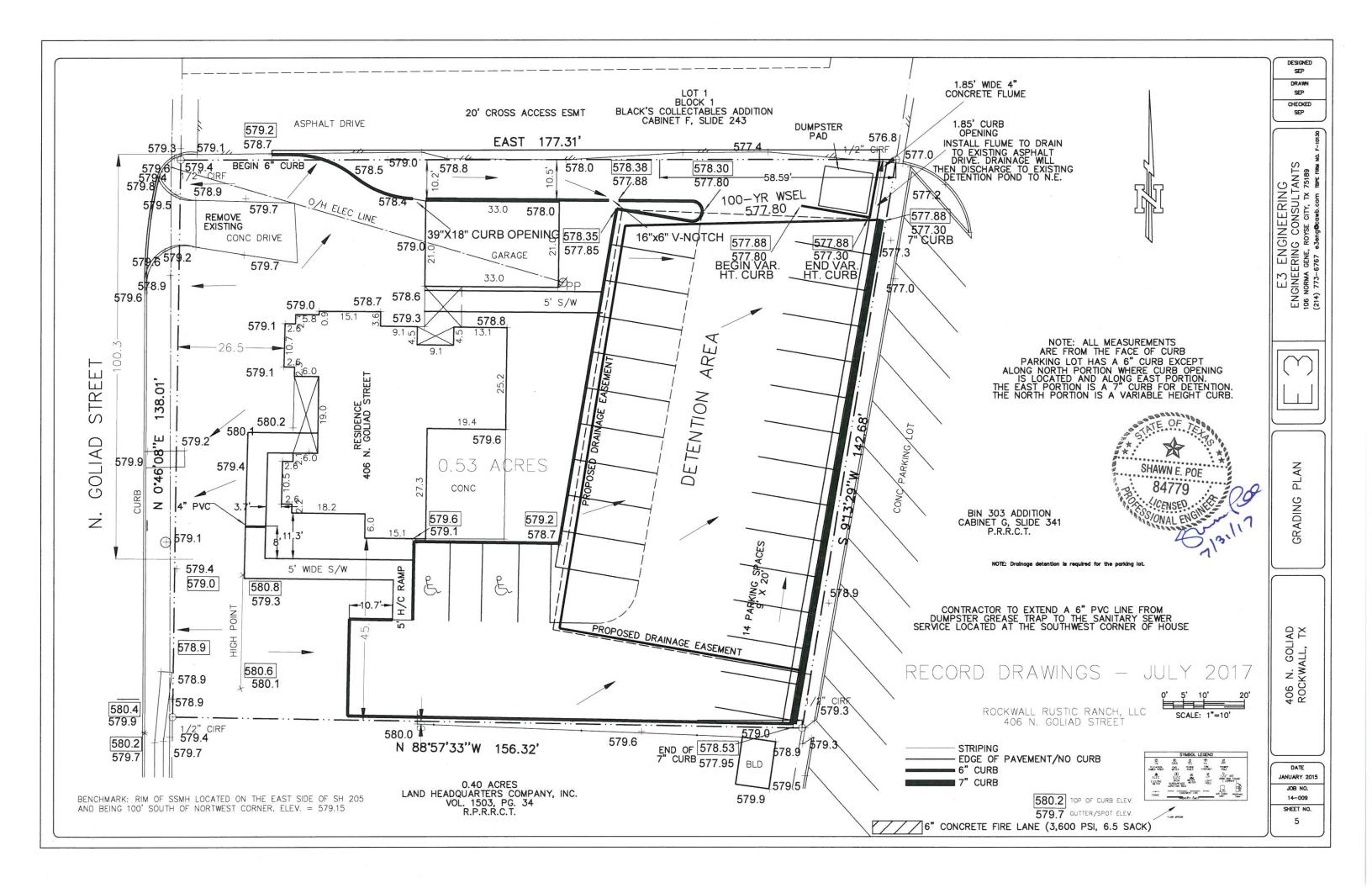
NOTES GENERAL

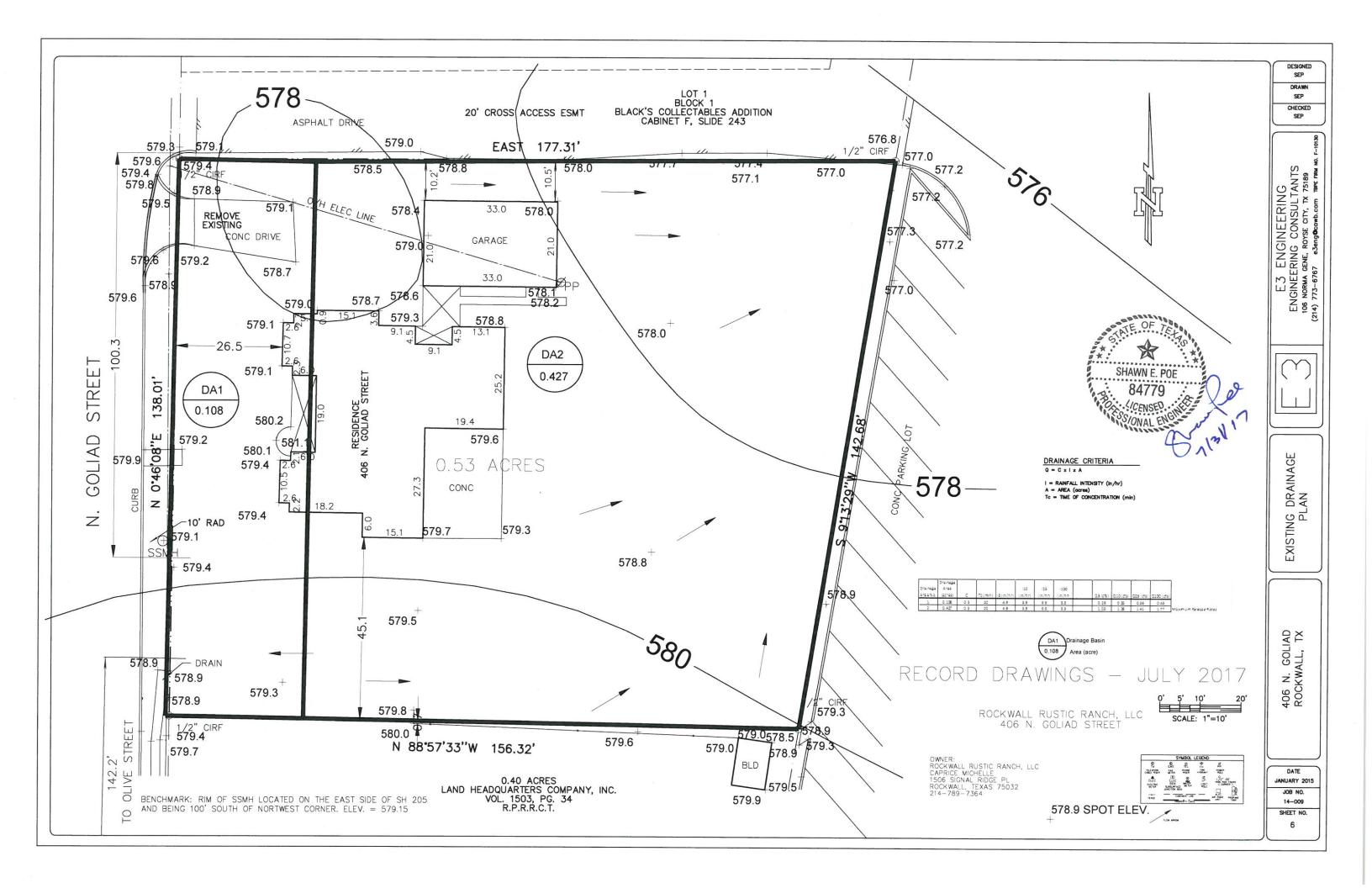
