



Permit to Construct Access Driveway Facilities on Highway Right of Way

PERMIT NUMBER: <u>20130516 FM2551</u>			
REQUESTOR		GPS*	ROADWAY
		LATITUDE, LONGITUDE	HWY NAME FM 2551
		FOR TxDOT'S USE	
NAME City of Allen		CONTROL	2056
MAILING ADDRESS 305 Century Parkway		SECTION	01
CITY, STATE, ZIP Allen, Texas 75013			
PHONE NUMBER 214-509-4100			
*GLOBAL POSITIONING SYSTEM COORDINATES AT INTERSECTION OF DRIVEWAY CENTERLINE WITH ABUTTING ROADWAY			

The Texas Department of Transportation, hereinafter called the State, hereby authorizes City of Allen, hereinafter called the Permittee, to construct / reconstruct a Commercial (residential, convenience store, retail mall, farm, etc.) access driveway on the highway right of way abutting highway number 2551 in Collin County, located approximately 1200 linear feet north of Lucas Road on FM 2551

USE ADDITIONAL SHEETS AS NEEDED

Subject to the Access Driveway Policy described on page 2 and the following:

- The undersigned hereby agrees to comply with the terms and conditions set forth in this permit for construction and maintenance of an access driveway on the state highway right of way.
- Design of facilities shall be as follows and/or as shown on sketch on page 2 and is subject to conditions stated below:
See attached Plans

- * Lane Closure must be between 9:00 A.M. to 3:30 P.M.
- ** Re-vegetation in the right of way must be established prior to final inspection.
- *** The permittee shall contact the the state's representative when state ROW portion of work is complete for final inspection.

All construction of materials shall be subject to inspection and approval by the State.

- Maintenance of facilities constructed hereunder shall be the responsibility of the Permittee, and the State reserves the right to require any changes, maintenance or repairs as may be necessary to provide protection of life or property on or adjacent to the highway. Changes in design will be made only with approval of the State.
- The Permittee shall hold harmless the State and its duly appointed agents and employees against any action for personal injury or property damage sustained by reason of the exercise of this permit.
- Except for regulatory and guide signs at county roads and city streets, the Permittee shall not erect any sign on or extending over any portion of the highway right of way, and vehicle service fixtures such as fuel pumps, vendor stands, or tanks and shall be located at least 12 feet from the right of way line to ensure that any vehicle services from these fixtures will be off the highway right of way.
- The State reserves the right to require a new access driveway permit in the event of a material change in land use or change in driveway traffic volume or vehicle types.
- This permit will become null and void if the above-referenced driveway facilities are not constructed within six (6) months from the issuance date of this permit.
- The Permittee will contact the State's representative Ray Hejke telephone, (972) 547-2345, at least twenty-four (24) hours prior to beginning the work authorized by this permit.
- The requesting Permittee will be provided instructions on the appeal process if this permit request is denied by the State.

5-16-13
Date of issuance

Ray Hejke
State Authorized Representative

The undersigned hereby agrees to comply with the terms and conditions set forth in this permit for construction and maintenance of an access driveway on the highway right of way.

Date: 5/9/13

Signed: [Signature]
(Property owner or owner's representative)

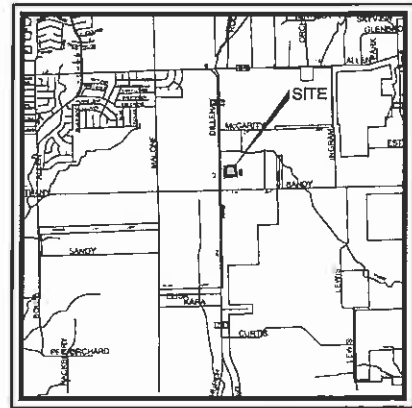
To see all the details that are visible on the screen, use the Print link next to the map.



CIVIL PLANS KWIK KAR

LUBE & AUTOMOTIVE SERVICE CENTER LUCAS, TX

START REVIEW 5/1/13
NEED PROJECT LIMIT
EMENDED 5/1/13



VICINITY MAP
N.T.S.

SHEET LIST TABLE		
SHEET NUMBER	SHEET TITLE	REVISION DATE
C-0	COVER	4/09/2013
	PRELIMINARY PLAT	
C-1	GENERAL NOTES	4/09/2013
C-2	CITY SITE PLAN	4/09/2013
C-3	OVERALL SITE PLAN	4/09/2013
C-4	ON-SITE EROSION CONTROL PLAN	4/09/2013
C-5	OFF-SITE EROSION CONTROL PLAN	4/09/2013
C-6	EROSION CONTROL DETAILS	4/09/2013
C-7	DIMENSIONAL CONTROL AND PAVING PLAN	4/09/2013
C-8	TxDOT DECELERATION LANE PLAN	4/09/2013
C-9	ON-SITE GRADING PLAN	4/09/2013
C-10	OFF-SITE GRADING PLAN	4/09/2013
C-11	DRAINAGE AREA MAP	4/09/2013
C-12	STORM DRAIN PLAN	4/09/2013
C-13	ON-SITE UTILITY PLAN	4/09/2013
C-14	OFF-SITE UTILITY PLAN AND PROFILE	4/09/2013
C-15	CONSTRUCTION DETAILS	4/09/2013
C-16	*TxDOT DETAIL TRAFFIC CONTROL PLAN - TCP(1-1)-12	
C-17	*TxDOT DETAIL TRAFFIC CONTROL PLAN - TCP(1-5)-12	
C-18	*TxDOT DETAIL TRAFFIC CONTROL PLAN - TCP(2-6)-12	
C-19	*TxDOT DETAIL BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS - BC(1)-07	
C-20	*TxDOT DETAIL BARRICADE AND CONSTRUCTION PROJECT LIMIT STANDARD - BC(2)-07	
C-21	*TxDOT DETAIL BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT STANDARD - BC(3)-07	
C-22	*TxDOT DETAIL BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES STANDARD - BC(4)-07	
C-23	*TxDOT DETAIL BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT STANDARD - BC(5)-07	
C-24	*TxDOT DETAIL BARRICADE AND CONSTRUCTION ARROW AND MESSAGE SIGNAL REFLECTOR & WARNING LIGHT STANDARD - BC(6)-07	
C-25	*TxDOT DETAIL BARRICADE AND CONSTRUCTION PLASTIC DRUM STANDARD - BC(7)-07	
C-26	*TxDOT DETAIL BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD - BC(8)-07	
C-27	*TxDOT DETAIL BARRICADE AND CONSTRUCTION TYPE III BARRICADE STANDARD - BC(9)-07	
C-28	*TxDOT DETAIL BARRICADE AND CONSTRUCTION PAVEMENT MARKING STANDARD - BC(10)-07	
C-29	*TxDOT DETAIL BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS STANDARD - BC(11)-07	
C-30	*TxDOT DETAIL BARRICADE AND CONSTRUCTION REGULATORY & GUIDE SIGNS STANDARDS - BC(12)-07	
C-31	*TxDOT DETAIL W.Z. GIVE US A BREAK - WZ(GTBM)-03	
C-32	*TxDOT DETAIL W.Z. WORK ZONE "GIVE US A BREAK SIGNS" - WZ(BRW)-03	
C-33	*TxDOT DETAIL TYPICAL STANDARD PAVEMENT MARKINGS - PM(1)-12	
C-34	*TxDOT DETAIL P.M. PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS - PM(3)-12	
C-35	*TxDOT DETAIL CONCRETE CURB AND CURB AND GUTTER DETAILS - CC-CG 12	
L-1	LANDSCAPE PLAN	4/09/2013
L-2	LANDSCAPE DETAILS	4/09/2013

* THE STANDARD SHEETS, SPECIFICALLY IDENTIFIED IN THIS INDEX OF SHEETS, HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

NOTES:

- ALL CONSTRUCTION WITHIN THE STATE RIGHT OF WAY WILL REQUIRE COMPLIANCE TO TxDOT STANDARD SPECIFICATIONS, STANDARD PLANS, AND TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, JUNE 1, 2004, AND SPECIFICATION ITEMS LISTED AS FOLLOWS SHALL GOVERN ON THIS PROJECT FOR ALL WORK WITHIN THE STATE RIGHT OF WAY
- BY SEALING AND SIGNING THESE PERMIT PLANS AS A PROFESSIONAL CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, I CERTIFY THAT THE PROPOSED DRIVEWAY OR PUBLIC STREET CONNECTION(S) TO THE STATE ROADWAY MEETS OR EXCEEDS THE MINIMUM STOPPING SIGHT DISTANCE REQUIRED FOR A POSTED SPEED OF 45 MILES PER HOUR, BASED ON THE MOST RECENT TxDOT DESIGN MANUAL REQUIREMENTS.
- CONTRACTOR TO SET UP PRECONSTRUCTION MEETING WITH TxDOT PRIOR TO BEGINNING ANY CONSTRUCTION.

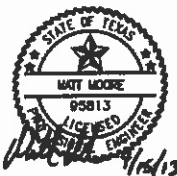
ENGINEER



TEXAS REGISTRATION #14109
1105 CHEEK SPARGER RD
SUITE #1
COLLEYVILLE, TX 76034
PH: 817.281.0572
FAX: 817.281.0574
CONTACT: MATT MOORE, PE
EMAIL: MATT@CLAYMOOREENG.COM

