CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

October 3, 2017

John Nourzad, P.E.
GreenbergFarrow
3 Executive Drive, Suite 150
Somerset, NJ 08873

RE: Murphy Express – Cottonwood
Conceptual Grading and Drainage Plan
Stamp Date: 8/23/17
Hydrology File: A14D003A

Dear Mr. Nourzad:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 9/29/17, the Conceptual Grading and Drainage Plan **is not** approved for Site Plan for Building Permit. The following comments need to be addressed for approval of the above referenced project:

1. Sheet C-3. Please provide the flood plain note with effective date.
2. Sheet C-3 & C-3.1. Please add the word "Conceptual" to the sheets title and add a note stating "Not for Construction".
3. Sheet C-3. Please use the procedure for 40 acre and smaller basins as outlined in Chapter 22, Part A of the Development Process Manual (DPM). Please provide both the existing conditions and proposed conditions for the 100 year-6 hour storm event.
4. Sheet C-3. Please add a note, "Prior to any work within Highway 528 Right-of-Way, a New Mexico Department of Transportation (NMDOT) permit will be required."
5. Sheet C-3. Please add a note, "Prior to any work within Cottonwood Right-of-Way, a City of Albuquerque permit will be required."
6. Sheet C-3.1. Please change the storm sewer manhole to an oil/water separator. Also provide a detail for the oil/water separator.
7. Sheet C-3. If the proposed pond is also to be a detention facility, then please use Chapter 22, Part A of the Development Process Manual (DPM). This section talks

Orig: Drainage File

how to use a hydrograph for small watersheds to calculate the volume needed for detention (100 year – 24 hour storm event). Please include the calculations. If a routing program is desired, then Chapter 22, Part C outlines a program called, "AHYMO". Please do not use HydroCAD. This program does not exactly match the rain patterns here in Albuquerque.

8. Sheet C-3. Please show how the drainage is going from the proposed pond to the existing concrete channels.

9. Sheet C-3. Please provide wier calculations (Chapter 22 of the DPM) for the two existing concrete channels and state what the discharge rate of the site to the NMDOT's drainage system.

10. Sheet C-3.1. Please reference City of Albuquerque standard detail No. 2236 – Sidewalk Culvert with Steel Plate Top at the two sidewalk culverts.

When you resubmit, please just send the two conceptual Grading and Drainage Sheets C-3 & C-3.1. If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Reneé C. Brissette

Reneé C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Orig: Drainage File

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 10/2015)

Project Title: Murphy Express (Cottonwood) Building Permit #: _____ Hydrology File #: _____

DRB#: _____ EPC#: 1011363 Work Order#: _____

Legal Description: Tract lettered "C-2" of Sever Bar Ranch, Albuquerque, NM, as the same is shown and designated on the plat thereof, filed in the office of the County Clerk of Bernalillo County, NM on July 26, 1984, in Plat Book C24, folio 136.

City Address: 3751 Hwy 528 NW

Applicant: Murphy Oil USA c/o Jillian Janovsky Contact: Jillian Janovsky

Address: 3 Executive Drive, Suite 150, Somerset, NJ 08873

Phone#: 732-537-0811 Fax#: _____ E-mail: jjanovsky@greenbergfarrow.com

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE

____ TRAFFIC/ TRANSPORTATION

____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION

x CONCEPTUAL G & D PLAN

____ GRADING PLAN

____ DRAINAGE MASTER PLAN

____ DRAINAGE REPORT

____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)

____ TRAFFIC IMPACT STUDY (TIS)

____ EROSION & SEDIMENT CONTROL PLAN (ESC)

X OTHER (SPECIFY) EPC

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL

____ SITE PLAN FOR SUB'D APPROVAL

____ SITE PLAN FOR BLDG. PERMIT APPROVAL

____ FINAL PLAT APPROVAL

____ SIA/ RELEASE OF FINANCIAL GUARANTEE

____ FOUNDATION PERMIT APPROVAL

____ GRADING PERMIT APPROVAL

____ SO-19 APPROVAL

____ PAVING PERMIT APPROVAL

____ GRADING/ PAD CERTIFICATION

____ WORK ORDER APPROVAL

____ CLOMR/LOMR

____ **PRE-DESIGN MEETING?**

X OTHER (SPECIFY) EPC

IS THIS A RESUBMITTAL?: ____ Yes X No

DATE SUBMITTED: 9/22/2017 By: Jillian Janovsky

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

SITE DEVELOPMENT PLANS FOR

MURPHY EXPRESS

ALBUQUERQUE, NEW MEXICO

3751 HIGHWAY 528 NW

GENERAL NOTES:

A. CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.

B. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

C. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

D. WARRANTY/DISCLAIMER:
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

E. SAFETY NOTICE TO CONTRACTOR:
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

F. ALL CONSTRUCTION WITHIN STATE HIGHWAY DEPARTMENT RIGHT-OF-WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT RESIDENT MAINTENANCE ENGINEER.

G. ALL SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE RELEVANT UTILITY COMPANY OR REGULATORY AUTHORITY, AND THE SPECIFICATIONS FOR THE CONSTRUCTION OF THE EXISTING IMPROVEMENTS WHICH ARE BEING ALTERED OR REPLACED. CONTRACTOR SHALL CONTACT THE ENGINEER FOR SPECIFICATION SECTIONS FOR ITEMS SUCH AS LANDSCAPING AND IRRIGATION THAT ARE AFFECTED BY THE WORK BUT NOT COMPLETELY DETAILED OR SPECIFIED ON THESE PLANS.

H. CONSTRUCTION AND INSTALLATION OF 1200 S.F. KIOSK/C-STORE, ALL UTILITY ENTRANCES, (1)25,000 GAL-REGULAR, (1)8,000 GAL-PREMIUM, (1)10,000 GAL-DIESEL, AND (1)8,000 GAL-E-0 UNDERGROUND TANKS SHALL BE IN ACCORDANCE WITH ASSOCIATED PLANS.

I.

J. STAGE II VAPOR RECOVERY SYSTEM IS NOT REQUIRED.

K. CONTRACTOR REQUIRED TO PROVIDE REDLINE AS-BUILTS AND PROVIDE THOSE TO MURPHY UPON COMPLETION.

L. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SURVEYING, STAKING, AND LAYOUT

NOTES TO CONTRACTOR

A. THE CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD WITH THE DATE WHEN CONSTRUCTION IS TO BEGIN.
B. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SURVEYING, STAKING, AND LAYOUT
C. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE ENGINEER OF RECORD INFORMED OF ANY DEVIATIONS DURING CONSTRUCTION AND SHALL REPORT THEM IMMEDIATELY
D. CONTRACTOR IS REQUIRED TO KEEP REDLINE AS-BUILTS AND TO PROVIDE THOSE TO MURPHY UPON COMPLETION.
E. CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING THE AS-BUILT AND CERTIFICATE OF OCCUPANCY (C.O.) REQUIREMENTS FROM THE ISSUING AUTHORITY.
F. IF AN AS-BUILT SURVEY IS REQUIRED BY THE ISSUING AUTHORITY, THE CONTRACTOR SHALL BE RESPONSIBLE OBTAINING THE AS-BUILT SURVEY, PREPARED BY A LICENSED SURVEYOR, AND SUBMITTING THE AS-BUILT SURVEY TO ISSUING AUTHORITY AND THE ENGINEER OF RECORD

WETLANDS NOTE:

ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. ARMY CORPS OF ENGINEERS DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER/DEVELOPER, THE ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP 35001C0109H DATED AUGUST 16, 2012

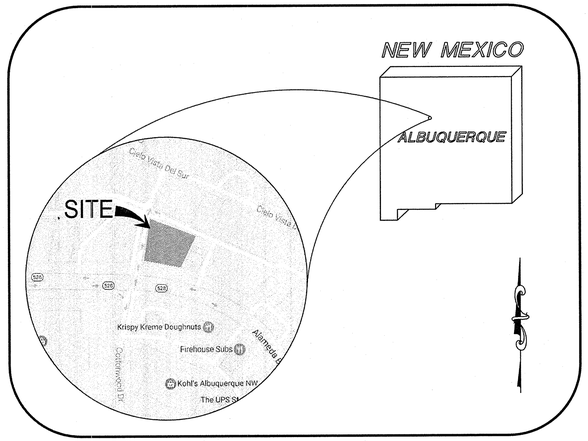
NOTICE TO BIDDERS:

ALL QUESTIONS REGARDING THE PREPARATION OF THE GENERAL CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER'S CONSTRUCTION DEPARTMENT AT (870) 866-7681 (JASON LAIRD). SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR. THE CONSULTING ARCHITECT AND/OR THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

INFORMATION TO CONTRACTOR:

1. MURPHY AND THE GENERAL GC ARE MADE AWARE THAT THIS PROJECT GOING OUT TO BID PRIOR TO PERMITS BEING OBTAINED. THIS INFORMATION IS BEING PROVIDED AS A BRIEF OVERVIEW OF THE PROJECT FOR INFORMATION ONLY AND IS NOT CONCLUSIVE. CONTRACT DOCUMENTS PROVIDED BY MURPHY INCLUDING PLANS AND SPECIFICATION SHALL GOVERN THE EXECUTION OF THE CONSTRUCTION CONTRACT.
2. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES BETWEEN CONSTRUCTION DRAWINGS AND FIELD OBSERVATIONS REGARDING THE SITE-WORK SCOPE OF WORK.
3. SWPPP - THE TOTAL DISTURBED ACREAGE FOR THE PROJECT IS APPROXIMATELY 1.20 ACRES. THE GC SHALL FOLLOW THE REQUIREMENTS OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED BY THE CIVIL ENGINEER, THE EROSION AND SEDIMENT CONTROL PLANS, EPA CONSTRUCTION GENERAL PERMIT, AND SHALL PROTECT THE ADJACENT PROPERTY AND STORMWATER FACILITIES FROM SILT RUNOFF AND POSSIBLE CONTAMINANTS DURING CONSTRUCTION.
4. THE GC IS TO NOTIFY THE ENGINEER OF RECORD THE DATE WHEN CONSTRUCTION IS TO COMMENCE. (INSERT SPECIFIC COUNTY, STATE, DISTRICT ADDITIONAL REQUIREMENTS IF NEEDED).
5. NOI/NOT - NOT REQUIRED AT THIS TIME.
6. THE BUILDING, CANOPY, SIGNS AND DUMPSTER COLORS AND TREATMENTS MUST BE COORDINATED WITH THE APPROVED SITE RENDERING PREPARED BY GREENBERGFARROW DATED JUNE 15, 2017.
7. AS-BUILT OR RECORD DRAWINGS WILL BE REQUIRED TO OBTAIN THE CERTIFICATE OF OCCUPANCY - GC IS HEREBY ADVISED TO KEEP AS-BUILT RECORDS AND PROVIDE TO THE ENGINEER AND TO SCHEDULE THE AS-BUILT SURVEY WITH SUFFICIENT TIME TO PERFORM THE SURVEY AND HAVE IT REVIEWED/APPROVED BY THE CITY OF ALBUQUERQUE (TWO WEEKS MINIMUM TIME EXPECTED).
8. PERMITS AND APPROVAL REQUIREMENTS:

- BUILDING - PENDING
- STATE FIRE MARSHALL - PENDING
- EROSION CONTROL/SWPPP - A COPY OF THE SWPPP MUST BE LOCATED ON-SITE.
- SIGN PERMIT - GC SHALL BE RESPONSIBLE FOR PULLING THE FINAL SIGN PERMIT AND PAYING ANY OUTSTANDING FEES ASSOCIATED WITH THE PERMIT.