406 N. GOLIAD ROCKWALL, TX

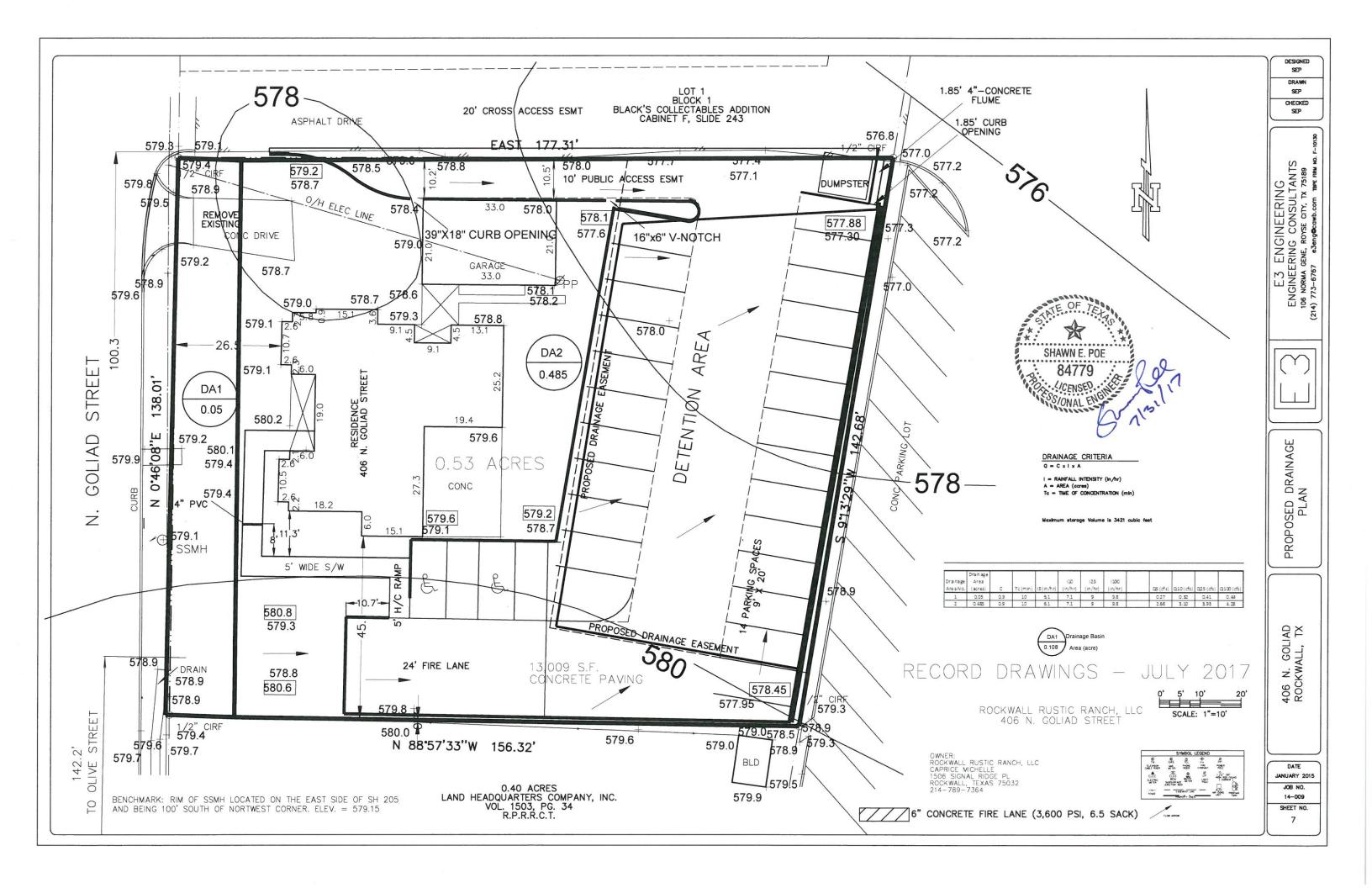
JANUARY 2015 JOB NO. 14-009 SHEET NO.