Owner

KWIK INDUSTRIES, INC.
4725 NALL RD
DALLAS, TX 75244
TEL: (972) 458-9761
CONTACT: SCOTT PENDLEY



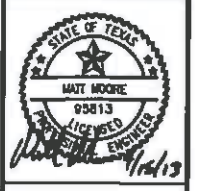
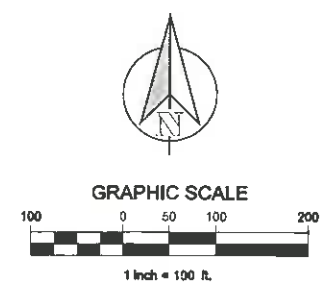
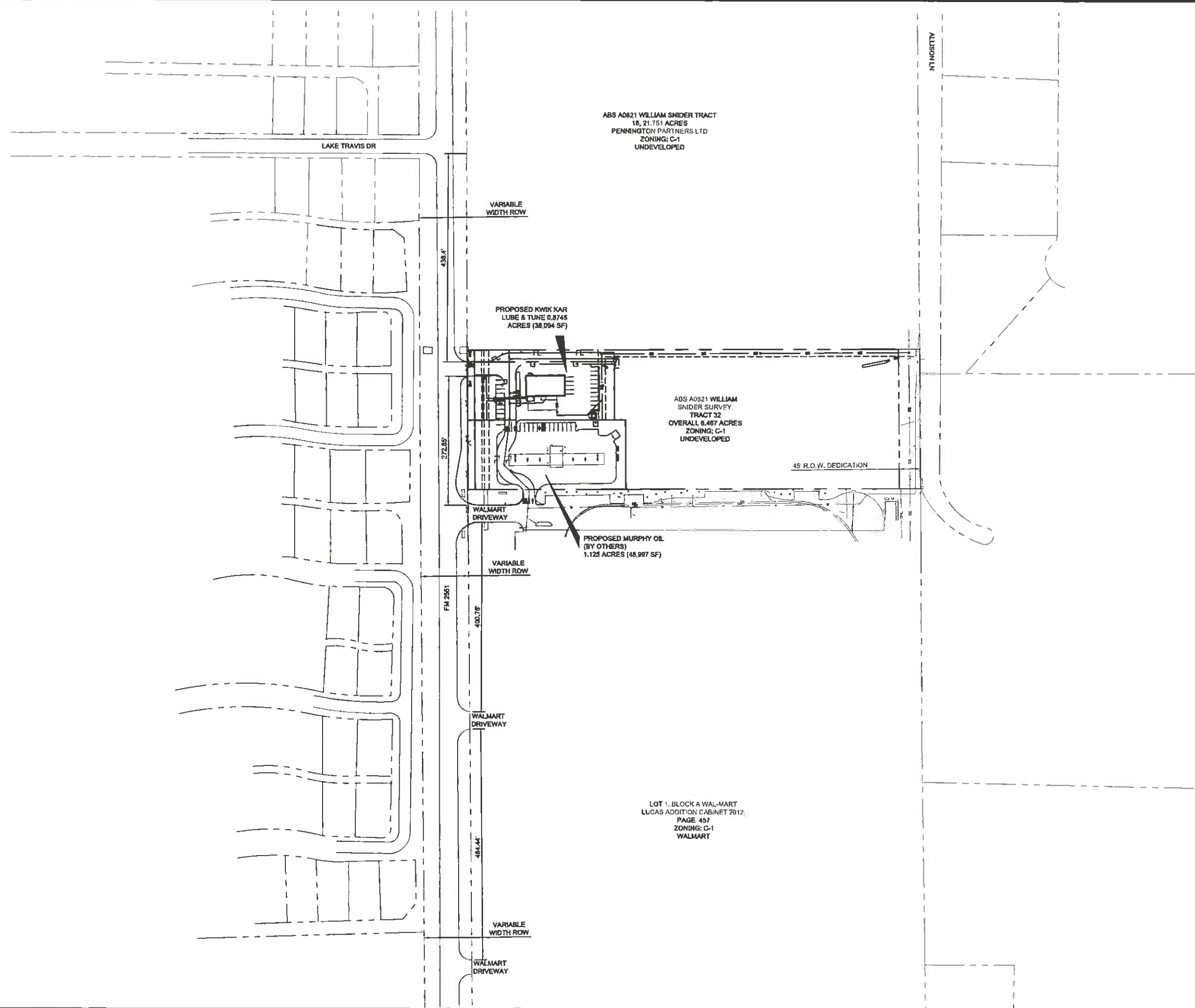
April 2013

PLAN SUBMITTAL LOG

DESCRIPTION	SUBMITTAL DATE
CITY SUBMITTAL	3/25/2013
CITY RE-SUBMITTAL	4/11/2013

STOP!
CALL BEFORE YOU DIG
DIG TESS
1-800-DIG-TESS
(@ least 72 hours prior to digging)

DREW: 5/2/2013 3:33 PM
 PLOT DATE: 5/2/2013 3:33 PM
 LOCATION: Z:\PROJECTS\2012-071 KWIK LUCAS\CADD\SHEETS\SP-2 TxDOT SITE PLAN.DWG
 LAST SAVED: 5/2/2013 3:17 PM



**KWIK KAR
 LUBE & AUTOMOTIVE
 SERVICE CENTER
 LUCAS, TX**

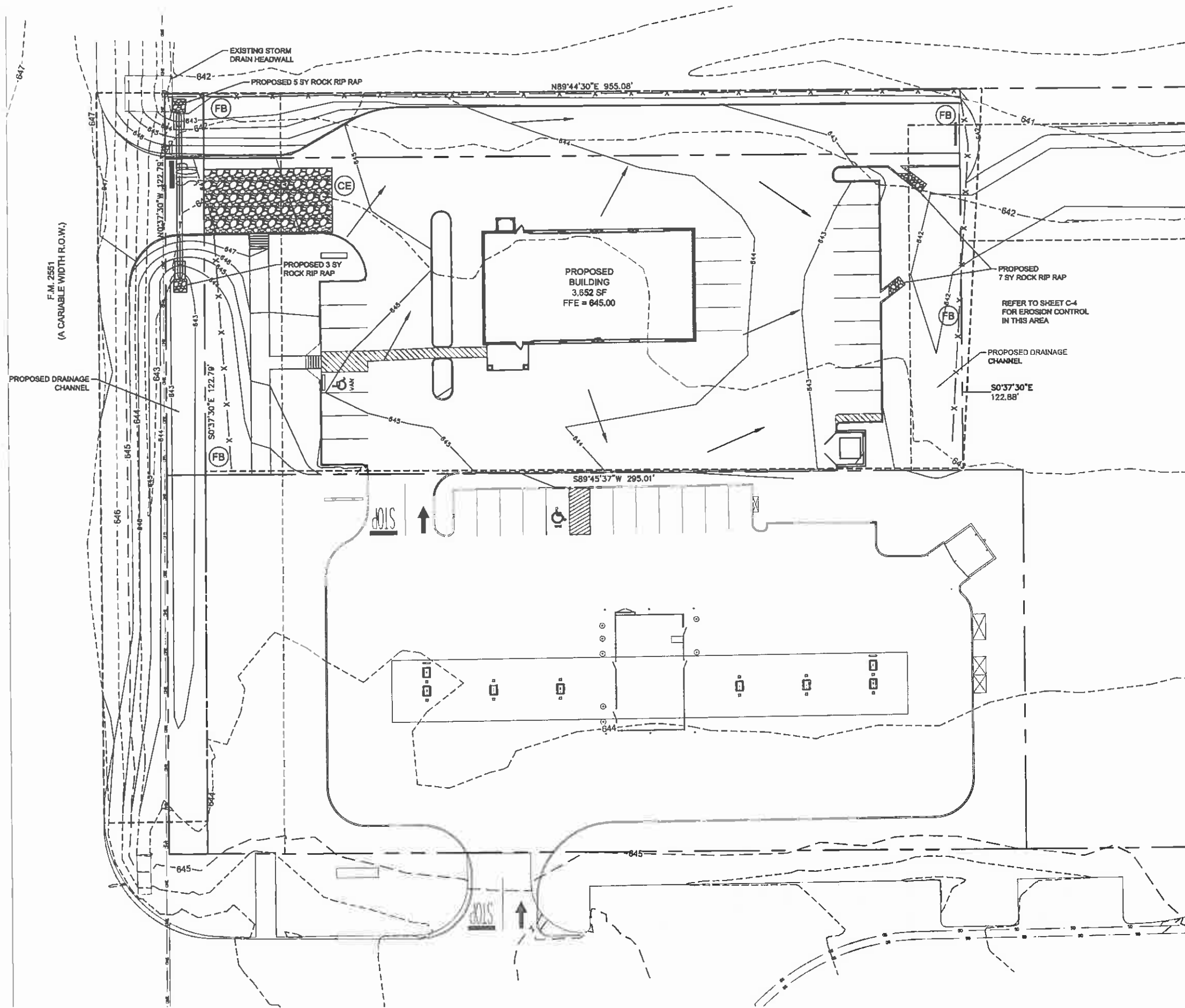
NO.	DATE	REVISION	BY

TxDOT SITE SITE PLAN

DESIGN: CLC
 DRAWING: CLC
 CHECKED: MAM
 DATE: 3/24/2013

SHEET
SP-3

PLOTTED BY: CLAY
 DATE: 4/15/2013 10:28 AM
 LOCATION: Z:\PROJECTS\2012-071 KWIK LUCAS\CADD\SHEETS\C-4 ON-SITE EROSION CONTROL PLAN.DWG
 LAST SAVED: 4/15/2013 10:19 AM

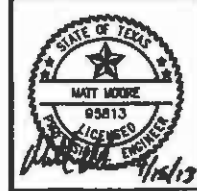


GRAPHIC SCALE



LEGEND	
	DIRECTION OF FLOW
	100 EXISTING CONTOUR
	100 PROPOSED CONTOUR
	LIMITS OF CONSTRUCTION
	(FB) FIBER BARRIER
	(CE) CONSTRUCTION ENTRANCE

ACREAGE SUMMARY	
ON-SITE DISTURBED AREA	0.87 AC
OFF-SITE DISTURBED AREA	0.27 AC
TOTAL DISTURBED AREA	1.28 AC



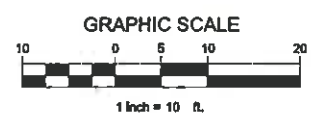
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 LUBE & AUTOMOTIVE
 SERVICE CENTER
 LUCAS, TX**