Vicinity Map

NOT TO SCALE

PLAN INDEX:

ENGINEER (CIVIL)

C-0	COVER SHEET
C-1	SITE PLAN
	SURVEY
C-3	GRADING PLAN
C-3.1	STORM SEWER PLAN
C-4	EROSION CONTROL PHASE 1
C-4.1	EROSION CONTROL PHASE 2
C-4.2	EROSION & SEDIMENT CONTROL DETAILS
C-5	DEMOLITION PLAN
C-6	UTILITY PLAN
C-6.1	UTILITY PROFILES
C-7	PAVING/JOINT LAYOUT PLAN
C-9	TRUCK ROUTE PLAN
C-10	LANDSCAPE PLAN
C-12	DETAIL SHEET
C-13	DETAIL SHEET
C-14	DETAIL SHEET
C-15	DETAIL SHEET
C-16	DETAIL SHEET
C-17	DETAIL SHEET
L1	PHOTOMETRIC PLAN

GALLOWAY (TANK/PIPING)

COVER	COVER SHEET
FS-1	SPECIFICATIONS
FS-2	SPECIFICATIONS
FS-3	SPECIFICATIONS
F-1	NOTES AND PARTS LIST
F-1.1	PARTS LIST
F-2	TANK INSTALLATION AND ANCHORING DETAILS
F-3	TANK SUMP AND VENTING DETAILS
F-4	TANK RISER, OBSERVATION WELL AND VENTING DETAILS
F-5	PRODUCT PIPING PLAN
F-6	DUALOY PIPING SOLUTION
F-7	STANDARD YARD AND DRIVE DETAILS
F-8	PARTIAL PAVING PLAN
FD-1	DISPENSER DETAILS
FE-1	CONDUIT PLAN, PUMPS AND DISPENSER WIRING DIAGRAM
FE-2	PUMPS AND DISPENSER CONTROL WIRING DIAGRAM
FE03	CANOPY WIRING LAYOUT, ELEVATIONS AND DETAILS
FE-4	SITE MONITORING DIAGRAM
FL-1	LABELING PLACEMENT STANDARDS
FL-2	STANDARD LABELING DETAILS

GREENBERGFARROW (BUILDING)

CS1	COVER SHEET
A1	ACCESSIBILITY STANDARDS NOTES & DETAILS
A2	EGRESS/ACCESSIBILITY FLOOR PLAN
S1	STRUCTURAL GENERAL NOTES
E1	EXTERIOR ELEVATIONS
E2	EXTERIOR ELEVATIONS
E3	FLOOR PLAN
E4	FLOOR FRAMING PLAN
E5	ROOF FRAMING PLAN
E6	SECTION
E7	SECTION
E8	INTERIOR ELEVATIONS
E9	INTERIOR ELEVATIONS
E10	FLOOR FINISH PLAN
EL1	ELECTRICAL PLAN
EL2	LIGHTING PLAN
EL3	ELECTRICAL DETAILS
EL4	ELECTRICAL PANEL SCHEDULE
P1	PLUMBING PLAN
P2	PLUMBING & WATER RISER
M1	MECHANICAL PLAN
M2	MECHANICAL ROOF PLAN
F1	FOUNDATION PLAN
F2	FOUNDATION DETAILS
GC1	GC SCOPE OF WORK FLOOR PLAN

GREENBERGFARROW (CANOPY)

CS1	COVER SHEET
S1	STRUCTURAL GENERAL NOTES
E1	FRAMING PLAN
E2	ELEVATIONS
E3	LIGHTING AND SOFFIT PLAN
E4	SECTION
E5	SECTION
E6	SECTION
F1	FOUNDATION PLAN

GreenbergFarrow

CONTACT: DAWN SCHAFFRAN
3 EXECUTIVE DRIVE, SUITE 150
SOMERSET, NJ 08873
(732) 537-0811

RESOURCE LIST:

PLANNING AND ZONING
KYM DICOME
CITY OF ALBUQUERQUE
URBAN DESIGN & DEVELOPMENT
600 2ND ST. NW
ALBUQUERQUE, NM 87102
PHONE: (505) 924-3814
KDICOME@CABQ.GOV

STORMWATER
JAMES HUGHES, PE
CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
600 2ND ST. NW
ALBUQUERQUE, NM 87102
PHONE: (505) 924-3986
JHUGHES@CABQ.GOV

WATER AND SEWER
KRISTOPHER CADENA, P.E.
CITY OF ALBUQUERQUE
UTILITY DEVELOPMENT SECTION
600 2ND ST., NW, SUITE 201
ALBUQUERQUE, NM 87102
PHONE: (505) 289-3301

TELEPHONE
CONTACT: CHUCK AVENT
SUPERVISOR, PLANT FACILITIES
CENTURYLINK
PHONE: (505) 514-6473
CHUCK.AVENT@CENTURYLINK.COM

BUILDING
PATRICIA ORTIZ
PLANS EXAMINER
CITY OF ALBUQUERQUE
600 2ND ST. NW, SUITE 1-B
ALBUQUERQUE, NM 87102
PHONE: (505) 924-3910
PAORTIZ@CABQ.GOV

FIRE PREVENTION
LT. ERIC L. GONZALES
ALBUQUERQUE FIRE DEPT.
600 2ND ST., NW, ROOM 410
ALBUQUERQUE, NM 87102
PHONE: (505) 924-3611
ELGONZALES@CABQ.GOV

ELECTRIC
SUZANNE MARQUEZ
ENGINEERING TECHNICIAN
PNM PUBLIC SERVICE CO.
4201 EDITH BOULEVARD NE
ALBUQUERQUE, NM 87107
PHONE: (505) 241-3479
CELL: (505) 450-8641
SUZANNE.MARQUEZ@PNM.COM

ENGINEER
GREENBERG FARROW
CONTACT: TREVOR ANDREY
1530 WEST PEACHTREE ST., SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601-4000

GEOTECH
UNITED CONSULTING
CONTACT: AARON C. EPSTEIN, P.E.
625 HOLCOMB BRIDGE ROAD
NORCROSS, GA 30071
PHONE: (770) 209-0029

MURPHY
CONTACT: GAVEN BALLINGER
200 PEACH ST.
EL DORADO, AR 71780
PHONE: (870) 881-6678

CALL BEFORE YOU DIG
1-800-321-ALERT
NEW MEXICO ONE CALL SYSTEM

AGENCY / DATE

AGENCY	DATE
PLANNING & ZONING (CITY OF ALBUQUERQUE)	
STORMWATER (CITY OF ALBUQUERQUE)	
BUILDING (CITY OF ALBUQUERQUE)	
NPDES	
PNM PUBLIC SERVICE CO.	

BASED ON A SURVEY BY:
SURV-TEK
9384 VALLEY VIEW DRIVE N.W.
ALBUQUERQUE, NEW MEXICO 87114
PHONE: (505) 897-3366
FAX: (505) 897-3377
MAY 25, 2017

REVISION	DATE	DESCRIPTION
REV-0	08-23-17	REVIEW SET

JOHN H. NOURZAD
NEW MEXICO
19062
PROFESSIONAL ENGINEER
AUG 2.3.2017

JOB NO.: 20160897.0

DATE:	SHEET NO.
08-23-17 REV-0	C-0

ZONING:
SU-1 (SPECIAL USE ZONE)

1200SF-8-2015v2

EXISTING

- Sanitary Sewer Manhole
- Power Pole
- Power Pole w/underground feed
- High Voltage Tower
- Guy Wire
- OHW — Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM — Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- X — X — Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- E — Underground Electric line
- COM — Underground Communications Line
- G — Underground Gas Line
- W — Underground Water Line
- SAS — Sanitary Sewer Line
- SD — Storm Drain Line
- Control Point
- Wall

PROPOSED

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- CF — CONSTRUCTION FENCE (SEE DETAIL SHEETS)
- CFP — CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)
- BUILDING/CANOPY CONTROL POINT

GENERAL SITE NOTES

A. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

B. ALL CURB RETURN RADII SHALL BE 5', AS SHOWN TYPICAL ON THIS PLAN, UNLESS OTHERWISE NOTED.

C. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON:
- ALL CURB AND GUTTER ADJACENT TO CONCRETE PAVING SHALL BE INSTALLED PER DETAIL 1B.
- PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE PAVING PLAN OVER THE ENTIRE PARKING LOT AREA AND ALL APPROACH DRIVES.
- SEE ASSOCIATED PLANS FOR CANOPY, COLUMN, PUMP ISLAND DETAILS AND LAYOUT.

D. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS.

E. THE LOCATION OF THE CONSTRUCTION FENCE ON THE DRAWINGS IS FOR GRAPHICAL REPRESENTATION ONLY. THE CONTRACTOR IS TO ENSURE THAT THE CONSTRUCTION FENCE ENCOMPASSES THE ENTIRE WORK AREA.

F. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

G. CONTRACTOR SHALL PURCHASE AND INSTALL A MAILBOX, AND SHALL COORDINATE LOCATION OF MAILBOX WITH MURPHY CONSTRUCTION MANAGER AND/OR ON-SITE REPRESENTATIVE AND LOCAL POSTMASTER.

H. ALL PROPOSED PAVEMENT STRIPING OR MARKINGS SHALL FOLLOW THE SPECIFICATIONS FOR PAINT INCLUDED IN DETAIL 10A.

SITE NOTES

- 2F DRILL (2) 3/4" X 5/8" DIA. HOLES (1) EACH FOR OPEN POSITION & CLOSED POSITION OF GATES. TO BE USED ON BOTH SIDES OF GATE. SEE DUMPSTER DETAIL.
- 8B OVERHEAD CANOPY – (TYP.–PER CANOPY PLANS)
- 12A 4" TRAFFIC YELLOW LANE STRIPE (SEE LENGTH INDICATED AT SYMBOL).
- 12D 4" WIDE PAINTED STRIPES. 2.0' O.C. @ 45° (SEE SIZE COLOR INDICATED AT SYMBOL).
- 12H 4" DOUBLE TRAFFIC YELLOW LANE STRIPE (SEE LENGTH INDICATED AT SYMBOL).
- 12M CONTRACTOR TO ENSURE THAT ANY LIGHT POLES OR HANDICAP PARKING SIGNS ARE AT LEAST 2' FROM BACK OF CURB TO PREVENT THE VEHICLES FROM STRIKING THESE ITEMS.
- 14J GC TO INSTALL (1) 4" PVC SLEEVE FOR IRRIGATION LINE. SEE UTILITY PLAN FOR INSTALLATION REQUIREMENTS.
- 14K GC TO INSTALL (2) 4" PVC SLEEVES FOR FUTURE USE. SEE UTILITY PLAN FOR INSTALLATION REQUIREMENTS.
- 16A MURPHY OIL FREESTANDING SIGN. PER APPROVED ELEVATION.
- 21A TAPER CURB TO MATCH EXISTING CURB
- 21D EDGE OF CONCRETE SLAB. PER TANK/PIPING PLANS.
- 21E UNDERGROUND STORAGE TANKS (1) 25,000 GAL–REGULAR, (1) 8,000 GAL–PREMIUM, (1) 10,000 GAL–DIESEL, (1) 8,000 GAL–E-0.
- 21G AIR VACUUM UNIT WITH 4' x 7' CONCRETE SLAB
- 21K MURPHY EXPRESS ID SIGN. PER APPROVED ELEVATION.
- 21L PRICE SIGN PER APPROVED ELEVATION
- 21P 7' X 10' CONCRETE PAD FOR PROPANE TANKS.
- 21T MAILBOX (CONTRACTOR TO COORDINATE LOCATION WITH MURPHY AND POSTMASTER PRIOR TO INSTALLATION)
- 21U 5' X 7' CONCRETE SLAB FOR ICE UNIT. SEE NUMBER INDICATED AT SYMBOL.
- 21V CONCRETE PAD FOR VENT RISERS. PER TANK & PIPING PLANS.
- 51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL.