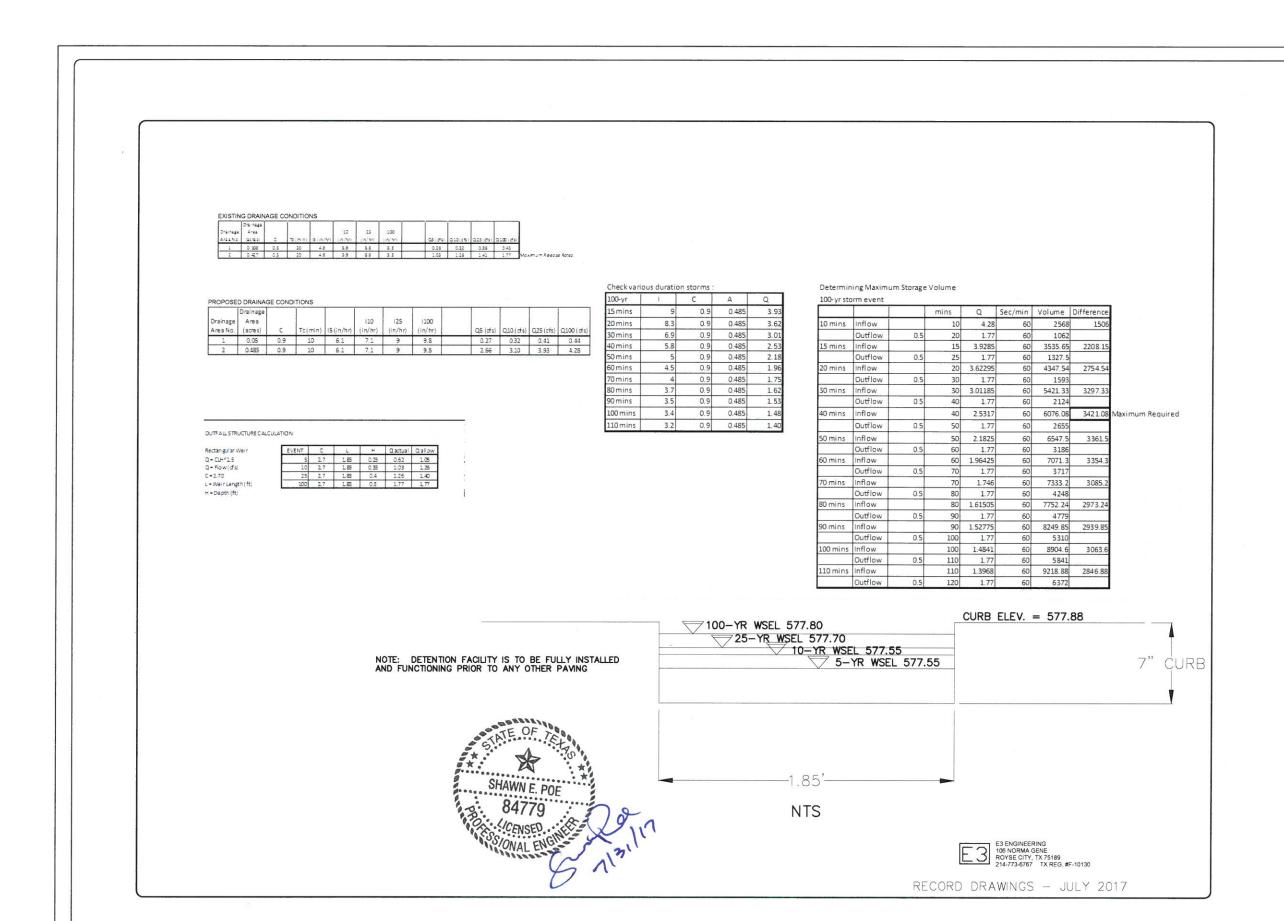
3











DESIGNED SEP

DRAWN SEP CHECKED

SEP

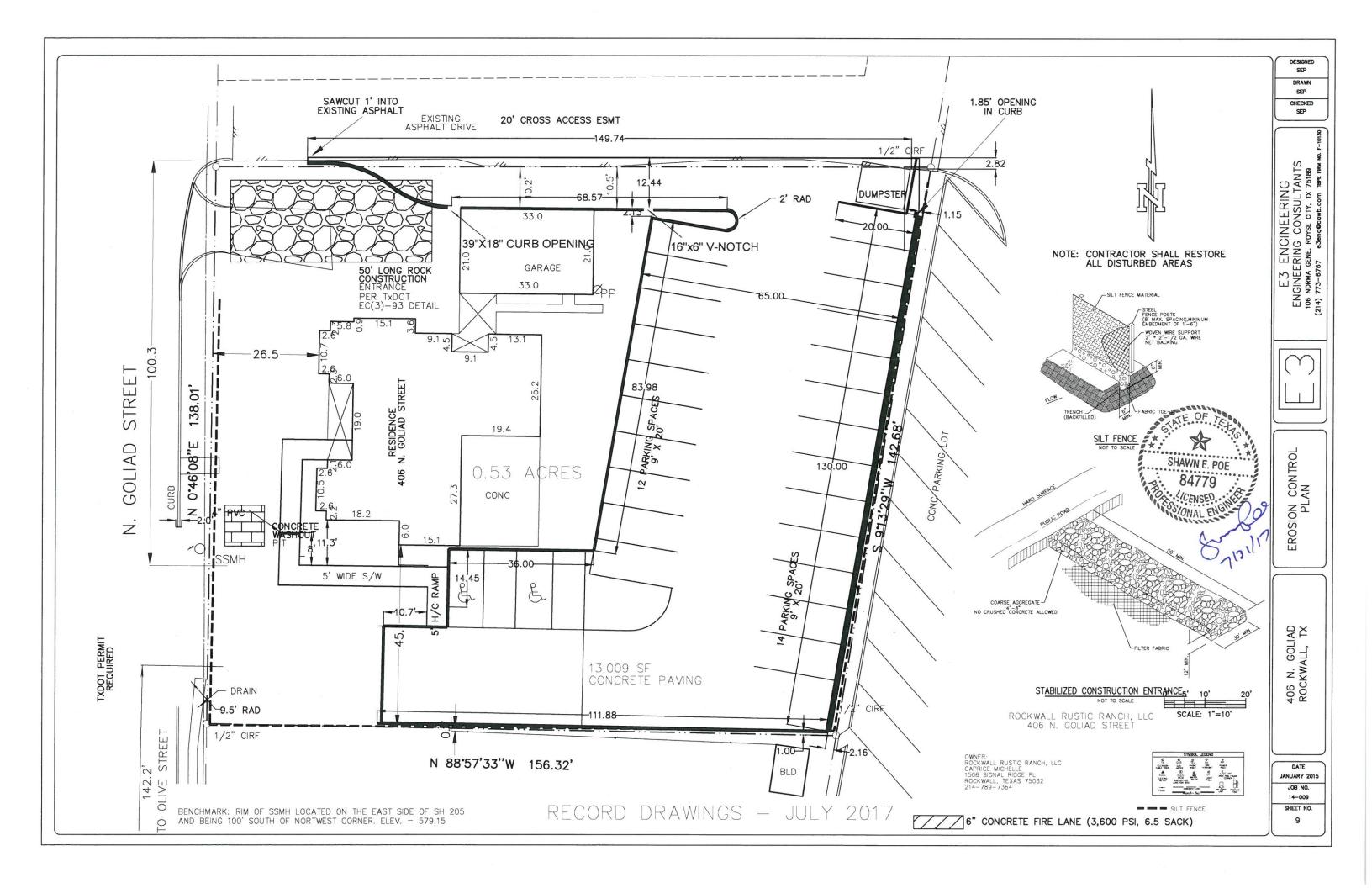
E3 ENGINEERING
ENGINEERING CONSULTANTS
106 NORMA GENE, ROYSE CITY, TX 75189
(214) 773-6767 636ng@ccurb.com time firm ma.