NO.	DATE	REVISION	BY

ON-SITE EROSION CONTROL PLAN

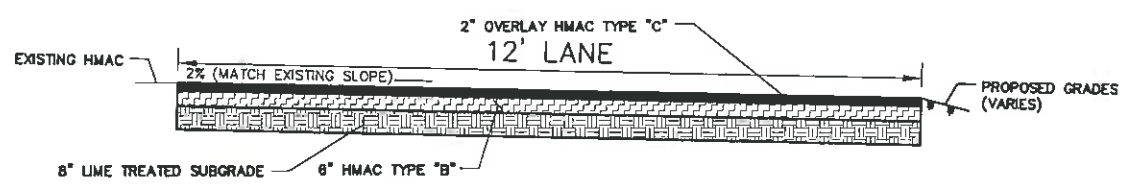
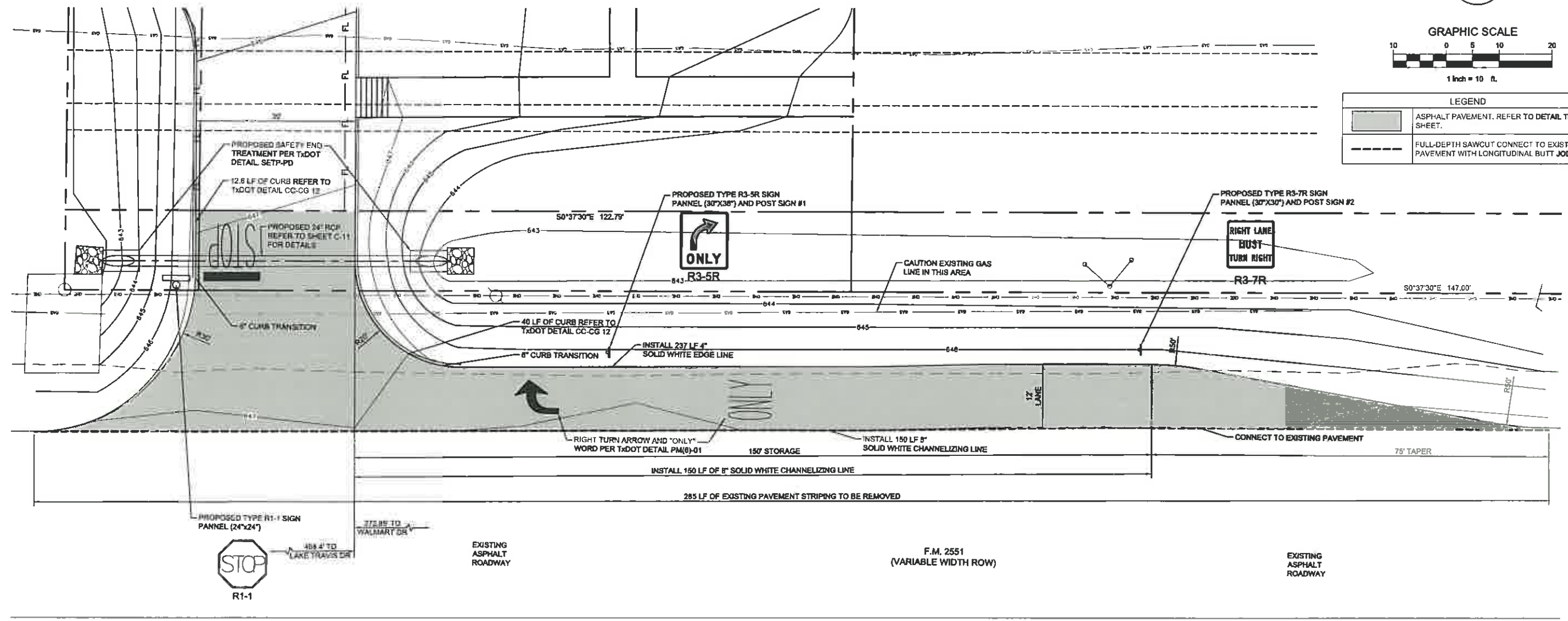
BENCH MARK
 (1) SQUARE CUT FOUND ON THE WESTERLY CURB RETURN AT THE SOUTHWEST CORNER OF LAKE WHITNEY DRIVE AND LAKE TEXHOMA DRIVE, POSTED ELEVATION = 647.32
 (2) RAILROAD SPIKE FOUND ON THE WEST SIDE OF A TRAFFIC SIGNAL POLE LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION OF W. LUCAS ROAD AND FM 2551, POSTED ELEVATION = 644.00
 ALUMINUM CAPPED IRON ROD AT THE SOUTHWEST CORNER OF THE SITE = 644.09

DESIGN: CLC
 DRAWN: CLC
 CHECKED: MAM
 DATE: 3/24/2013
 SHEET
C-4
 File No. 2012-071



LEGEND

	ASPHALT PAVEMENT. REFER TO DETAIL THIS SHEET.
	FULL-DEPTH SAWCUT CONNECT TO EXISTING PAVEMENT WITH LONGITUDINAL BUTT JOINT

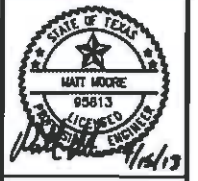


1 TYPICAL PAVEMENT SECTION SCALE: NTS

NOTES:
 1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

BENCH MARK
 (1) SQUARE CUT FOUND ON THE WESTERLY CURB RETURN AT THE SOUTHWEST CORNER OF LAKE WHITNEY DRIVE AND LAKE TEXHOMA DRIVE, POSTED ELEVATION = 647.32
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PLOTTED BY: DREW 5/2/2013 3:20 PM
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 LAST SAVED: 5/2/2013 3:01 PM



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 SERVICE CENTER
 LUCAS, TX**

NO.	DATE	REVISION	BY

TXDOT DECELERATION
 LANE PLAN

DESIGNER: CLC
 DRAWING: CLC
 CHECKED: MAM
 DATE: 3/24/2013
 SHEET
C-8
 File No. 2012.071

DETENTION POND CALCULATIONS

Drainage / Detention Calculations
Modified Rational Method

Required Storage Volume	21,411 cubic-feet
	0.492 acre-feet
Provided Storage Volume	21,411 cubic-feet
	0.492 acre-feet

Water Surface Elevation = 641.32

Onsite Existing Conditions

Area	1.91 acres
Time (Tc)	15 minutes
C value	0.35
I-100yr	7.52 in/hr
Q100yr	5.03 cfs
	2.20 cfs
Q100yr (T)	2.82 cfs

Flow Bypassing Pond (Drainage Area A-1, B-2)
Allowable Release Rate (Existing Flow + Bypass Flow)

Onsite Proposed Conditions

Area	1.91 acres
Time (Tc)	10 minutes
C*Ca value	0.90 avg
I-100yr	8.74 in/hr
Q100yr	15.02 cfs

Developed Runoff

Inflow per Storm Event			Max Allowable Outflow per Storm Event			Minimum Detention Volume Required			Storage		
Storm Event	Runoff (ft ³)	(ft ³)	Storm	Time	Release	Storm	Inflow	Outflow	(ft ³)	(acre-ft)	
10	15.02	9,014	10	20	2.82	1,696	10	9,014	1,696	7,320	0.168
15	12.93	11,834	15	25	2.82	2,118	15	11,834	2,118	9,716	0.218
20	11.35	13,814	20	30	2.82	2,542	20	13,814	2,542	11,072	0.254
30	9.88	17,792	30	40	2.82	3,390	30	17,792	3,390	14,402	0.331
35	9.20	19,313	35	45	2.82	3,813	35	19,313	3,813	15,500	0.358
40	8.25	19,803	40	50	2.82	4,237	40	19,803	4,237	15,568	0.357
50	7.39	22,178	50	60	2.82	5,064	50	22,178	5,064	17,061	0.392
60	6.72	24,197	60	70	2.82	5,932	60	24,197	5,932	18,265	0.418
70	6.07	25,486	70	80	2.82	6,779	70	25,486	6,779	19,707	0.428
80	5.67	27,229	80	90	2.82	7,647	80	27,229	7,647	19,602	0.450
90	5.24	28,312	90	100	2.82	8,474	90	28,312	8,474	19,836	0.455
100	4.88	29,189	100	110	2.82	9,321	100	29,189	9,321	19,867	0.456
110	4.64	30,833	110	120	2.82	10,189	110	30,833	10,189	20,464	0.470
120	4.50	32,427	120	130	2.82	11,018	120	32,427	11,018	21,411	0.492
130	4.28	33,252	130	140	2.82	11,883	130	33,252	11,883	21,389	0.491
140	3.92	32,922	140	150	2.82	12,711	140	32,922	12,711	20,211	0.464
150	3.61	32,489	150	160	2.82	13,558	150	32,489	13,558	19,931	0.435
180	3.28	35,480	180	190	2.82	16,100	180	35,480	16,100	19,359	0.444
200	2.87	38,686	200	210	2.82	17,796	200	38,686	17,796	17,891	0.411

Proposed Detention Pond Evaluation

Elevation	Area (sf)	Ac	Elevation Difference	Incremental Volume (ft ³)	Cumulative Volume (ft ³)	Cumulative Volume (ac-ft)
638.67	0	0.00				
			0.33	266	266	0.006
639.00	1610	0.04	1.00	4691	4957	0.114
640.00	7773	0.18	1.00	10972	15929	0.366
641.00	14170	0.33	0.88	15076	31005	0.712
641.88	20094	0.46	1.00	25275	56279	1.292
642.88	30456	0.70				

POND VOLUME INCLUDES STORAGE WITHIN THE DRAINAGE CHANNEL

Total Release Rate
Orifice Equation (B⁵)
 $Q = C^*A(2gh)^{0.5}$

$Q_{100} = 2.98 \text{ cfs}$ $WSE = 641.32$

DRAINAGE AREAS

ON-SITE HYDROLOGIC CALCULATIONS

DRAINAGE AREA	AREA (AC.)	C	Tc (min)	I ₁₀₀ (IN/HR)	Q ₁₀₀ (CFE)	REMARKS
A-1	0.09	0.90	10.0	8.74	0.71	DRAINS TO FM 2551 ROW
A-2	0.07	0.90	10.0	8.74	0.58	DRAINS TO OPEN CHANNEL AND DETENTION POND
B-1	0.89	0.90	10.0	8.74	7.90	DRAINS TO OPEN CHANNEL AND DETENTION POND
B-2	0.18	0.90	10.0	8.74	1.42	DRAINS TO FM 2551 ROW
C-1	4.35	0.35	10.0	8.74	13.31	DRAINS TO NORTHEAST CORNER OF SITE
TOTAL ONSITE DRAINAGE	5.68				23.01	

OFF-SITE HYDROLOGIC CALCULATIONS

DRAINAGE AREA	AREA (AC.)	C	Tc (min)	I ₁₀₀ (IN/HR)	Q ₁₀₀ (CFE)	REMARKS
OS-1	0.11	0.90	10.0	8.74	0.97	DRAINS TO OPEN CHANNEL AND DETENTION POND
OS-2	0.07	0.90	10.0	8.74	0.58	DRAINS TO OPEN CHANNEL AND DETENTION POND
OS-3	0.37	0.90	10.0	8.74	2.91	DRAINS TO FM 2551 ROW
OS-4**	1.80	0.90	10.0	8.74	12.99	DRAINS TO FM 2551 ROW
TOTAL OFFSITE DRAINAGE	2.15				16.91	
TOTAL DRAINAGE	7.73				39.93	