SITE DETAILS – SEE DETAIL SHEETS

- 1B TYPE "B" CONCRETE CURB & GUTTER.
- 2E DUMPSTER ENCLOSURE
- 2F CONSTRUCTION SAFETY FENCE
- 3D CONCRETE SIDEWALK
- 3M WHEELCHAIR RAMP IN SIDEWALK
- 5A GUARD POST (SINGLE)
- 5B TRAFFIC SIGN IN BOLLARD
- 6B SCREEN WALL
- 9S ACCESSIBLE / VAN ACCESSIBLE PARKING SIGN (TYP.)
- 9U ACCESSIBLE PARKING SYMBOL (SEE PAINT COLOR INDICATED AT SYMBOL)
- 10A TRAFFIC FLOW ARROW (TYP.)
- 10B STOP BAR (TYP.)
- 11D "RIGHT TURN ONLY" SIGN
- 11K "NO PARKING FIRE LANE" SIGN
- 12B BICYCLE RACK
- 12G "STOP" SIGN
- 12N MOTORCYCLE PARKING SIGN PER CITY OF ALBUQUERQUE STANDARDS
- 13A SITE LIGHT POLE. SEE PHOTOMETRIC PLANS FOR POLE BASE DETAIL, FIXTURE TYPE, AND MOUNTING DETAILS.

PARKING INFORMATION: MURPHY

DESCRIPTION	BUILDING AREA (S.F)	REQUIRED:				
		RATIO	SPACES			
MURPHY OIL	AREA	/1000 S.F.	REGULAR	ACCESSIBLE	VAN ACCESSIBLE	TOTAL
		5	6	1	1	6
STALL DIMENSIONS:		PROVIDED:				
9' X 20'		RATIO	SPACES			
		/1000 S.F.	REGULAR	ACCESSIBLE	VAN ACCESSIBLE	TOTAL
		7	6	1	1	7

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	CHORD BEARING	DELTA
C1	192.31'	1054.93'	96.42'	192.05'	N81°36'42"W	10°26'42"
C2	42.22'	25.00'	28.14'	37.38'	N38°27'13"W	96°45'40"
C3	110.99'	733.94'	55.60'	110.89'	N14°15'34"E	8°39'53"
C4	11.24'	15.00'	5.90'	10.98'	N82°29'13"E	42°55'21"

CALL BEFORE YOU DIG 1-800-321-ALERT NEW MEXICO ONE CALL SYSTEM

SHEET NO. C-1

JOHN H. NOURAD NEW MEXICO 19062 PROFESSIONAL ENGINEER

AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

SITE PLAN
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016089710

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730

A.L.T.A. / N.S.P.S. LAND TITLE SURVEY OF

TRACT C-2
SEVEN - BAR RANCH

CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
MAY, 2017

LEGEND

- Sanitary Sewer Manhole
- Power Pole w/underground feed
- Power Pole
- High Voltage Tower
- Guy Wire
- OHW — Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM — Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- —X—X— Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- —E— Underground Electric line
- —COM— Underground Communications Line
- —G— Underground Gas Line
- —W— Underground Water Line
- SAS — Sanitary Sewer Line
- SD — Storm Drain Line
- Control Point
- Wall

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	CHORD BEARING	DELTA
C1	192.31'	1054.93'	96.42'	192.05'	N81°36'42"W	10°26'42"
C2	42.22'	25.00'	28.14'	37.38'	N38°27'13"W	96°45'40"
C3	110.99'	733.94'	55.60'	110.89'	N14°15'34"E	8°39'53"
C4	11.24'	15.00'	5.90'	10.98'	N82°29'13"E	42°55'21"

GRAPHIC SCALE

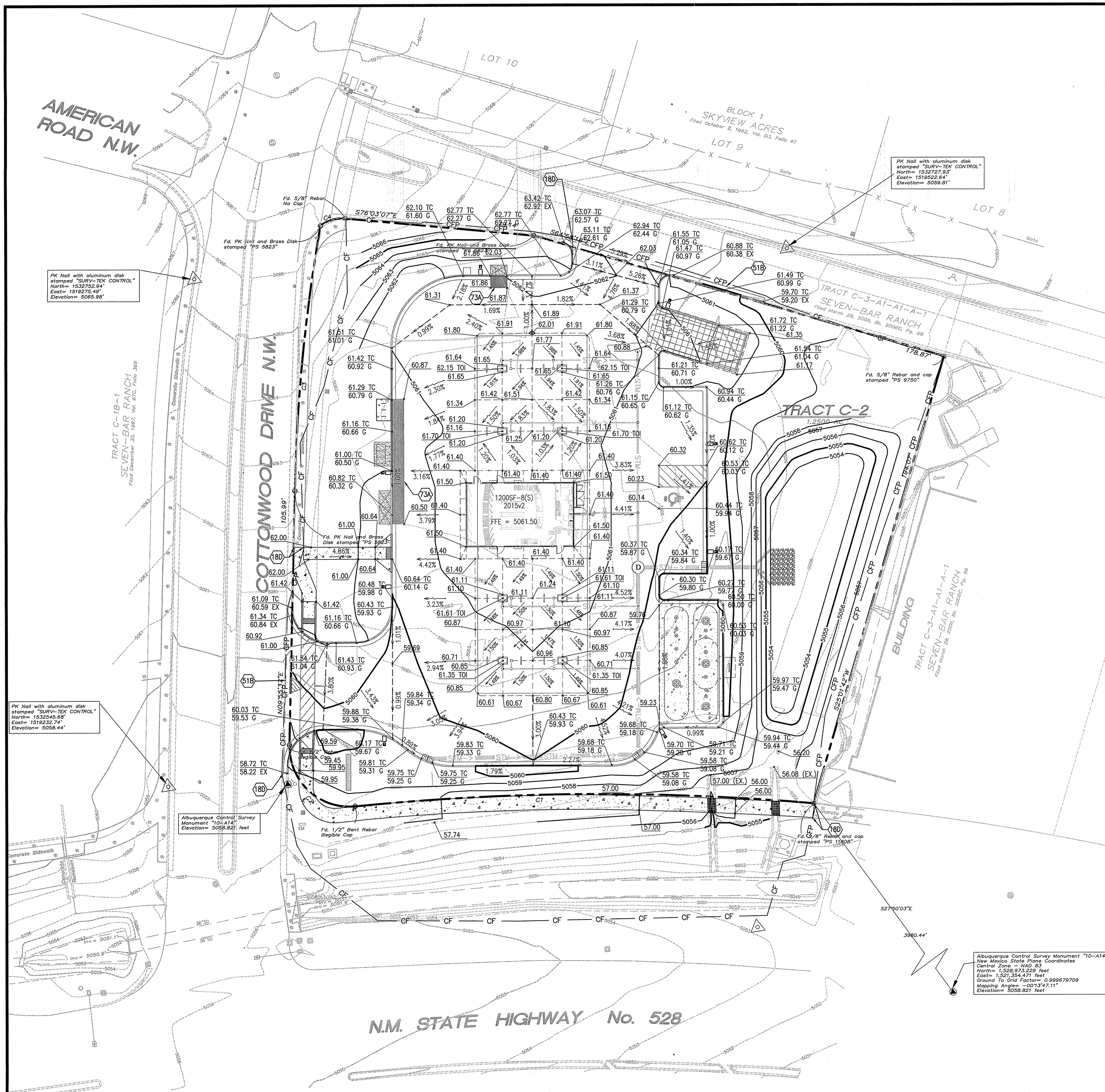
20 0 10 20 40 80

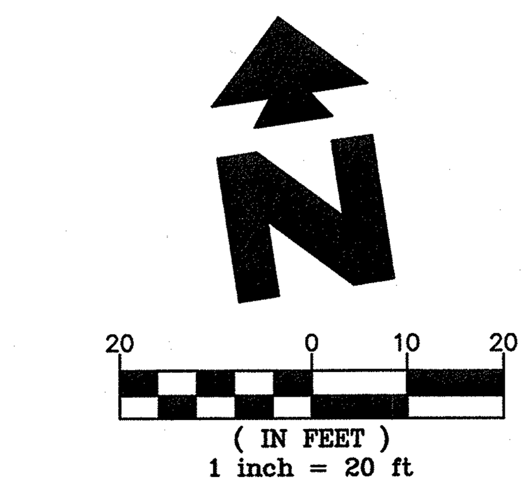
(IN FEET)
1 inch = 20 ft.

SHEET 2 OF 2

SURVTEK, INC.
Consulting Surveyors
9384 Valley View Drive, N.W. Albuquerque, New Mexico 87114
Phone: 505-897-3366
Fax: 505-897-3377

170270_5-1-17.DWG





GRADING NARRATIVE

THE EXISTING TOPOGRAPHY ON THIS SITE SLOPES FROM NORTH TO SOUTH TOWARDS THE HIGHWAY. THERE ARE EXISTING STORMWATER FLUMES IN THE SOUTHEAST CORNER OF THE SITE THE ADJACENT STREET TO THE NORTH SHEET FLOWS FROM WEST TO EAST, AND THE STREET TO THE WEST SHEET FLOWS FROM NORTH TO SOUTH. THERE IS AN EXISTING STORMWATER TRENCH TO THE SOUTH OF THE SITE. ACCORDING TO FLOOD MAP 35001C0109H (YEAR 2012) THE SITE IS IN FLOOD ZONE X AND IS NOT IN AN ESTABLISHED FLOOD PLAIN. PROPOSED GRADING IMPROVEMENTS INCLUDE A FINISHED FLOOR ELEVATION OF 5061.50' WITH SURROUNDING DRIVE AISLES AND PARKING TO MAINTAIN THE EXISTING DIRECTION OF STORMWATER FLOW AND THE CREATION OF A DEPRESSION ON THE EAST SIDE OF THE SITE FOR STORMWATER QUALITY WHERE PONDING WILL OCCUR. AREAS IN FRONT OF THE ICE MACHINE, PROPANE CAGE, AIRVAC, BIKE RACK, AND ADA ACCESSIBLE PARKING SPACE ARE TO HAVE A MAXIMUM OF 2% CROSS SLOPE.