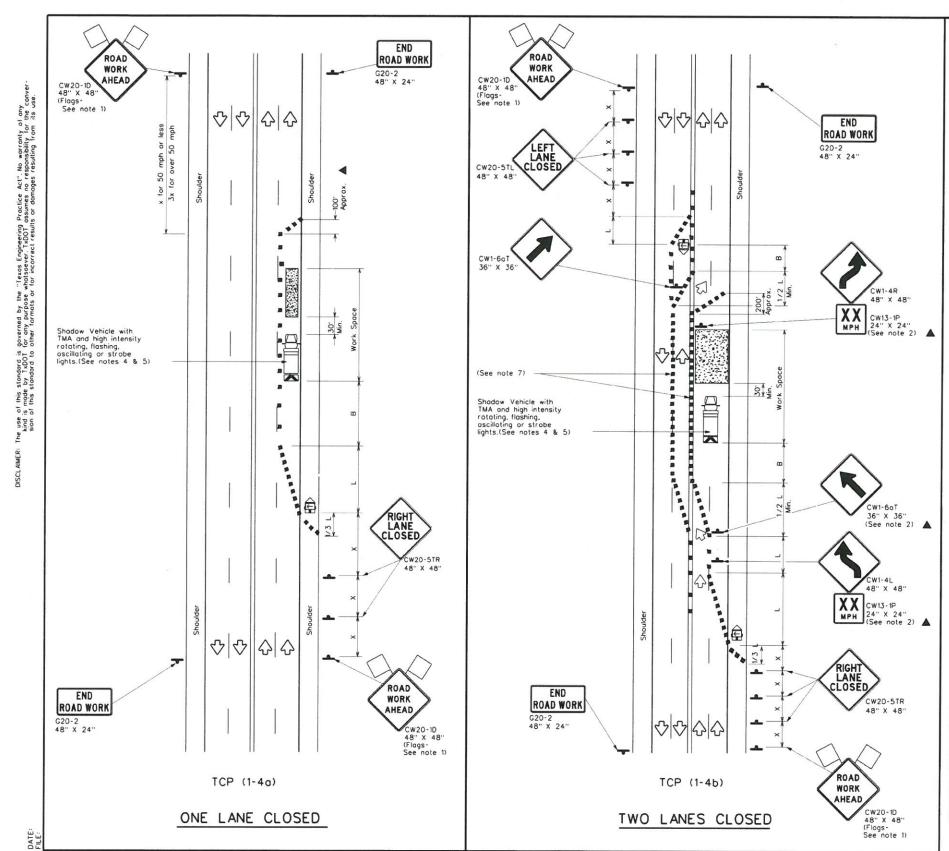


DETENTION CALCULATIONS

406 N. GOLIAD ROCKWALL, TX

DATE JANUARY 2015 JOB NO. 14-009 SHEET NO. 8





	LEG	END	The same of the sa
	Type 3 Barricade	0.0	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuotor (TMA)
<b>£</b>	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
4	Sign	\cdot\)	Traffic Flow
Q	Flag	II.O	Flagger

Posted Form Speed	Formula	Minimum Suggested M Desirable Spacing rnula Taper Lengths Channelizir x x Device		ng of lizing	Minimum Sign Spacing	Suggested Longitudinal Buffer Space		
		10° Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	B
30	_2	150'	165'	180	30'	60'	120'	90.
35	$L \cdot \frac{\text{WS}^2}{60}$	2051	225'	245	35'	70'	160'	120'
40		265	295'	320'	40'	80'	240'	155'
45		450'	495'	540	45'	90,	320'	195'
50		500	550'	600'	50'	100'	400'	240'
55	L-WS	550'	605'	660	55'	110'	500'	295'
60	] - " 3	600'	660'	720'	60'	120'	600'	350'
65		650'	715	780'	65'	130'	700'	410'
70		7001	770	840	70'	140'	800	475'
75		750	825	900'	75'	150'	900.	540

- Conventional Roads Only
- xx Taper lengths have been rounded off.