**OS-4 AREA IS PER EAST BETHANY DRIVE WIDENING DRAINAGE AREA MAP PREPARED BY GRANTHAM AND ASSOCIATES DATED 2/27/2012



GRAPHIC SCALE

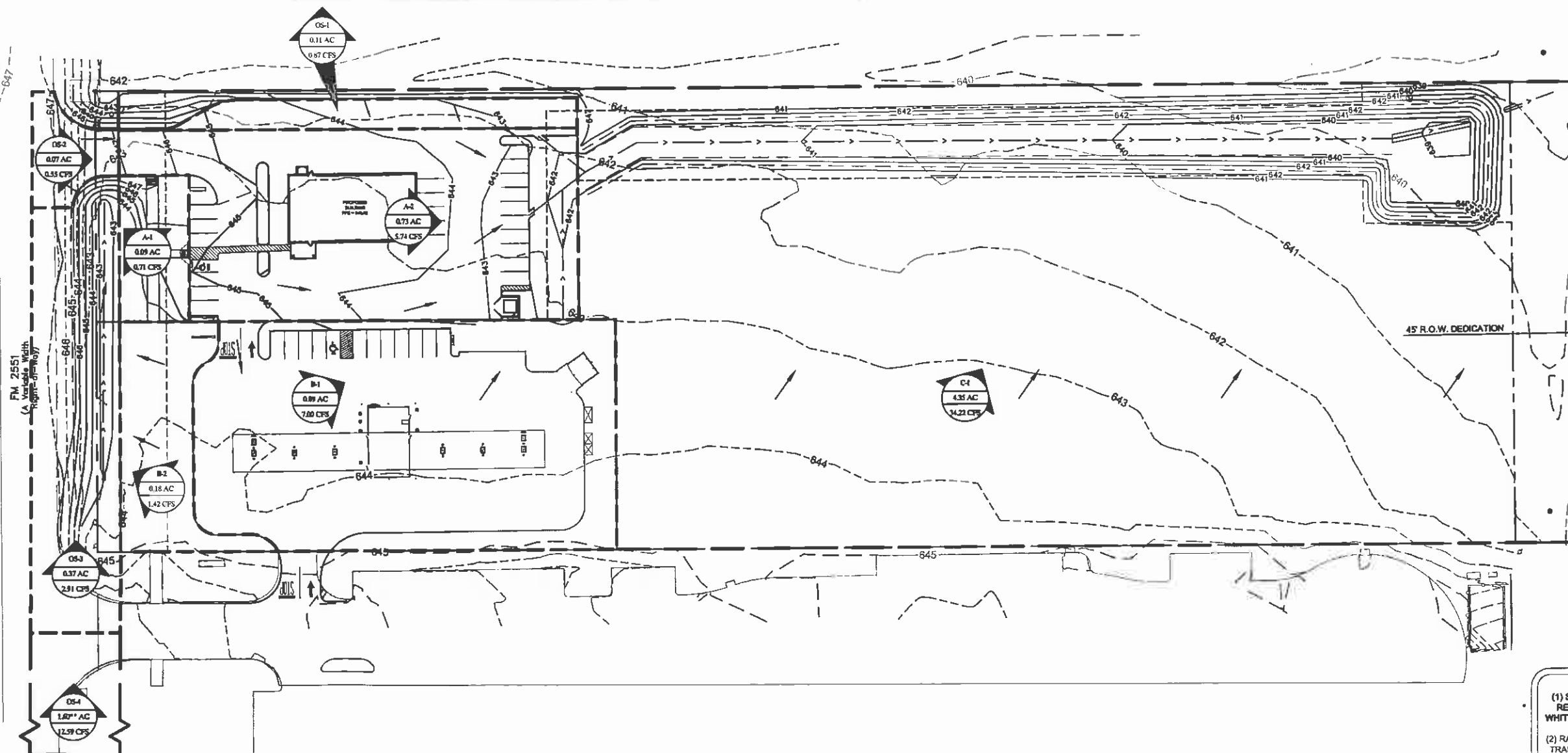


LEGEND

	- DRAINAGE AREA
	- DRAINAGE AREA IN ACRES
	- FLOW FOR DRAINAGE AREA IN CFS
	DIRECTION OF FLOW
	DRAINAGE AREA BOUNDARY

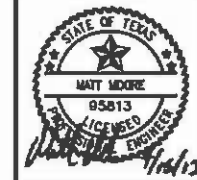
FLOODPLAIN NOTE

ACCORDING TO MAP NO. 48883C08A DATED JUNE 2, 2008 OF THE NATIONAL FLOOD INSURANCE PROGRAM MAP, FLOOD INSURANCE RATE MAP OF COLLIN COUNTY, TEXAS, FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, THIS PROPERTY IS WITHIN ZONE "X" (SHADED) AND IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA. IF THIS SITE IS NOT WITHIN AN IDENTIFIED SPECIAL FLOOD HAZARD AREA, THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.



BENCH MARK
(1) SQUARE CUT FOUND ON THE WESTERLY CURB RETURN AT THE SOUTHWEST CORNER OF LAKE WHITNEY DRIVE AND LAKE TEXOMA DRIVE. POSTED ELEVATION = 647.32
(2) RAILROAD SPIKE FOUND ON THE WEST SIDE OF A TRAFFIC SIGNAL POLE LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION OF W. LUCAS ROAD AND FM 2551. POSTED ELEVATION = 644.00
ALUMINUM CAPPED IRON ROD AT THE SOUTHWEST CORNER OF THE SITE = 644.09

PLOTTED BY: CLAY 4/15/2013 10:31 AM
 PLOT DATE: 4/15/2013 10:31 AM
 LOCATION: Z:\PROJECTS\2012-071 KWIK LUCAS\CADD\SHEETS\C-11 DRAINAGE AREA MAP.DWG
 LAST SAVED: 4/15/2013 10:17 AM



KWIK KAR
LUBE & AUTOMOTIVE
SERVICE CENTER
LUCAS, TX

NO.	DATE	REVISION	BY

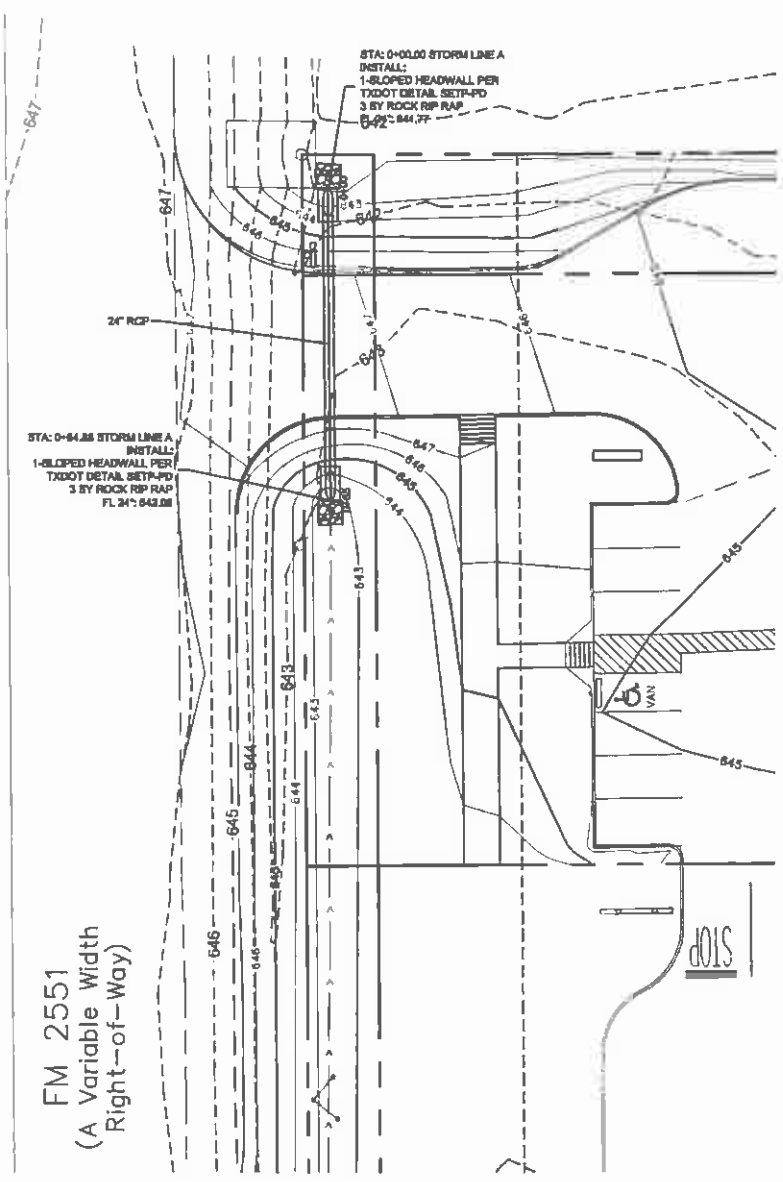
DRAINAGE AREA MAP

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 DRAWN: CLC
 CHECKED: MAM
 DATE: 3/24/2013

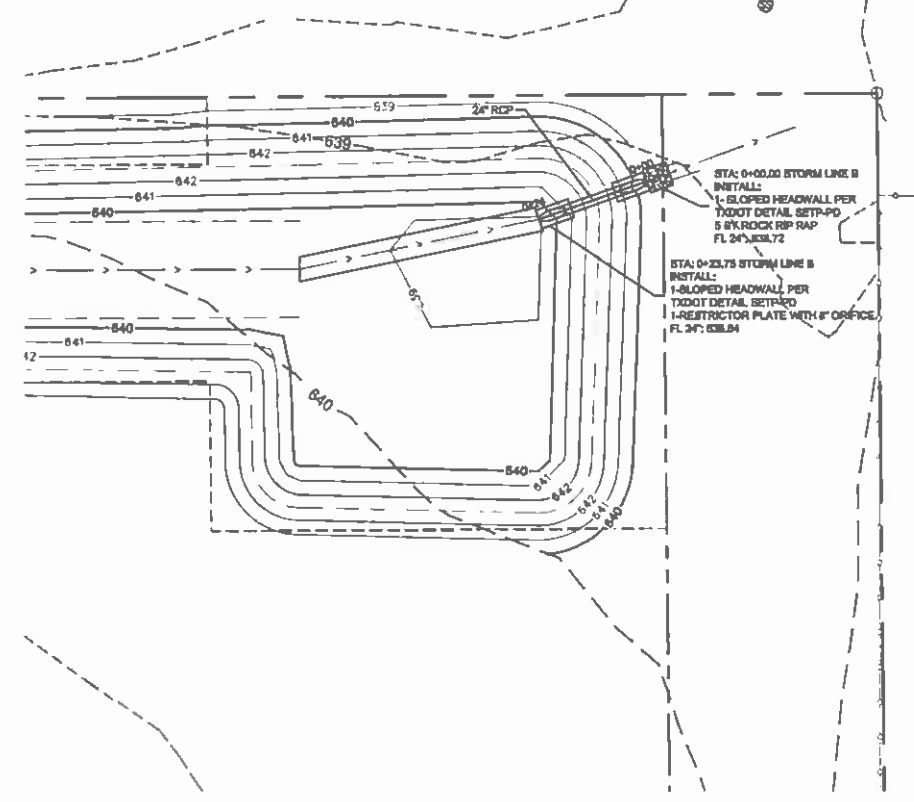
SHEET
C-11

File No. 2012-071

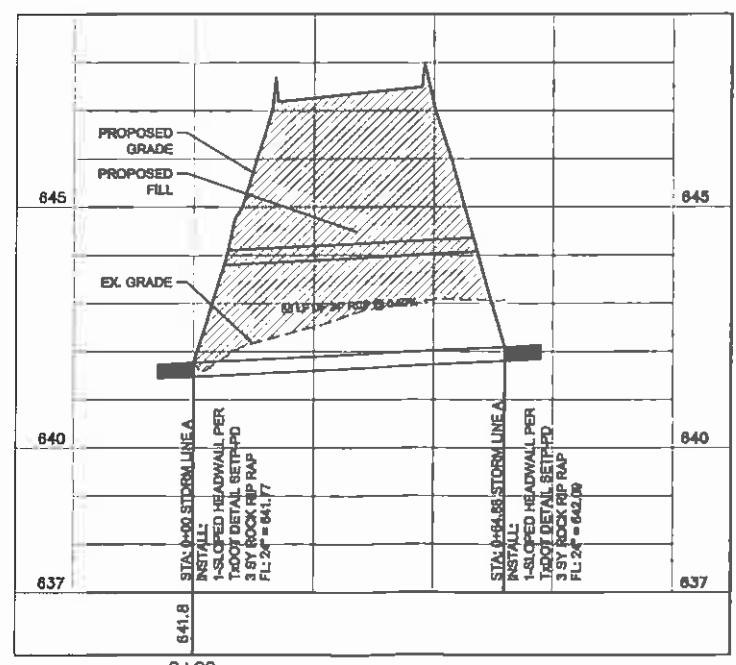
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 PROJECTS\2012-071 KWIK LUCAS\CADD\SHEETS\C-12 STORM DRAIN PLAN.DWG
 LOCATION:
 LAST SAVED: 4/15/2013 10:17 AM