EXISTING

- *Sanitary Sewer Manhole*
- *Power Pole w/underground feed*
- *Power Pole*
- *High Voltage Tower*
- *Guy Wire*
- OHW *Overhead Wires*
- *Water Meter*
- *Water Valve*
- *Hydrant*
- EM *Electric Meter*
- *Traffic Box*
- *Overhead Traffic Light Pole*
- —X—X— *Fence*
- *Hand Railing*
- *Light Pole*
- *Bollard*
- *Concrete Symbol*
- *Telephone Pedestal*
- —E— *Underground Electric line*
- —COM— *Underground Communications Line*
- —G— *Underground Gas Line*
- —W— *Underground Water Line*
- SAS *Sanitary Sewer Line*
- SD *Storm Drain Line*
- *Control Point*
- *Wall*

PROPOSED

- PROPERTY LINE
- CONCRETE CURB AND GUTTER
- —— XXXX —— PROPOSED CONTOUR
- —— CF —— CONSTRUCTION FENCE
- —— CFP —— CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)
- X% DRAINAGE SLOPE AND DIRECTION

SPOT ELEVATIONS:

XXXX TC	TOP OF CURB
XXXX G	GUTTER
XXXX TOI	TOP OF ISLAND
XXXX EX.	EXISTING ELEVATION
XXXX TS	TOP OF SIDEWALK

STM—> STM—> PROPOSED STORM SEWER PIPE

GENERAL GRADING NOTES

A. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS OR REQUIRED DEVIATIONS FROM THE PLAN PRIOR TO CONSTRUCTION. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION, THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

B. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

C. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

D. REFER TO GEOTECHNICAL REPORT FOR SPECIFIC SITE SOIL CONDITIONS AND CONSIDERATIONS.

E. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.

F. ALL HDPE SHALL BE N-12 WT IB (OR EQUIVALENT) WITH SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS. 4"-60" PIPE SHALL MEET ASTM F2648 (OR AASHTO M252 TYPE S) REQUIREMENTS, AND SHALL HAVE A MINIMUM MANNINGS "n" DESIGN VALUE OF 0.012. JOINTS SHALL BE WATERTIGHT ACCORDING TO ASTM D3212 (OR AASHTO M252. M294) REQUIREMENTS. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. JOINT PERFORMANCE, FITTINGS, MATERIAL PROPERTIES, AND INSTALLATION SHALL BE DONE PER THE COMPLETE ADS SPECIFICATION FOR ADS N-12 WT IB PIPE FOUND IN THE ADS, INC. DRAINAGE HANDBOOK, LATEST EDITION.

G. IF USING HDPE PERFORATED PIPE FOR SUBSURFACE DRAINAGE AND DETENTION/RETENTION SYSTEMS, THE PERFORATIONS SHALL MEET THE AASHTO CLASS II STANDARD PERFORATION PATTERN REQUIREMENTS.

H. ALL STORM SEWER LINES 18"-54" DIAMETER ARE TO BE REINFORCED CONCRETE PIPE ACCORDING TO ASTM C-76 TYPE III UNLESS OTHERWISE INDICATED.

I. SPOT ELEVATIONS SHORTENED FOR CLARITY. ADD 5000 TO ELEVATIONS SHOWN.

GRADING NOTES

18D	MATCH EXISTING PAVEMENT ELEVATIONS
51B	LIMITS OF SAWCUT AND PAVEMENT REMOVAL.
73A	2% MAXIMUM SLOPE

CALL BEFORE YOU DIG
1-800-321-ALERT
NEW MEXICO ONE CALL SYSTEM

SHEET NO.
C-3

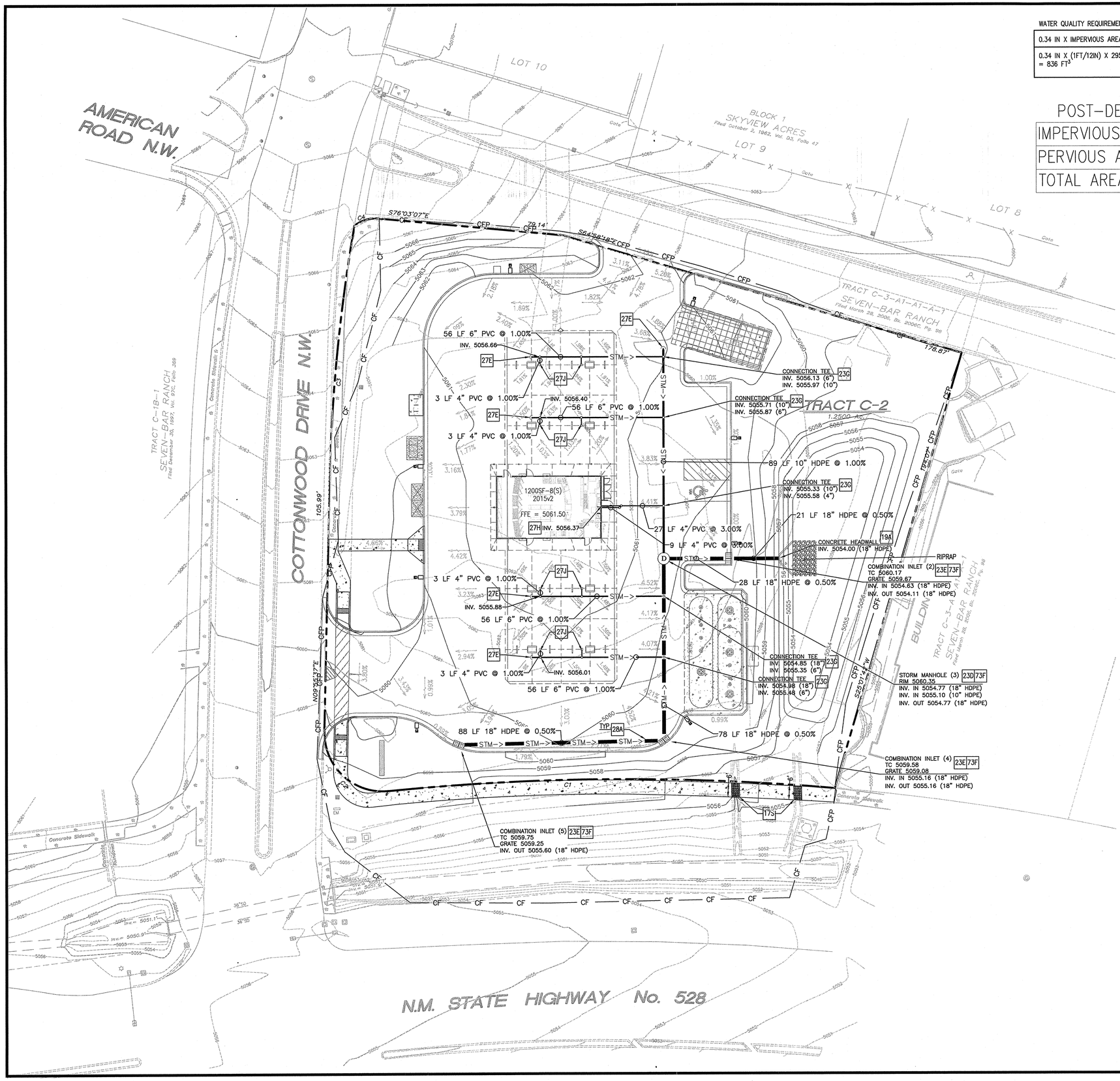
JOHN H. NOURZAD
NEW MEXICO
19062
PROFESSIONAL ENGINEER
AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

GRADING PLAN
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601-4000
FAX: (404) 601-3970
DWG NAME: ALBUQUERQUE, NM
JOB NO: 20160897.0

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



WATER QUALITY REQUIREMENT

0.34 IN X IMPERVIOUS AREA:
0.34 IN X (1FT/12IN) X 29510 FT^2 = 836 FT^3

POST-DEV LAND USE

IMPERVIOUS AREA	0.68 AC
PERVIOUS AREA	0.57 AC
TOTAL AREA	1.25 AC

20 0 10 20
(IN FEET)
1 inch = 20 ft

EXISTING

- Sanitary Sewer Manhole
- Power Pole
- Power Pole w/underground feed
- High Voltage Tower
- Guy Wire
- OHW — Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM — Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- X—X— Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- E — Underground Electric line
- COM — Underground Communications Line
- G — Underground Gas Line
- W — Underground Water Line
- SAS — Sanitary Sewer Line
- SD — Storm Drain Line
- Control Point
- Wall

PROPOSED

- PROPERTY LINE
- CONCRETE CURB AND GUTTER
- XXXX — PROPOSED CONTOUR
- CF — CONSTRUCTION FENCE
- CFP — CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)
- DRAINAGE SLOPE AND DIRECTION
- STM-> STM-> PROPOSED STORM SEWER PIPE

GENERAL GRADING NOTES

A. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS OR REQUIRED DEVIATIONS FROM THE PLAN PRIOR TO CONSTRUCTION. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION, THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

B. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

C. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

D. REFER TO GEOTECHNICAL REPORT FOR SPECIFIC SITE SOIL CONDITIONS AND CONSIDERATIONS.

E. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.

F. ALL HDPE SHALL BE N-12 WT IB (OR EQUIVALENT) WITH SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS. 4"-60" PIPE SHALL MEET ASTM F2648 (OR AASHTO M252 TYPE S) REQUIREMENTS, AND SHALL HAVE A MINIMUM MANNINGS "n" DESIGN VALUE OF 0.012. JOINTS SHALL BE WATERTIGHT ACCORDING TO ASTM D3212 (OR AASHTO M252, M294) REQUIREMENTS. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. JOINT PERFORMANCE, FITTINGS, MATERIAL PROPERTIES, AND INSTALLATION SHALL BE DONE PER THE COMPLETE ADS SPECIFICATION FOR ADS N-12 WT IB PIPE FOUND IN THE ADS, INC. DRAINAGE HANDBOOK, LATEST EDITION.

G. IF USING HDPE PERFORATED PIPE FOR SUBSURFACE DRAINAGE AND DETENTION/RETENTION SYSTEMS, THE PERFORATIONS SHALL MEET THE AASHTO CLASS II STANDARD PERFORATION PATTERN REQUIREMENTS.

H. ALL STORM SEWER LINES 18"-54" DIAMETER ARE TO BE REINFORCED CONCRETE PIPE ACCORDING TO ASTM C-76 TYPE III UNLESS OTHERWISE INDICATED.