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

	TYPICAL USAGE							
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY				
	1	1						

#### GENERAL NOTES

- Flags attached to signs where shown are REQUIRED.
   All traffic control devices illustrated are REQUIRED, except those denoted. with the Iriongle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.

  3. The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.

- 4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted
- for the Shadow Vehicle and TMA.

  5. Additional Shadow Vehicles with TMAs may be positioned off the payed. surface, next to those shown in order to protect wider work spaces.

6. If this TCP is used for a left lane closure , CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

#### TCP (1-4b)

7. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20° or 15° if posted speeds are 35 mph or slower, and for tangent sections, at 1/25 where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

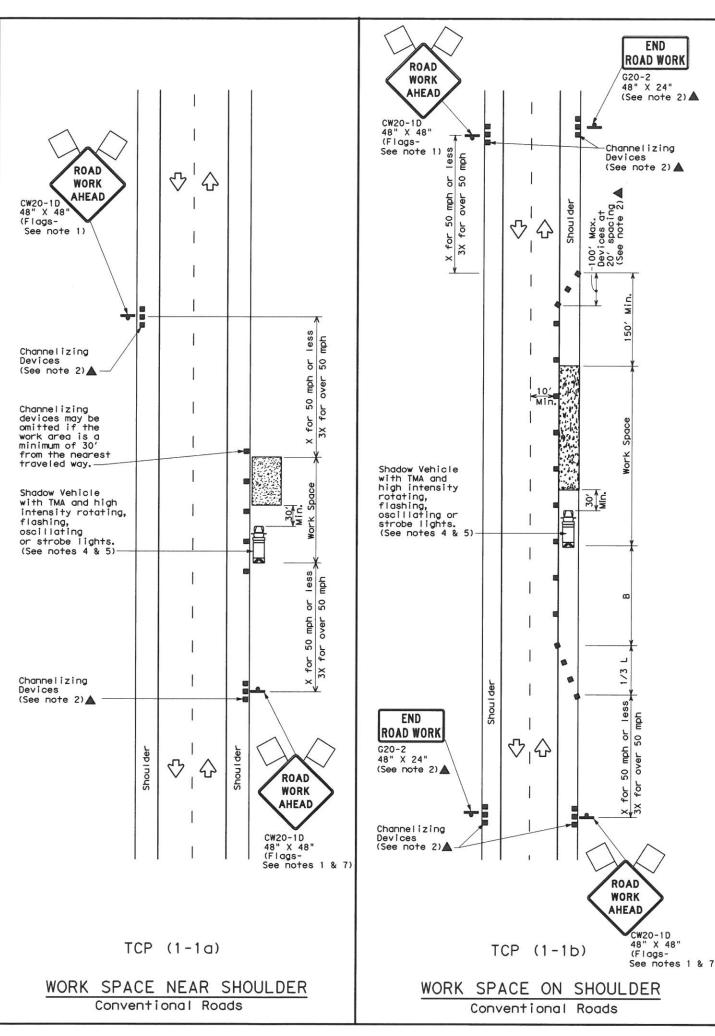
For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in con be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

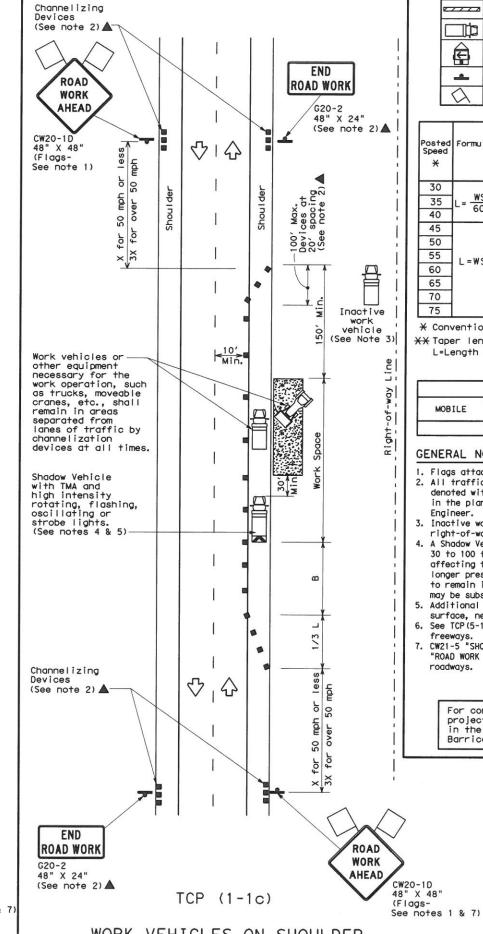


TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(1-4)-12

			CK: TXDO	
SECT	108		HIGHWAY	
	COUNTY		SHEET NO.	
		000111	000111	





	LEGE	ND			
	Type 3 Barricade	Channelizing			
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)		
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)		
4	Sign	⟨¬⟩	Traffic Flow		
Q	Flag	ПО	Flagger		