STORM LINE A



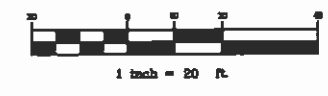
STORM LINE B



PROFILE STORM LINE A
 SCALE: H1:20 V1:2



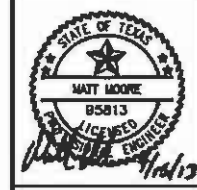
GRAPHIC SCALE



LEGEND	
	- DRAINAGE AREA
	- DRAINAGE AREA IN ACRES
	- FLOW FOR DRAINAGE AREA IN CFS
	- DIRECTION OF FLOW
	- DRAINAGE AREA BOUNDARY

FLOODPLAIN NOTE

ACCORDING TO MAP NO. 48855C04051, DATED JUNE 2, 2009 OF THE NATIONAL FLOOD INSURANCE PROGRAM MAP, FLOOD INSURANCE RATE MAP OF COLLIN COUNTY, TEXAS, FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, THIS PROPERTY IS WITHIN ZONE "X" (SHADED) AND IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA. IF THIS SITE IS NOT WITHIN AN IDENTIFIED SPECIAL FLOOD HAZARD AREA, THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES, THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.



**KWIK KAR
 LUBE & AUTOMOTIVE
 SERVICE CENTER
 LUCAS, TX**

NO.	DATE	REVISION	BY

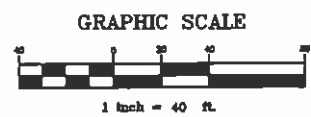
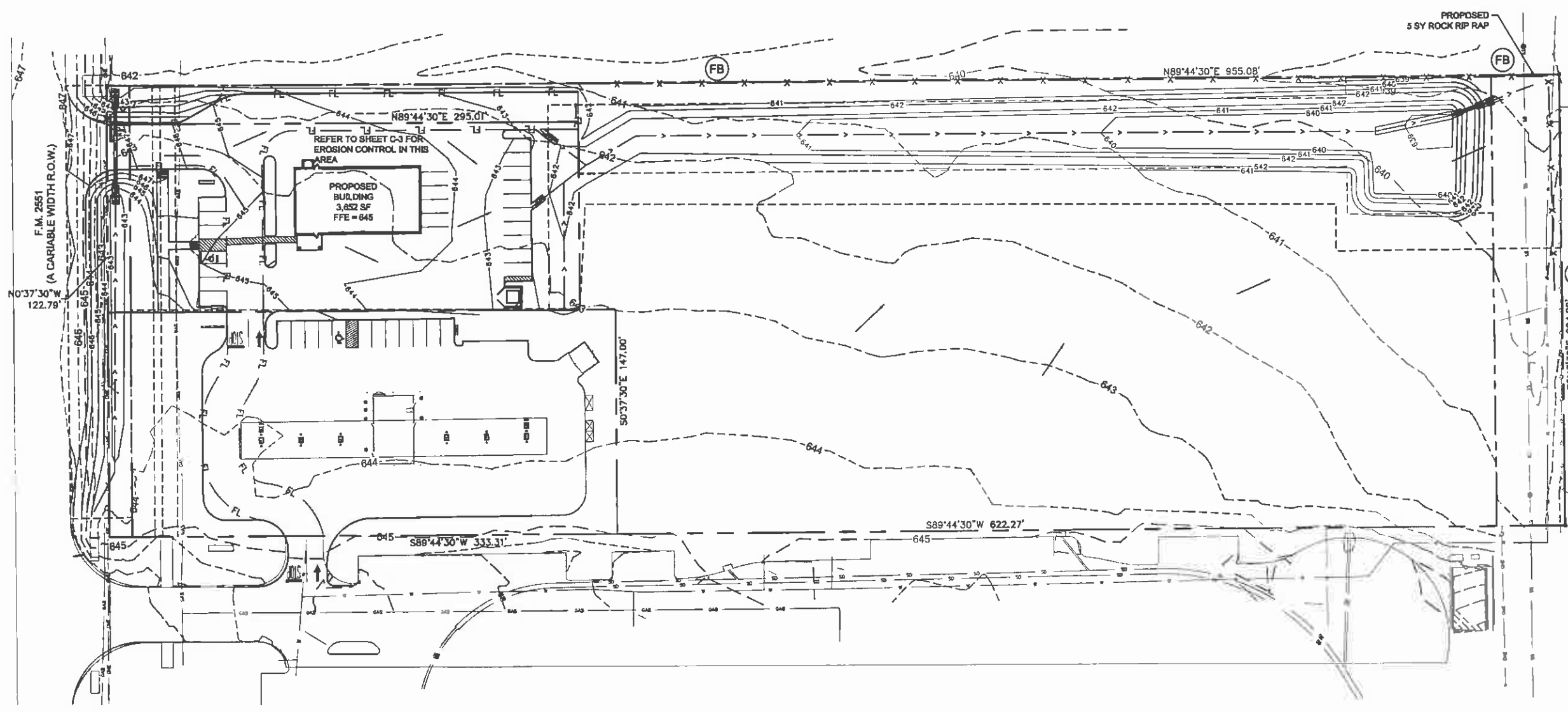
STORM DRAIN PLAN

BENCH MARK
 (1) SQUARE CUT FOUND ON THE WESTERLY CURB RETURN AT THE SOUTHWEST CORNER OF LAKE WHITNEY DRIVE AND LAKE TEXHOMA DRIVE. POSTED ELEVATION = 847.32
 (2) RAILROAD SPIKE FOUND ON THE WEST SIDE OF A TRAFFIC SIGNAL POLE LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION OF W. LUCAS ROAD AND FM 2551. POSTED ELEVATION = 844.00
 ALUMINUM CAPPED IRON ROD AT THE SOUTHWEST CORNER OF THE SITE = 844.09

DESIGN:	CLD
DRAWN:	CLD
CHECKED:	MAN
DATE:	3/24/2013

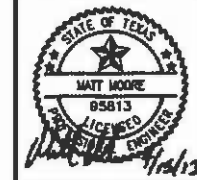
SHEET
C-12

PLOTTED BY: CLAY
 4/15/2013 10:28 AM
 PLOT DATE: Z:\PROJECTS\2012-071 KWIK LUCAS\CADD\SHEETS\C-5 OFF-SITE EROSION CONTROL PLAN.DWG
 LOCATION: 4/15/2013 10:19 AM
 LAST SAVED:



LEGEND	
	DIRECTION OF FLOW
	100 EXISTING CONTOUR
	100 PROPOSED CONTOUR
	LIMITS OF CONSTRUCTION
	FIBER BARRIER

ACREAGE SUMMARY	
ON-SITE DISTURBED AREA	1.24 AC
TOTAL DISTURBED AREA	1.24 AC



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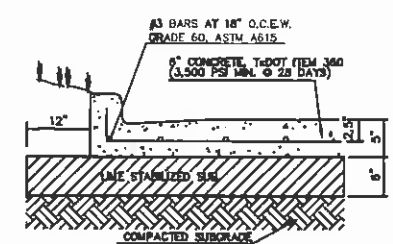
NO.	DATE	REVISION	BY

OFF-SITE EROSION CONTROL PLAN

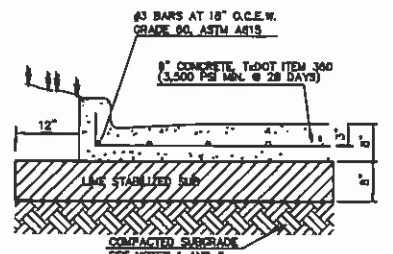
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 (2) RAILROAD SPIKE FOUND ON THE WEST SIDE OF A TRAFFIC SIGNAL POLE LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION OF W. LUCAS ROAD AND FM 2551. POSTED ELEVATION = 644.00
 ALUMINUM CAPPED IRON ROD AT THE SOUTHWEST CORNER OF THE SITE = 644.09