☐ STORM DETAILS – SEE DETAIL SHEETS

17S	EXISTING FLUME WITH STEEL PLATE/SIDEWALK
19A	CONCRETE HEADWALL
23O	STORM DRAIN MANHOLE
23E	COMBINATION INLET
23G	TEE CONNECTION (INSERTA TEE OR EQUIVALENT WATER TIGHT CONNECTION)
27E	STORM DRAIN CLEAN-OUT
27H	ROOF DRAIN DOWNSPOUT CONNECTION
27J	CANOPY DRAIN DOWNSPOUT CONNECTION
28A	STORM SEWER TRENCH AND BEDDING
73F	WATERSTOP STRUCTURE CONNECTION FOR HDPE PIPE

CALL BEFORE YOU DIG 1-800-321-ALERT NEW MEXICO ONE CALL SYSTEM

SHEET NO. C-3.1

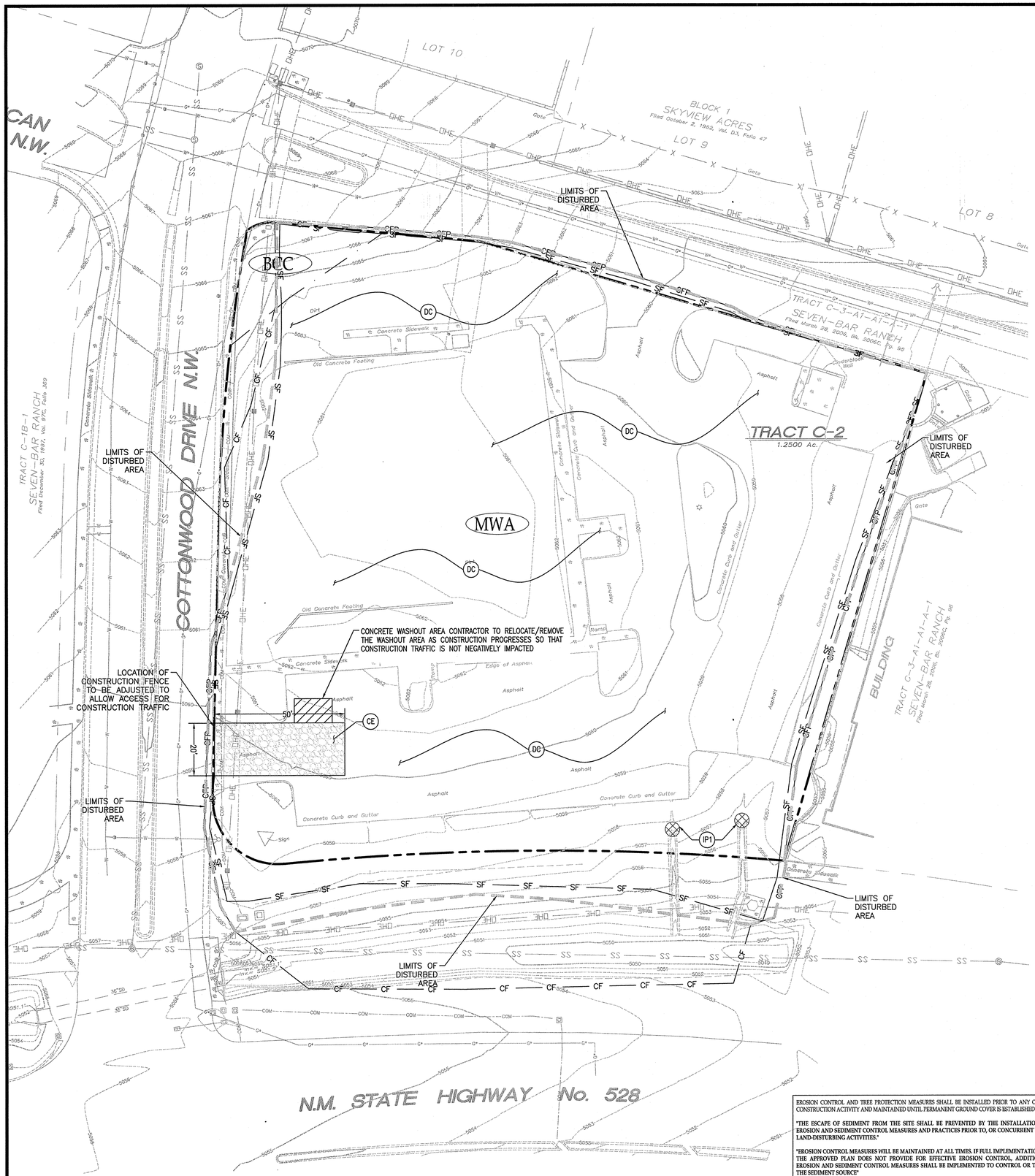
JOHN H. NOURZAD NEW MEXICO 19062 PROFESSIONAL ENGINEER
AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

STORM SEWER PLAN
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW, SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016069710

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730



GENERAL EROSION NOTES

A. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THIS STORM WATER POLLUTION PREVENTION PLAN. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

B. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

C. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

D. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN, OR AS REQUIRED BY THE APPLICABLE GENERAL PERMIT. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.

E. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWNSTREAM SIDES AS NEEDED.

F. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

G. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

H. DUST ON THE SITE SHALL BE MINIMIZED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

I. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

J. ALL DENUDED/BARE AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE. MUST BE STABILIZED IMMEDIATELY UPON COMPLETION OF MOST RECENT GRADING ACTIVITY, WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKETS.

K. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDED, SODDED, AND/OR VEGETATED IMMEDIATELY, OR STABILIZED AS SHOWN ON PLANS, NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

L. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO PREVENT TRACKING OF DIRT, DUST OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.

M. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

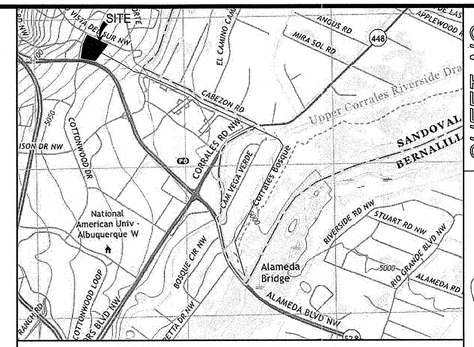
N. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

O. ON-SITE AND OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

P. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

Q. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.

R. GENERAL CONTRACTOR IS TO DESIGNATE/IDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.



USGS QUADRANGLE MAP
N.T.S.

EXISTING

- Sanitary Sewer Manhole
- Power Pole
- Power Pole w/underground feed
- High Voltage Tower
- Guy Wire
- OHW — Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM — Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- X — X — Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- E — Underground Electric line
- COM — Underground Communications Line
- G — Underground Gas Line
- W — Underground Water Line
- SAS — Sanitary Sewer Line
- SD — Storm Drain Line
- Control Point
- Wall

PROPOSED

- BOUNDARY LINE
- CF — CONSTRUCTION FENCE
- LIMITS OF DISTURBED AREA
- CFP — CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)
- ## — SOIL TYPE DESIGNATION
- SOIL TYPE BOUNDARY LINE

SEQUENCE OF CONSTRUCTION

PHASE I
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. INSTALL ALL PERIMETER SEDIMENT MEASURES.
5. INSTALL ALL TEMPORARY EROSION & SEDIMENT CONTROLS AS NEEDED.
6. INSTALL FLUME PROTECTION DEVICES
7. CLEAR AND GRUB THE SITE.
8. BEGIN GRADING THE SITE.

PHASE II

9. START CONSTRUCTION OF BUILDING PAD, STRUCTURES, AND OFF-SITE IMPROVEMENTS.
10. TEMPORARILY SEED DENUDED AREAS.
11. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
12. INSTALL INLET PROTECTION DEVICES.
13. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
14. PREPARE SITE FOR PAVING.
15. PAVE SITE.
16. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
17. REMOVE EROSION AND TEMPORARY SEDIMENT CONTROL DEVICES AFTER FINAL STABILIZATION IS ACHIEVED.

BMP MAINTENANCE NOTES

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURE SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRED PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. FILTER TUBES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM TUBES WHEN IT REACHES ½ OF ITS EXPOSED HEIGHT. SEE DETAILS.
7. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

PROJECT INFORMATION

RECEIVING WATER IS UN-NAMED LOCAL DEPRESSION. DEPRESSION EVENTUALLY CONNECTS TO THE RIO GRANDE ± 1 MILE FROM THE PROJECT SITE

PROPOSED PROJECT SITE MADE UP OF AN EXISTING COMMERCIAL LOT. STORM RUN-OFF FROM SITE WILL PIPE INTO THE PROPOSED DETENTION POND CONSTRUCTED TO ACCOMMODATE STORM RUN-OFF FOR THE GAS STATION.

PROPOSED PROJECT IS CONSTRUCTING A GAS STATION CONSISTING OF 1200 S.F. CONVENIENT STORE WITH (8) PUMP ISLANDS AND ASSOCIATED PARKING AREA.

ACREAGE OF SITE IS 1.25 ACRES.

DISTURBED ACREAGE OF SITE (INCLUDING OFF-SITE WORK) IS 1.25 ACRES.

ANTICIPATED CONSTRUCTION START DATE IS APRIL 2018 AND COMPLETION DATE IS JULY 2018.

CONTRACTOR TO TAKE APPROPRIATE MEASURES TO KEEP SEDIMENT FROM ESCAPING SITE AND ALL ACCUMULATED SEDIMENT SHALL BE CLEANED OUT AND REMOVED FROM SITE.

DOWNSTREAM CONDITION WILL NOT BE NEGATIVELY AFFECTED BY PROPOSED DEVELOPMENT.

EROSION DETAILS – SEE DETAIL SHEET C-4.2

- CE — STABILIZED CONSTRUCTION ACCESS
- SF — SEDIMENTATION\SILT FENCE WITH WIRE SUPPORT
- DC — DUST CONTROL (USING: PHASING OF THE PROJECT, MULCH, SPRINKLING WATER, SPRAY-ON-ADHESIVE, CALCIUM CHLORIDE, BARRIERS, ETC.)
- IP1 — TEMP. BLOCK AND AGGREGATE FLUME SEDIMENT FILTER

SITE SOILS

MWA — MADUREZ-WINK ASSOCIATION
BCC — BLUEPOINT LOAMY FINE SAND

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

"THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES."

"EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE"

24 HR EMERGENCY CONTACT:
JASON LAIRD 870-866-7681

N

20 0 10 20
(IN FEET)
1 inch = 20 ft

SHEET NO. C-4

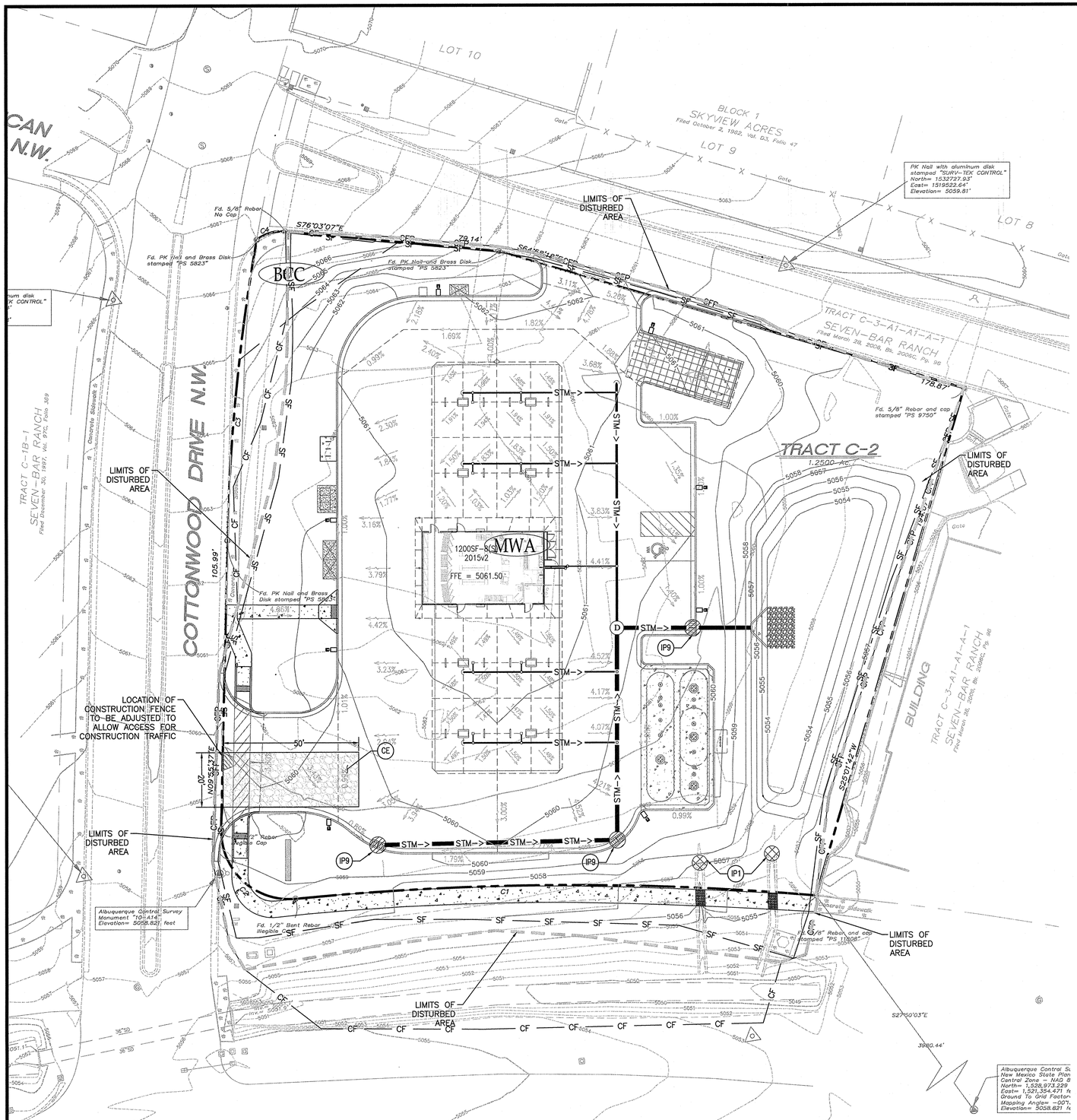
JOHN H. NOURZAD
NEW MEXICO
19062
PROFESSIONAL ENGINEER
AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