Posted Form Speed	Formula	D	Minimu esirab er Len <del>X X</del>	le	Spaci Channe	d Maximum ng of lizing ices	Minimum Sign Spacing "X"	Suggested Longitudinal Buffer Space
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"
30	ws2	150'	165'	180'	30'	60'	120'	90′
35	L= WS	2051	225'	245'	35′	70'	160'	120'
40	60	265'	295'	320'	40'	80'	240'	155'
45		450'	495'	540'	45'	90'	320'	195′
50		500'	550′	600'	50′	100'	400'	240'
55	L=WS	550'	605'	660'	55′	110'	500'	295'
60	L-113	600'	660'	720'	60′	120'	600'	350'
65		650'	715'	780'	65′	130'	700′	410'
70		7001	770′	840'	701	140'	800′	475′
75		750'	825'	900'	75′	150'	900'	540'

\* Conventional Roads Only

\*\* Taper lengths have been rounded off.

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

TYPICAL USAGE								
MOBILE	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY						
	1	1						

#### GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.

2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.

3. Inactive work vehicles or other equipment should be parked near right-of-way line and not parked on the paved shoulder.

4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.

5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D

"ROAD WORK AHEAD" signs for shoulder work on conventional

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

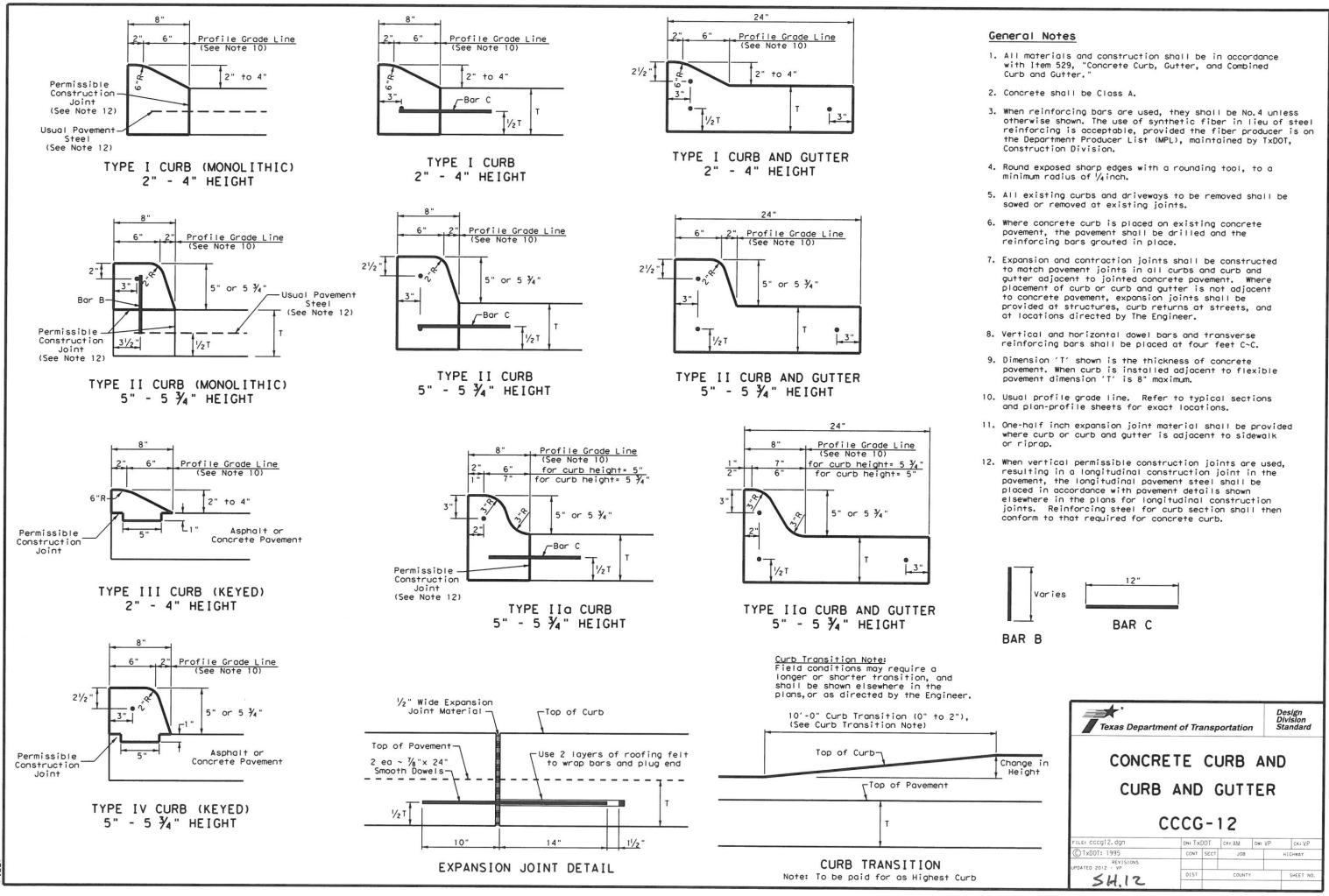
> Texas Department of Transportation Traffic Operations Division