DESIGN:	CLC
DRAWN:	CLC
CHECKED:	MM
DATE:	3/24/2013

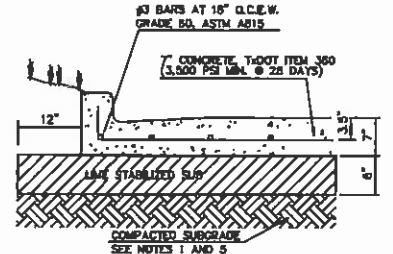
SHEET
C-5



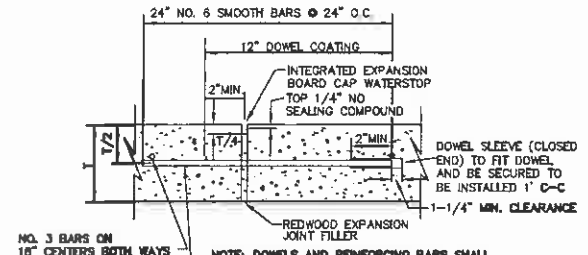
STANDARD DUTY CONCRETE PAVING



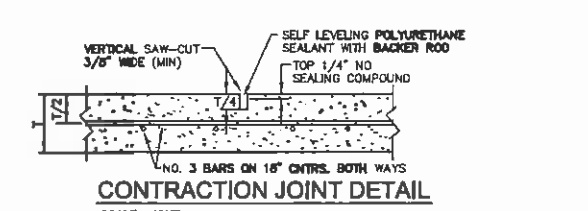
HEAVY DUTY CONCRETE PAVING



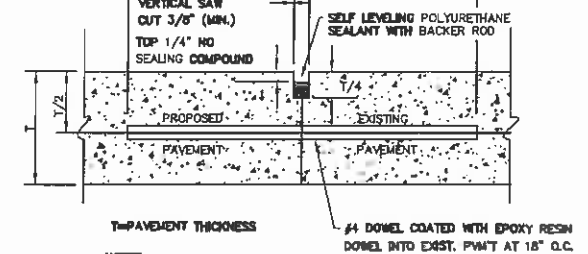
DUMPSTER AREA CONCRETE PAVING



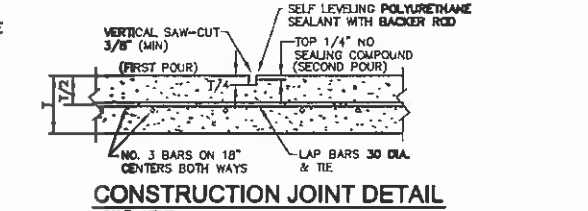
TRANSVERSE EXPANSION ISOLATION JOINT DETAIL



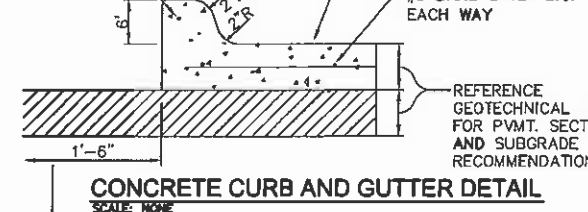
CONTRACTION JOINT DETAIL



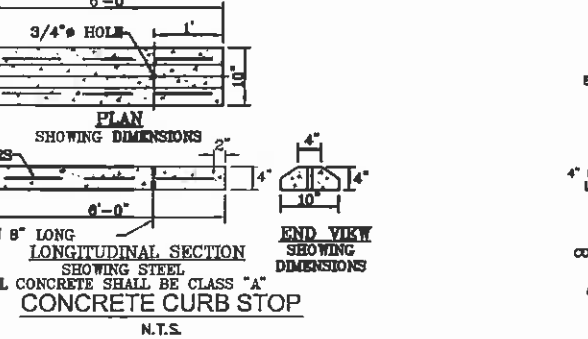
LONGITUDINAL BUTT JOINT DETAIL



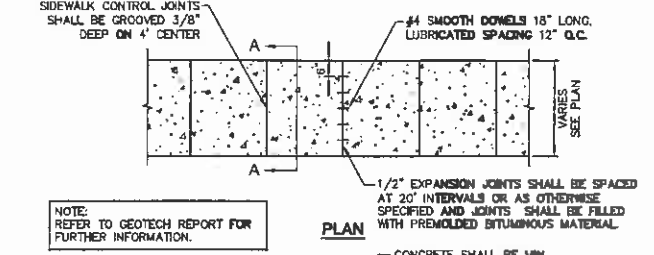
CONSTRUCTION JOINT DETAIL



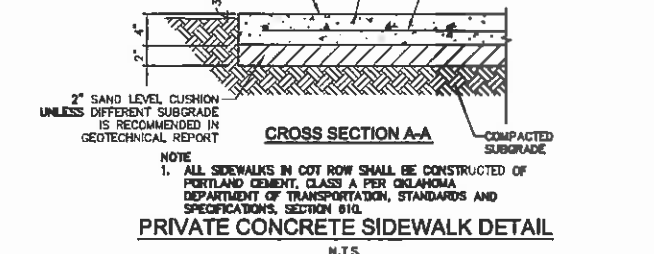
CONCRETE CURB AND GUTTER DETAIL



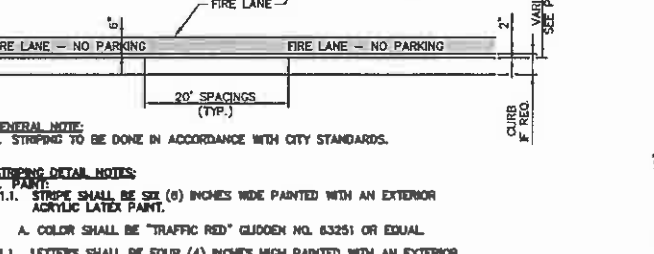
CONCRETE CURB STOP



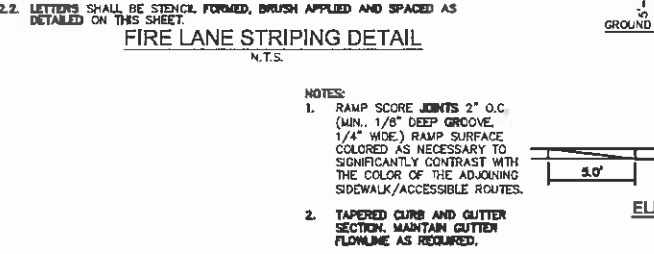
PRIVATE CONCRETE SIDEWALK DETAIL



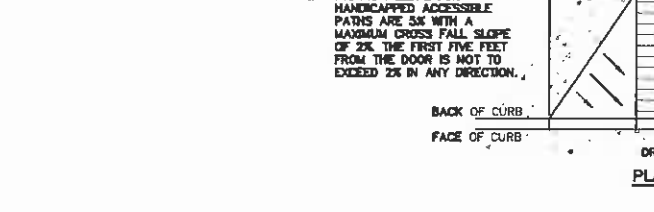
FIRE LANE STRIPING DETAIL



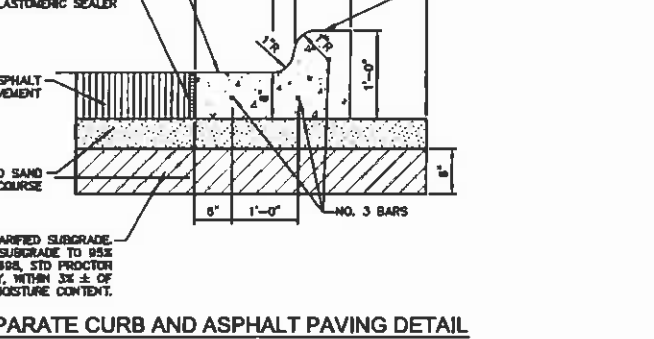
DISABLED SIGN DETAIL



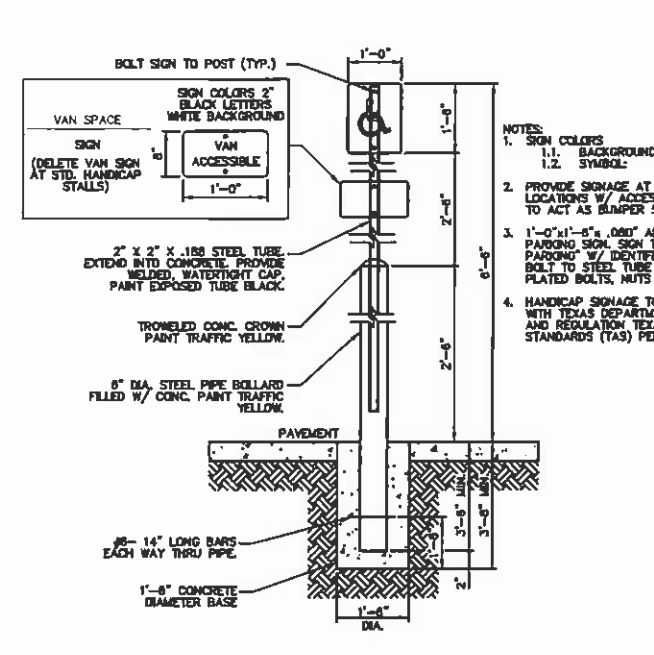
CURB WITH WALL DETAIL



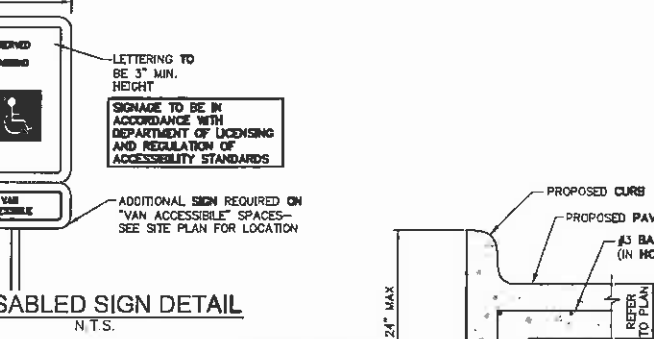
PRIVATE HANDICAPPED RAMPS



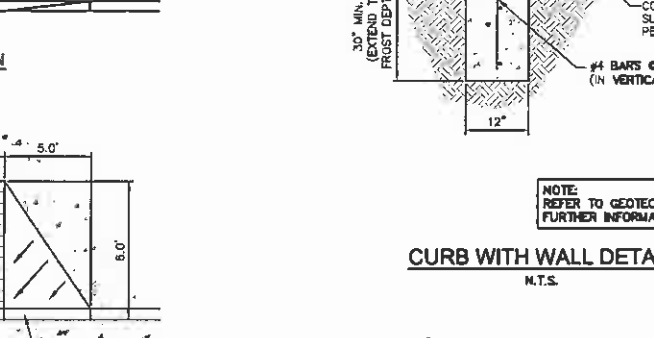
SEPARATE CURB AND ASPHALT PAVING DETAIL



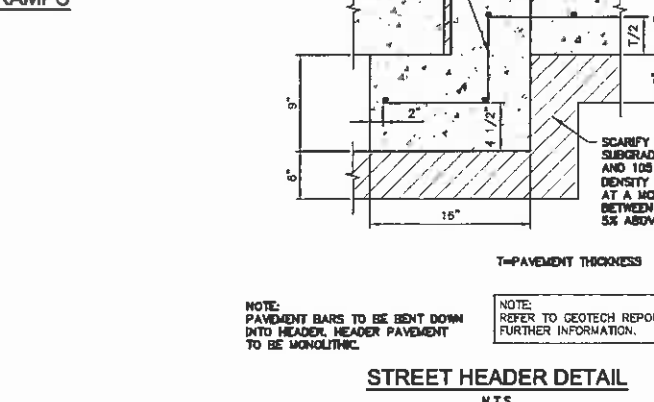
"HANDICAPPED PARKING" SIGN POST DETAIL



FIRE LANE STRIPING DETAIL



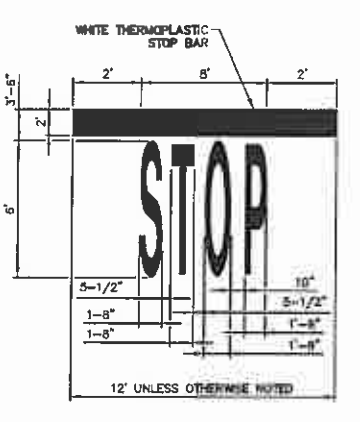
CURB WITH WALL DETAIL



STREET HEADER DETAIL

- GENERAL PAVING NOTES**
- FOR PREPARATION OF PAVEMENT SUBGRADE, COHESIVE (CLAY) SUBGRADE SOILS SHOULD BE COMPACTED BETWEEN 95% AND 100% OF MAXIMUM DRY DENSITY SUBGRADE DEFINED BY THE STANDARD PROCTOR (ASTM D 698) WITH A MOISTURE CONTENT RANGING FROM 1 TO 4% ABOVE OPTIMUM DRY DENSITY.
 - CONCRETE SHALL HAVE A MINIMUM 3,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS. JOINTS IN CONCRETE PAVING SHALL BE FORMED AT A MAXIMUM OF 15 FEET. CONCRETE SHALL INCLUDE AIR ENTRAINMENT OF 4-6% PERCENT. ALL OTHER JOINT SPACING SHALL BE INSTALLED PER PROJECT SPECIFICATIONS.
 - JOINTS IN CONCRETE PAVEMENT SHALL NOT EXCEED 15 FOOT SPACING.
 - SUBGRADE SHALL BE MINIMUM 6" THICK AND A MINIMUM OF 7% LIME BY DRY WEIGHT OF SOIL SHOULD BE USED.
 - REFER TO GEOTECHNICAL REPORT FOR ALL SUBGRADE RECOMMENDATIONS

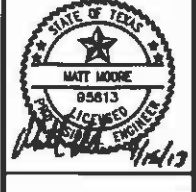
PAVING DETAILS



STOP BAR DETAIL

NOTE: 1. ALL TRAFFIC MARKINGS TO BE THERMOPLASTIC AS PER DIMENSIONS SHOWN.