EROSION CONTROL PHASE 1
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 5970
DWG NAME: A1BQUERQUE.NM
JOB NO.: 2016089.0

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



GENERAL EROSION NOTES

A. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THIS STORM WATER POLLUTION PREVENTION PLAN. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

B. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

C. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

D. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN, OR AS REQUIRED BY THE APPLICABLE GENERAL PERMIT. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.

E. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWNSTREAM SIDES AS NEEDED.

F. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

G. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

H. DUST ON THE SITE SHALL BE MINIMIZED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

I. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

J. ALL DENUDED/BARE AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE. MUST BE STABILIZED IMMEDIATELY UPON COMPLETION OF MOST RECENT GRADING ACTIVITY, WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKETS.

K. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDED, SODDED, AND/OR VEGETATED IMMEDIATELY, OR STABILIZED AS SHOWN ON PLANS, NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

L. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO PREVENT TRACKING OF DIRT, DUST OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.

M. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

N. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

O. ON-SITE AND OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

P. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

Q. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.

R. GENERAL CONTRACTOR IS TO DESIGNATE/IDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.

SEQUENCE OF CONSTRUCTION

PHASE I
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. INSTALL ALL PERIMETER SEDIMENT MEASURES.
5. INSTALL ALL TEMPORARY EROSION & SEDIMENT CONTROLS AS NEEDED.
6. INSTALL FLUME PROTECTION DEVICES
7. CLEAR AND GRUB THE SITE.
8. BEGIN GRADING THE SITE.

PHASE II

9. START CONSTRUCTION OF BUILDING PAD, STRUCTURES, AND OFF-SITE IMPROVEMENTS.
10. TEMPORARILY SEED DENUDED AREAS.
11. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
12. INSTALL INLET PROTECTION DEVICES.
13. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
14. PREPARE SITE FOR PAVING.
15. PAVE SITE.
16. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
17. REMOVE EROSION AND TEMPORARY SEDIMENT CONTROL DEVICES AFTER FINAL STABILIZATION IS ACHIEVED.

BMP MAINTENANCE NOTES

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURE SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

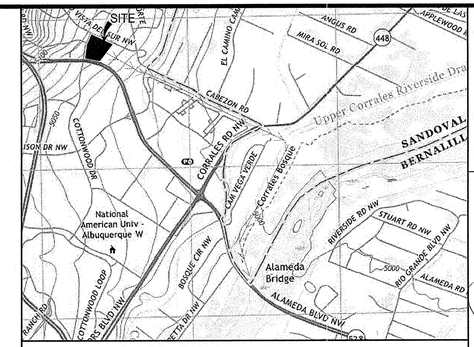
1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRED PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. FILTER TUBES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM TUBES WHEN IT REACHES ½ OF ITS EXPOSED HEIGHT. SEE DETAILS.
7. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

"THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES."

"EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE"

24 HR EMERGENCY CONTACT:
JASON LAIRD 870-866-7681



USGS QUADRANGLE MAP
N.T.S.

EXISTING

- Sanitary Sewer Manhole
- Power Pole
- Power Pole w/underground feed
- High Voltage Tower
- Guy Wire
- OHW Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- X—X Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- E Underground Electric line
- COM Underground Communications Line
- G Underground Gas Line
- W Underground Water Line
- SAS Sanitary Sewer Line
- SD Storm Drain Line
- Control Point
- Wall

PROPOSED

- BOUNDARY LINE
- CF CONSTRUCTION FENCE
- LIMITS OF DISTURBED AREA
- CFP CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)
- ## SOIL TYPE DESIGNATION

PROJECT INFORMATION

RECEIVING WATER IS UN-NAMED LOCAL DEPRESSION. DEPRESSION EVENTUALLY CONNECTS TO THE RIO GRANDE ± 1 MILE FROM THE PROJECT SITE

PROPOSED PROJECT SITE MADE UP OF AN EXISTING COMMERCIAL LOT. STORM RUN-OFF FROM SITE WILL PIPE INTO THE PROPOSED DETENTION POND CONSTRUCTED TO ACCOMMODATE STORM RUN-OFF FOR THE GAS STATION.

PROPOSED PROJECT IS CONSTRUCTING A GAS STATION CONSISTING OF 1200 S.F. CONVENIENT STORE WITH (8) PUMP ISLANDS AND ASSOCIATED PARKING AREA.

ACREAGE OF SITE IS 1.25 ACRES.

DISTURBED ACREAGE OF SITE (INCLUDING OFF-SITE WORK) IS 1.25 ACRES.

ANTICIPATED CONSTRUCTION START DATE IS APRIL 2018 AND COMPLETION DATE IS JULY 2018.

CONTRACTOR TO TAKE APPROPRIATE MEASURES TO KEEP SEDIMENT FROM ESCAPING SITE AND ALL ACCUMULATED SEDIMENT SHALL BE CLEANED OUT AND REMOVED FROM SITE.

DOWNSTREAM CONDITION WILL NOT BE NEGATIVELY AFFECTED BY PROPOSED DEVELOPMENT.

EROSION DETAILS – SEE DETAIL SHEET C-4.2

	CE	STABILIZED CONSTRUCTION ACCESS
	PS	PERMANENT STABILIZATION. SEE LANDSCAPE PLANS
SF		SEDIMENTATION\SILT FENCE WITH WIRE SUPPORT
	IP1	TEMP. BLOCK AND AGGREGATE FLUME SEDIMENT FILTER
	IP9	INLET SEDIMENT FILTER SECK

SITE SOILS

MWA	MADUREZ-WINK ASSOCIATION
BCC	BLUEPOINT LOAMY FINE SAND

N

20 0 10 20
(IN FEET)
1 inch = 20 ft

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

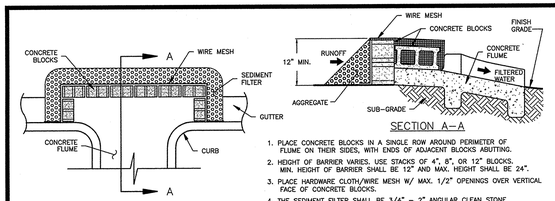
EROSION CONTROL PHASE 2
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

SHEET NO. C-4.1

JOHN H. NOURZAD
NEW MEXICO
19052
PROFESSIONAL ENGINEER
AUG 2 3 2017

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA. 30309
PHONE: (404) 601 4000
FAX: (404) 601 5970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016057.0

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



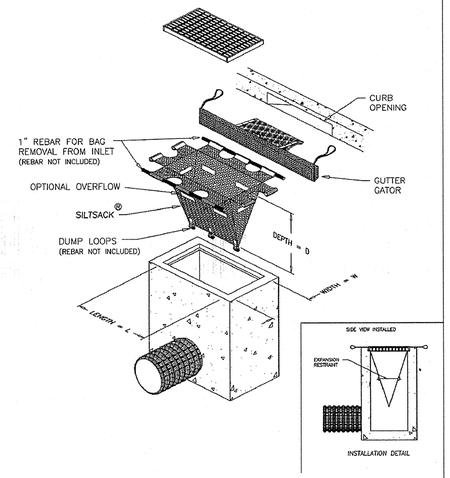
1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF FLUME ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4", 8", OR 12" BLOCKS. MIN. HEIGHT OF BARRIER SHALL BE 12" AND MAX. HEIGHT SHALL BE 24".
3. PLACE HARDWARE CLOTH/WIRE MESH W/ MAX. 1/2" OPENINGS OVER VERTICAL FACE OF CONCRETE BLOCKS.
4. THE SEDIMENT FILTER SHALL BE 3/4" – 2" ANGULAR CLEAN STONE WHICH WILL SLOW THE FLOW OF WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE FLUME.

TEMPORARY BLOCK AND AGGREGATE FLUME SEDIMENT FILTER (IP1)

N.T.S.

CONSTRUCTION ENTRANCE (CE)

N.T.S.



DETAIL OF INLET SEDIMENT CONTROL DEVICE WITH GUTTER GATOR

Environmental
Your Complete Source for Geosynthetic Solutions

ACF Environmental, Inc.
2631 Cardwell Rd.
Richmond, Virginia 23234
(800) 448-3636

SILTSACK ® GUTTER GATOR ® COMBINATION SPECIFICATIONS

NOTE: THE SILTSACK ® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK ®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS	
GRAB TENSILE STRENGTH	ASTM D-4632		300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632		20 %
PUNCTURE	ASTM D-4833		120 LBS
MULLEN BURST	ASTM D-3786		600 PSI
TRAPEZOID TEAR	ASTM D-4533		120 LBS
UV RESISTANCE	ASTM D-4355		90 %
APPARENT OPENING SIZE	ASTM D-4751		40 US SIEVE
FLOW RATE	ASTM D-4491		40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491		0.55 SEC -1

HI-FLOW SILTSACK ®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

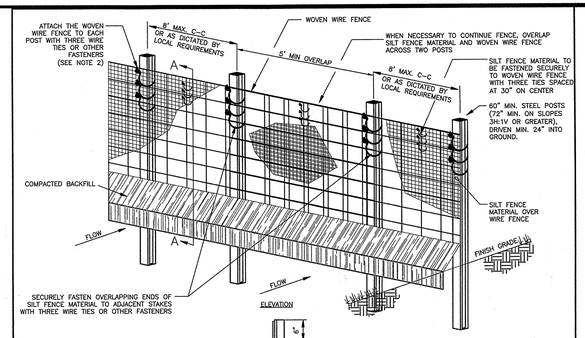
PROPERTIES	TEST METHOD	UNITS	
GRAB TENSILE STRENGTH	ASTM D-4632		265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632		20 %
PUNCTURE	ASTM D-4833		125 LBS
MULLEN BURST	ASTM D-3786		420 PSI
TRAPEZOID TEAR	ASTM D-4533		45 LBS
UV RESISTANCE	ASTM D-4355		70 %
APPARENT OPENING SIZE	ASTM D-4751		20 US SIEVE
FLOW RATE	ASTM D-4491		200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491		1.5 SEC -1

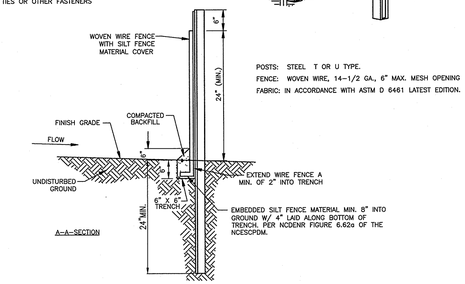
OIL-ABSORBANT SILTSACK ®
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK WITH A WOVEN PILLOW INSERT.