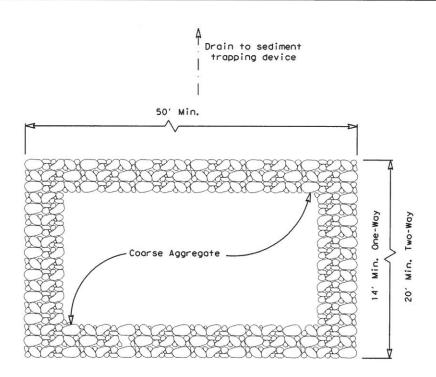
TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP (1-1)-12

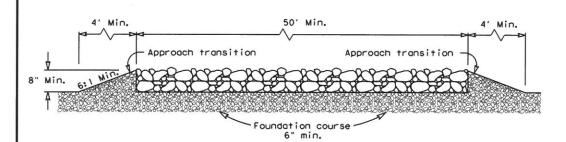
© TxDOT December 1985	DN: TX	DOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
REVISIONS 2-94 2-12	CONT	SECT	JOB	1	HIGHWAY
8-95 1-97 5H.11	DIST		COUNTY		SHEET NO.

WORK VEHICLES ON SHOULDER Conventional Roads





#### PLAN VIEW



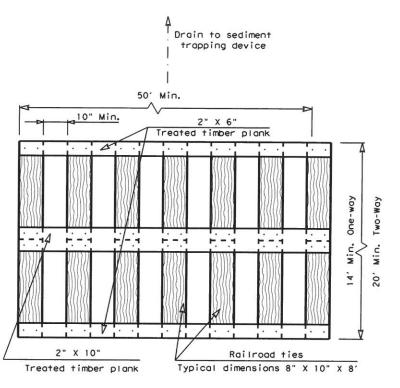
# **ELEVATION VIEW**

# CONSTRUCTION EXIT (TYPE 1)

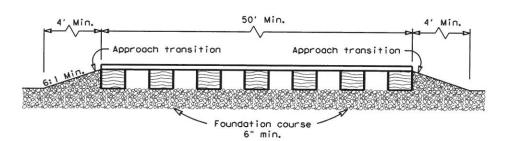
### ROCK CONSTRUCTION (LONG TERM)

# GENERAL NOTES (TYPE 1)

- 1. The length of the type I 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 materialas 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.
- 7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



## PLAN VIEW



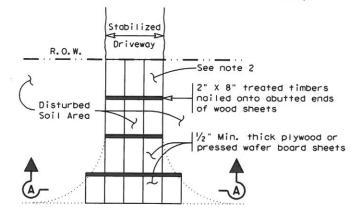
#### **ELEVATION VIEW**

#### CONSTRUCTION EXIT (TYPE 2)

#### TIMBER CONSTRUCTION (LONG TERM)

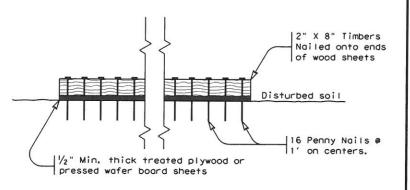
#### GENERAL NOTES (TYPE 2)

- The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
- The treated timber planks shall be attached to the railroad ties with  $\frac{1}{2}$ "x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
- The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
- 4. The approach transitions shall 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.
- 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.
- Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



#### Paved Roadway

## PLAN VIEW



# SECTION A-A CONSTRUCTION EXIT (TYPE 3) SHORT TERM

# GENERAL NOTES (TYPE 3)

- 1. The length of the type 3 construction exit shall be as shown 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 two to four inches spread a min. of 4" 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.