- NOTES:**
1. SIGN COLORS:
1.1. BACKGROUND: WHITE
1.2. SYMBOL: BLUE
 2. PROVIDE SIGNAGE AT END OF STALL AT LOCATIONS W/ ACCESSIBLE DESIGNATION TO ACT AS BUMPER STOP.
 3. 1'-0" x 1'-5" x .080" ALUM. HANDICAPPED PARKING SIGN. SIGN TO READ "RESERVED PARKING W/ IDENTIFICATION SYMBOL BOLT TO STEEL TUBE W/ 3/8" GALVANIZED PLATED BOLTS, NUTS & WASHERS.
 4. HANDICAP SIGNAGE TO BE IN ACCORDANCE WITH TEXAS DEPARTMENT OF LICENSING AND REGULATION TEXAS ACCESSIBILITY STANDARDS (TAS) PER 4.6.4



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LUCAS, TX**

NO.	DATE	REVISION	BY

CONSTRUCTION DETAILS

DESIGN:	CLC
DRAWN:	CLC
CHECKED:	MMM
DATE:	3/24/2013

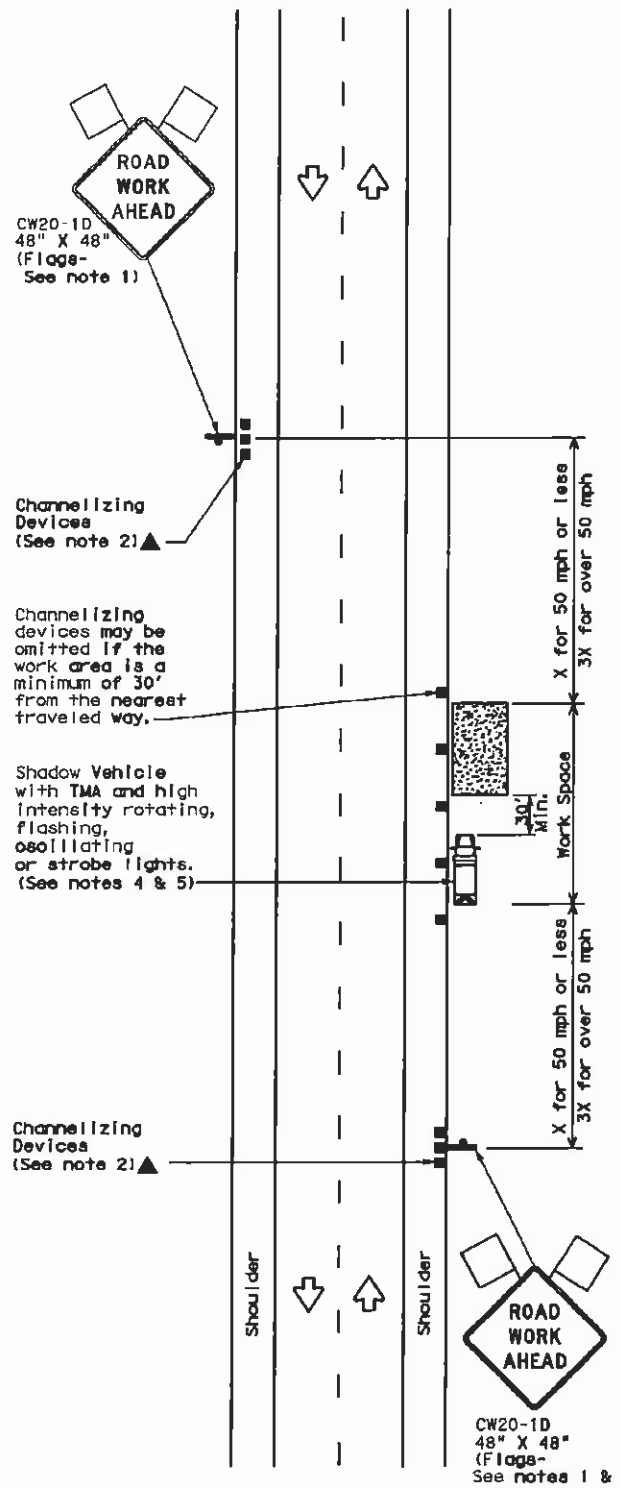
SHEET
C-15

File No. 2012-071

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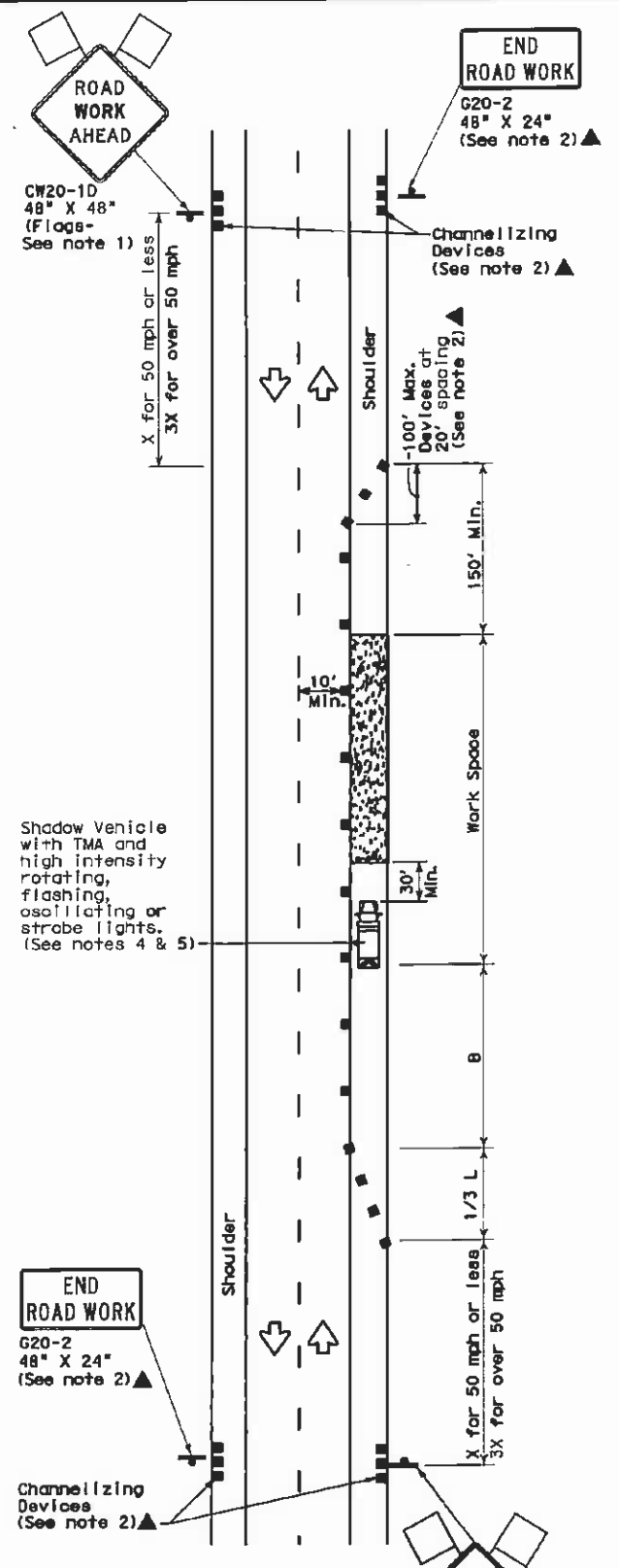
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any work performed under this standard or for incorrect results or damages resulting from its use.

DATE: FILE:



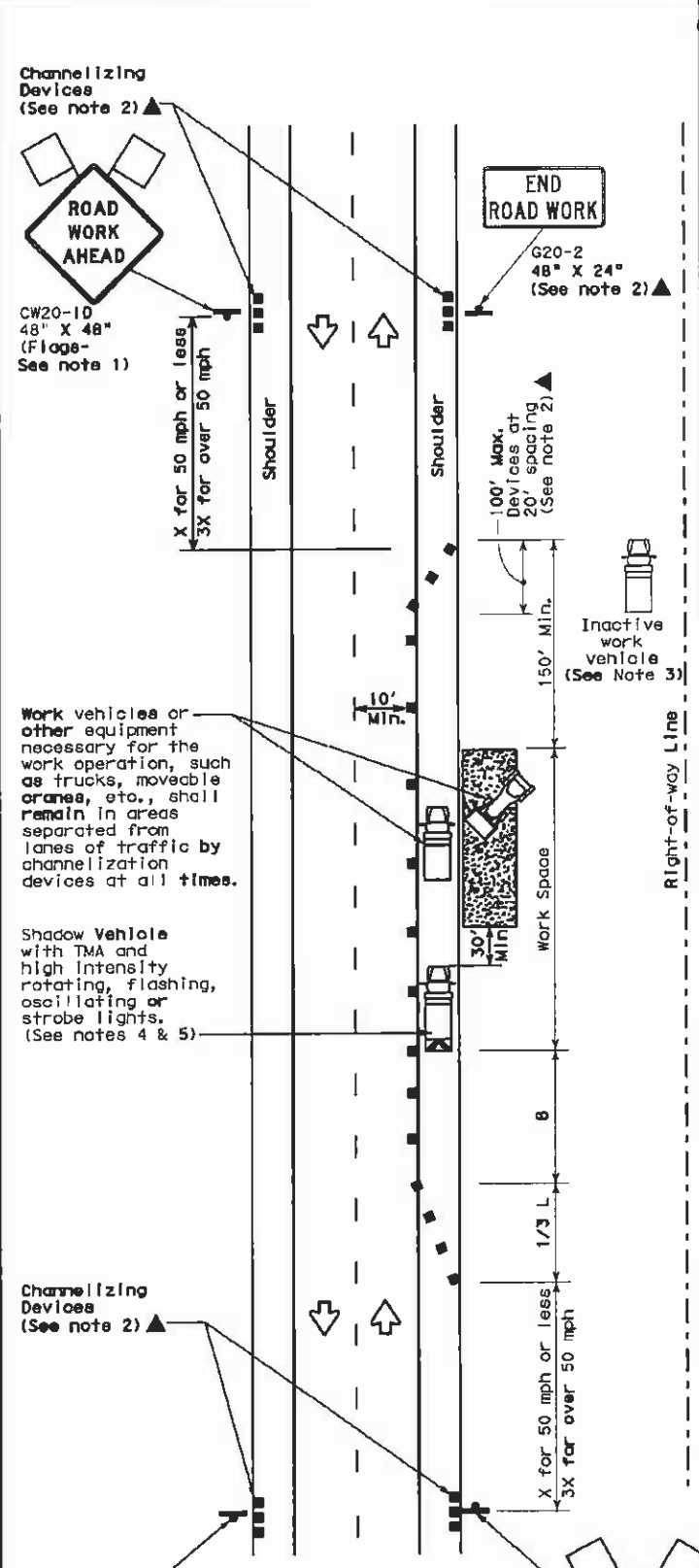
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND

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

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

* Conventional Roads Only
 ** Taper lengths have been rounded off.
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE

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

- GENERAL NOTES
- Flags attached to signs where shown are REQUIRED.
 - 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.
 - Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
 - 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.
 - 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.
 - CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

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

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN
CONVENTIONAL ROAD
SHOULDER WORK

TCP (1-1)-12

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REV	DATE	BY	CHK	APP	REASON
2-94	2-12				
8-95					
1-97					
4-98					

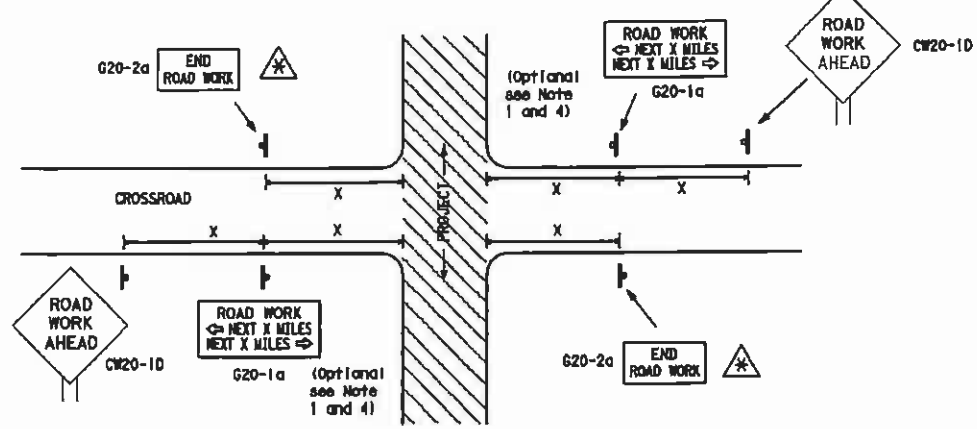
151

The use of this standard is governed by the "Texas Engineering Practices Act". No warranty of any kind is made by TxDOT for any purpose whatsoever, and no liability shall be assumed by TxDOT for any damages or injuries resulting from its use.

DISCLAIMER:

DATE/FILE

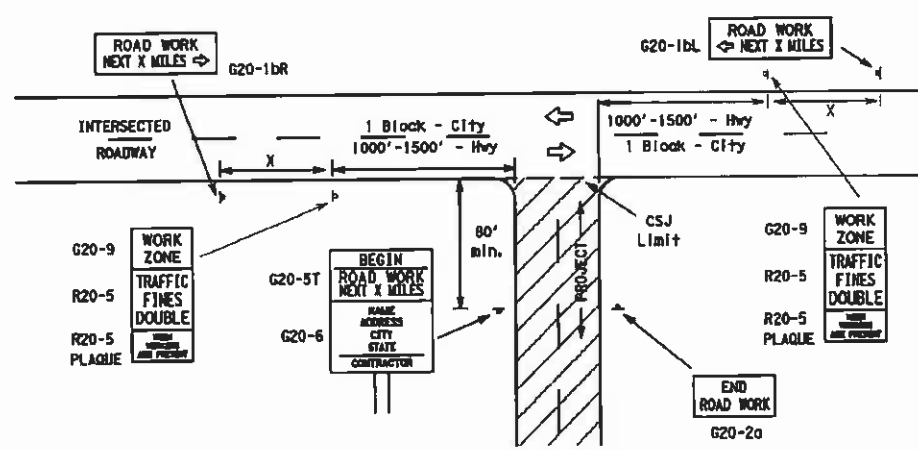
TYPICAL LOCATION OF CROSSROAD SIGNS



* May be mounted on back of CW20-10 sign with approval of engineer. (See note 2 below)

- The typical minimum signing on a crossroad approach should be a CW20-10 ROAD WORK AHEAD sign and a G20-2a END ROAD WORK sign, unless noted otherwise in plans.
- The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-10) sign mounted back to back with the reduced size 36" x 18" END ROAD WORK (G20-2a) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume. This information shall be shown in the plans.
- Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
- The G20-1a sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
- Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
- When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

- The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
- If construction closes the road at a T-intersection the Contractor shall place the G20-6 "Contractor Name" sign behind the Type III Barricades for the road closure (see BC(10) also). The G20-1BL and G20-1BR signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING^{1,5,6}

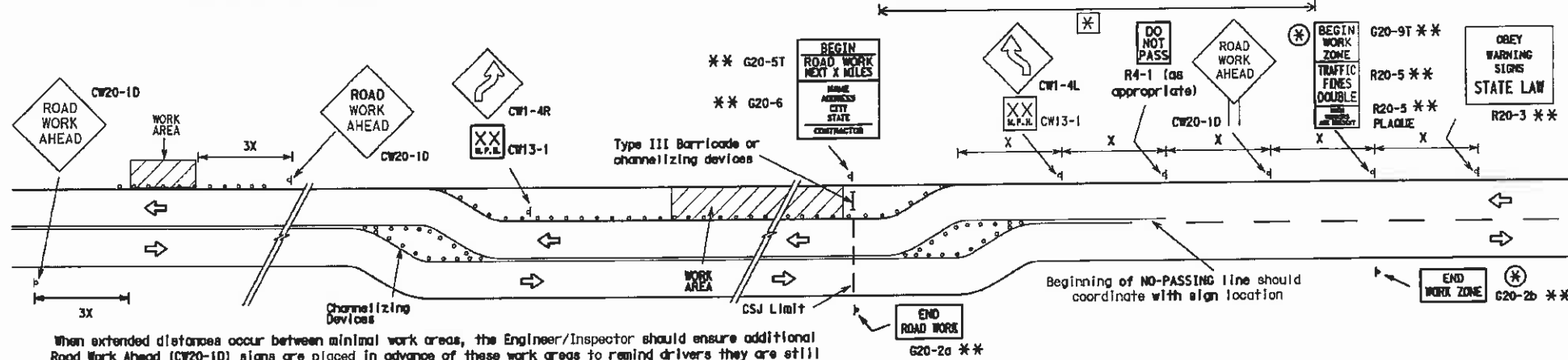
Sign Number or Series	SIZE		SPACING	
	Conventional Road	Expressway/Freeway	Posted Speed MPH	Sign Spacing "X" Feet (Approx.)
CW20, CW21, CW22, CW23, CW25	48" x 48"	48" x 48"	30	120
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"	40	240
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"	45	320
			50	400
			55	500 ²
			60	600 ²
			65	700 ²
			70	800 ²
			75	900 ²
			80	1000 ²
			*	*

* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TDP Standard Sheets.
 Δ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

General Notes:

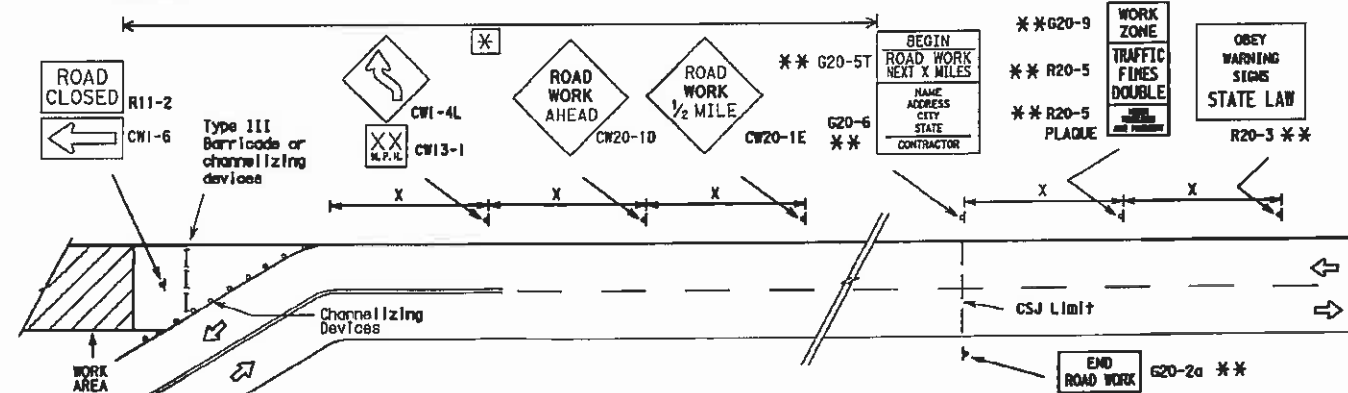
- Special or larger size signs may be used as necessary.
- Distance between signs should be increased as required to have 1500 feet advance warning.
- Distance between signs should be increased as required to have 1/2 mile or more advance warning.
- 36" x 36" ROAD WORK AHEAD (CW20-10) signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
- Only diamond shaped warning sign sizes are indicated.
- See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work areas, the Engineer/Inspector should ensure additional Road Work Ahead (CW20-10) signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

- The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and G20-5T sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.
- * The G20-9T and G20-2b shall be used when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a work zone where traffic fines may double if workers are present.
- ** Required CSJ Limit signing. See Note 10 on BC(1).
- * Area for placement of "ROAD WORK AHEAD" sign and other signs or devices as called for on the Traffic Control Plan.

LEGEND

- d sign
- Channelizing Devices
- I Type III Barricade
- X See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.



Texas Department of Transportation
 Traffic Operations Division

BARRICADE AND CONSTRUCTION PROJECT LIMIT STANDARD

2 of 12 BC(2)-07

© TxDOT 11-4-02	REVISED	DATE	BY	JOB	SHEET	TOTAL
9-07						