INLET SEDIMENT FILTER SACK (IP9)

N.T.S.





POSTS: STEEL T OR U TYPE
FENCE: WOVEN WIRE, 14-1/2 GA., 6" MAX. MESH OPENING
FABRIC: IN ACCORDANCE WITH ASTM D 6461 LATEST EDITION.

1. INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION.
2. ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. ALSO, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
3. WHEN TWO SECTIONS OF SILT FENCE MATERIAL ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 6O" ACROSS TWO POSTS, AS SHOWN.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE FENCE. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF THE SILT FENCE MATERIAL ABOVE GRADE.
5. ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS THE STATIC SLICING EQUIPMENT IS UTILIZED TO INSTALL THE FENCE PER FIGURE 6.62a OF THE NCESCPDM.
6. WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
7. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH. COMPACT THE UPSTREAM SIDE FIRST. COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.
8. ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS.

SEDIMENTATION/SILT FENCE WITH WIRE SUPPORT (SF)

N.T.S.

SHEET NO. C-4.2

JOHN H. NOURZAD NEW MEXICO 13062 PROFESSIONAL ENGINEER

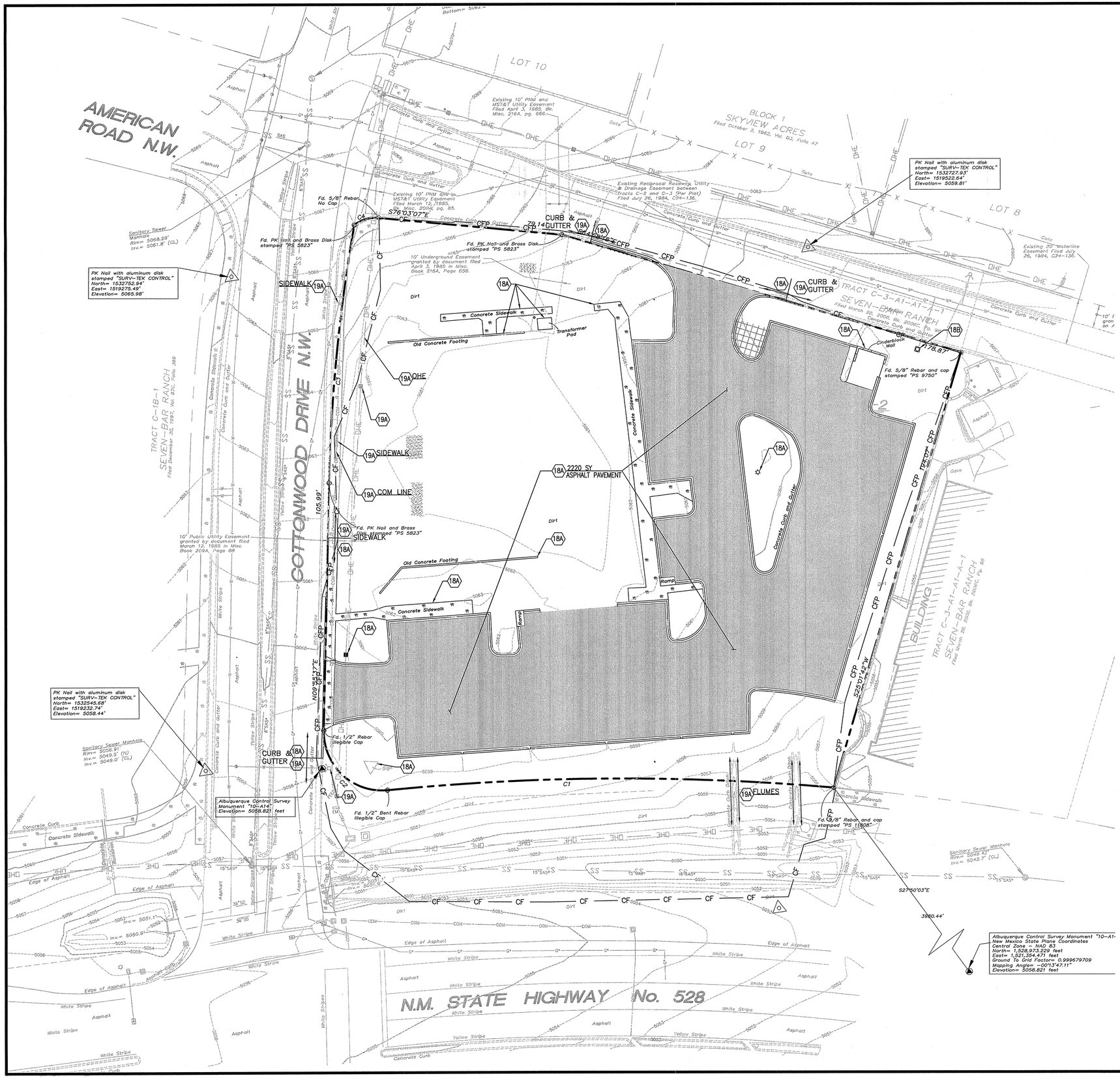
AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

E&S CONTROL DETAILS
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3570
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016059710



EXISTING

- Sanitary Sewer Manhole
- Power Pole w/underground feed
- Power Pole
- High Voltage Tower
- Guy Wire
- OHW — Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM — Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- X — Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- E — Underground Electric line
- COM — Underground Communications Line
- G — Underground Gas Line
- W — Underground Water Line
- SAS — Sanitary Sewer Line
- SD — Storm Drain Line
- Control Point
- Wall

PROPOSED

- BOUNDARY LINE
- CF — CONSTRUCTION FENCE (SEE DETAIL SHEETS)
- CFP — CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)

GENERAL DEMOLITION NOTES

A. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.

B. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

C. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

D. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

DEMOLITION NOTES

- 18A EXISTING TO BE REMOVED
- 19A EXISTING TO REMAIN
- 51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL.

SHEET NO. C-5

JOHN H. NOURSE NEW MEXICO 19062 PROFESSIONAL ENGINEER

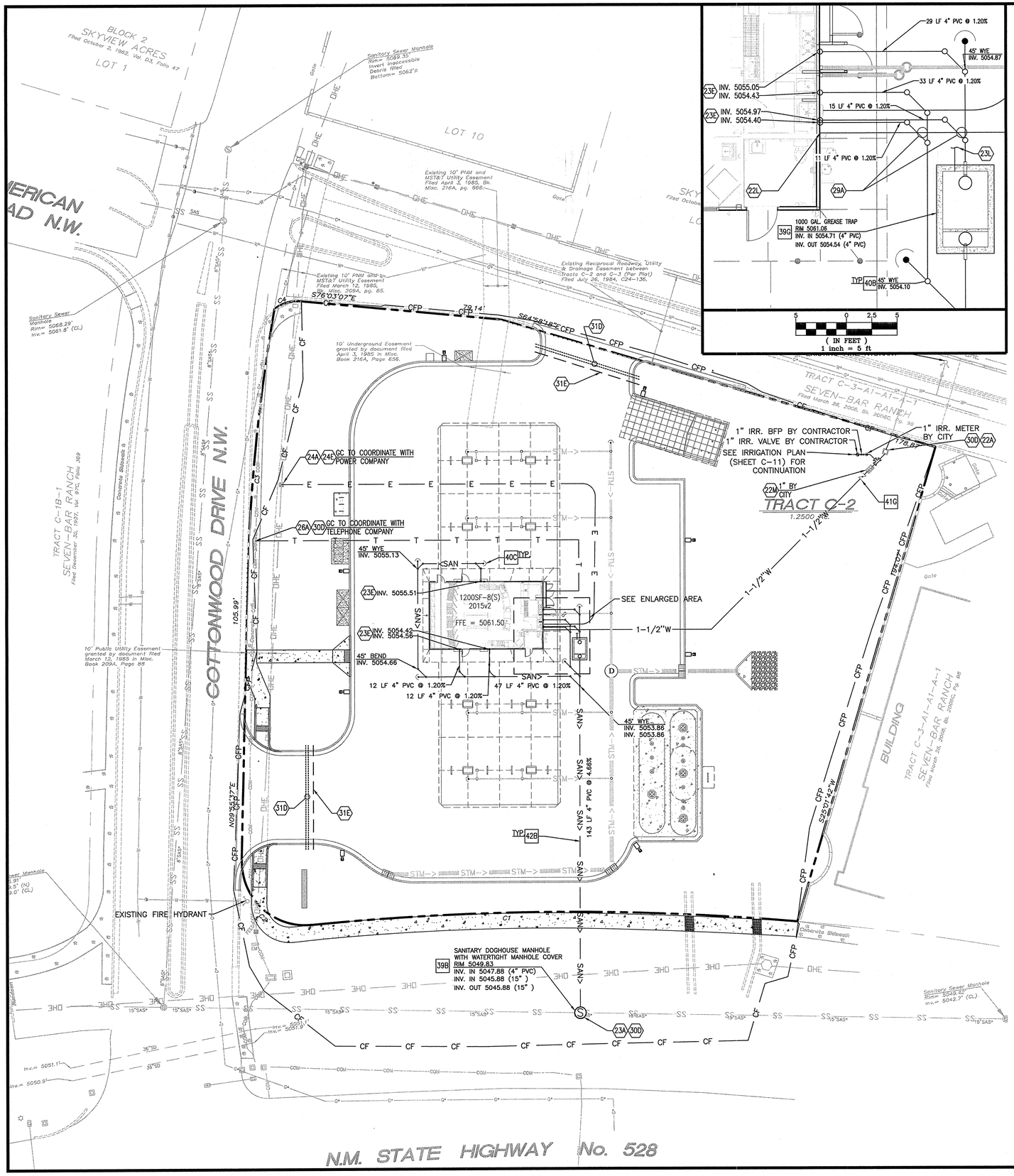
AUG 23 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

DEMOLITION PLAN
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

Greenberg Farrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016059710

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



UTILITY CONTACT INFORMATION

ELECTRIC
SUZANNE MARQUEZ
ENGINEERING TECHNICIAN
PNM PUBLIC SERVICE CO.
4201 EDITH BOULEVARD NE
ALBUQUERQUE, NM 87107
PHONE: (505) 241-3479
CELL: (505) 450-8641
SUZANNE.MARQUEZ@PNM.COM

TELEPHONE
CONTACT: CHUCK AVENT
SUPERVISOR, PLANT FACILITIES
CENTURYLINK
PHONE: (505) 514-6473
CHUCK.AVENT@CENTURYLINK.COM

WATER AND SEWER
KRISTOPHER CADENA, P.E.
CITY OF ALBUQUERQUE
UTILITY DEVELOPMENT SECTION
600 2ND ST., NW, SUITE 201
ALBUQUERQUE, NM 87102
PHONE: (505) 289-3301

UTILITY INSTALLATION RESPONSIBILITIES

ELECTRIC RESPONSIBILITY			
	GENERAL CONTRACTOR	UTILITY PROVIDER	N/A
CONDUIT / TRENCH	X		
TRANSFORMER PAD			X
CT CABINET	X		
EASEMENTS (TRANSFORMER)			X
EASEMENTS (SECONDARY LINE)			X

TELEPHONE RESPONSIBILITY			
	GENERAL CONTRACTOR	UTILITY PROVIDER	N/A
CONDUIT / TRENCH	X		
PULL STRINGS			X

WATER RESPONSIBILITY			
	GENERAL CONTRACTOR	UTILITY PROVIDER	N/A
TAP	X		
DOMESTIC METER		X	
DOMESTIC BFP	X		
IRRIGATION METER		X	
IRRIGATION BFP	X		
HYDRANT			X
EASEMENTS			X

SEWER RESPONSIBILITY			
	GENERAL CONTRACTOR	UTILITY PROVIDER	N/A
TAP	X		
EASEMENTS			X

UTILITY FEE SCHEDULE

WATER & SANITARY SEWER FEES TO BE PAID BY MURPHY:
WATER:
$5,076.00 IMPACT FEE
$ 304.00 DOMESTIC METER, TAP & RPZ
$5,380.00 TOTAL

SANITARY SEWER:
$3,808.00 IMPACT FEE
$3,808.00 TOTAL

METER SIZES

DOMESTIC: 1"
IRRIGATION: 1"

CALL BEFORE YOU DIG 1-800-321-ALERT NEW MEXICO ONE CALL SYSTEM

EXISTING

- Sanitary Sewer Manhole
- Power Pole w/underground feed
- Power Pole
- High Voltage Tower
- Guy Wire
- Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- Underground Electric line
- Underground Communications Line
- Underground Gas Line
- Underground Water Line
- Sanitary Sewer Line
- Storm Drain Line
- Control Point
- Wall

PROPOSED LEGEND

- BOUNDARY LINE
- SAN> SANITARY SEWER SERVICE
- E UNDERGROUND ELECTRIC SERVICE
- T UNDERGROUND TELEPHONE SERVICE
- 1-1/4"W WATER SERVICE
- CF CONSTRUCTION FENCE (SEE CIVIL DETAILS)
- CFP CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)

GENERAL UTILITY NOTES

A. ALL BUILDING WATER LINES FROM METER TOWARDS BUILDING SHALL BE SCHEDULE 40 PVC, MEETING ASTM D1785 & D2665 SPECIFICATIONS, AND SHALL BE RATED FOR USE WITH POTABLE WATER PER NSF STD. 61 & STD.14 , WITH 36" MIN. COVER.

B. ALL SANITARY SEWER LINES SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, PROVIDE 36" MINIMUM COVER.

C. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

D. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

E. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.

F. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM GREENBERGFARROW ENGINEERS AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF (72) HOURS PRIOR TO CONSTRUCTION. GREENBERGFARROW AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

G. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.

⬡ UTILITY NOTES

22A POINT OF CONNECTION – WATER SERVICE.
22L METERED DOMESTIC WATER SERVICE ENTRY PER BLDG PLUMBING PLAN (SEE SIZES THIS SHEET)
22M PROPOSED WATER METER (SEE SIZE THIS SHEET)
23A POINT OF CONNECTION – SANITARY SEWER SERVICE.
23E SANITARY SEWER SERVICE ENTRY (PER BUILDING MECHANICAL PLANS)
23L CONNECT GREASE TRAP VENT TO BUILDING VENT SYSTEM. GREASE TRAP VENT INVERT MUST BE HIGHER THAN INLET INVERT.
24A POINT OF CONNECTION FOR UNDERGROUND ELECTRIC SERVICE.
24E PROPOSED POLE MOUNTED TRANSFORMER
26A POINT OF CONNECTION FOR UNDERGROUND TELEPHONE.
29A MAINTAIN MIN. 18" VERTICAL SEPARATION.
30D VERIFY LOCATION AND DEPTH OF EXISTING UTILITY BEFORE CONSTRUCTING PROPOSED UTILITY
31D INSTALL (2) 4" PVC SLEEVES 30" BELOW FINAL GRADE UNDER DRIVEWAY. EXTEND SLEEVES 2 FEET BEYOND BACK OF PROPOSED CURB OR EDGE OF PAVEMENT. STAKE BOTH ENDS OF EACH SLEEVE WITH CAPPED VERTICAL PVC PIPE, 12" ABOVE GRADE. DO NOT ALLOW SOIL OR WATER TO ENTER SLEEVES DURING OR AFTER CONSTRUCTION.
31E INSTALL (1) 4" PVC SLEEVE 30" BELOW FINAL GRADE UNDER DRIVEWAY FOR IRRIGATION LINE. EXTEND SLEEVE 2 FEET BEYOND BACK OF PROPOSED CURB OR EDGE OF PAVEMENT. STAKE BOTH ENDS OF SLEEVE WITH CAPPED VERTICAL PVC PIPE, 12" ABOVE GRADE. DO NOT ALLOW SOIL OR WATER TO ENTER SLEEVE DURING OR AFTER CONSTRUCTION.

☐ UTILITY DETAILS – SEE DETAIL SHEETS

39B SANITARY SEWER "DOGHOUSE" MANHOLE
39G SANITARY SEWER GREASE TRAP
40B SANITARY SEWER WYE CONNECTION
40C SANITARY SEWER CLEAN-OUT
41G REDUCED PRESSURE ZONE BACKFLOW PREVENTER. CONTRACTOR TO VERIFY TYPE (ABOVE/UNDERGROUND) PRIOR TO COMMENCING CONSTRUCTION.
42B SANITARY SEWER TRENCHING AND BEDDING.

SHEET NO. C-6

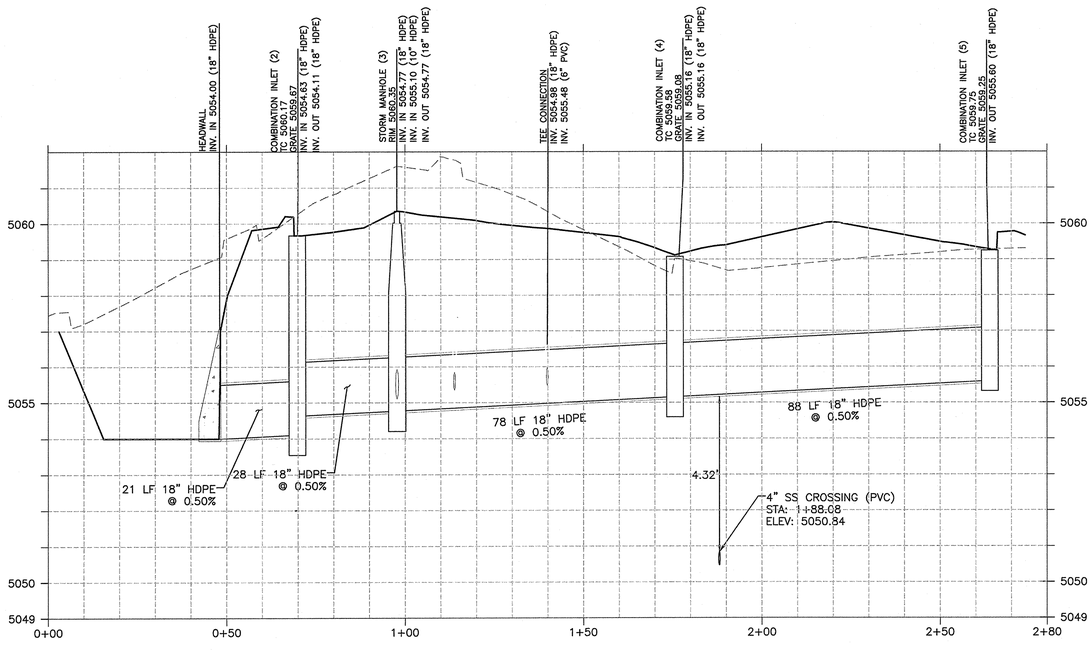
JOHN H. KOURZAD NEW MEXICO 19062 PROFESSIONAL ENGINEER
AUG 23 2017

REV-0	08-23-17	JN	DS	DS	DS	DRW
	DATE	PRN	PM	DES		

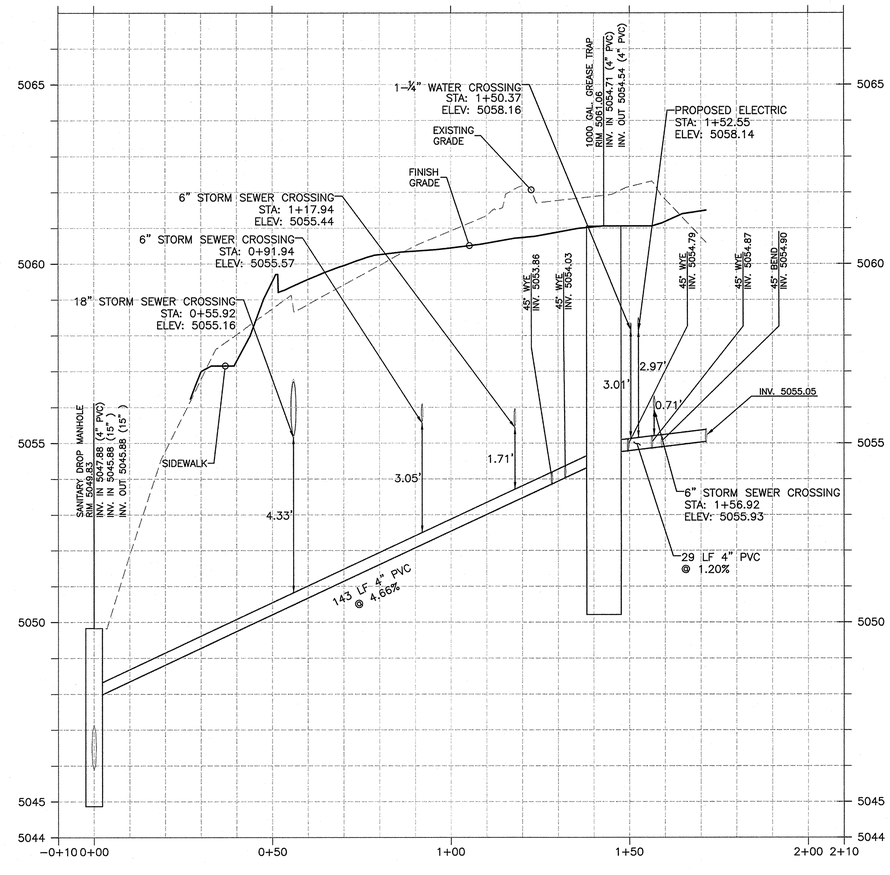
UTILITY PLAN
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016059.10

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



STORM
VERTICAL SCALE: 1"=2'
HORIZONTAL SCALE: 1"=20'



SANITARY SEWER
VERTICAL SCALE: 1"=2'
HORIZONTAL SCALE: 1"=20'

SHEET NO. C-6.1

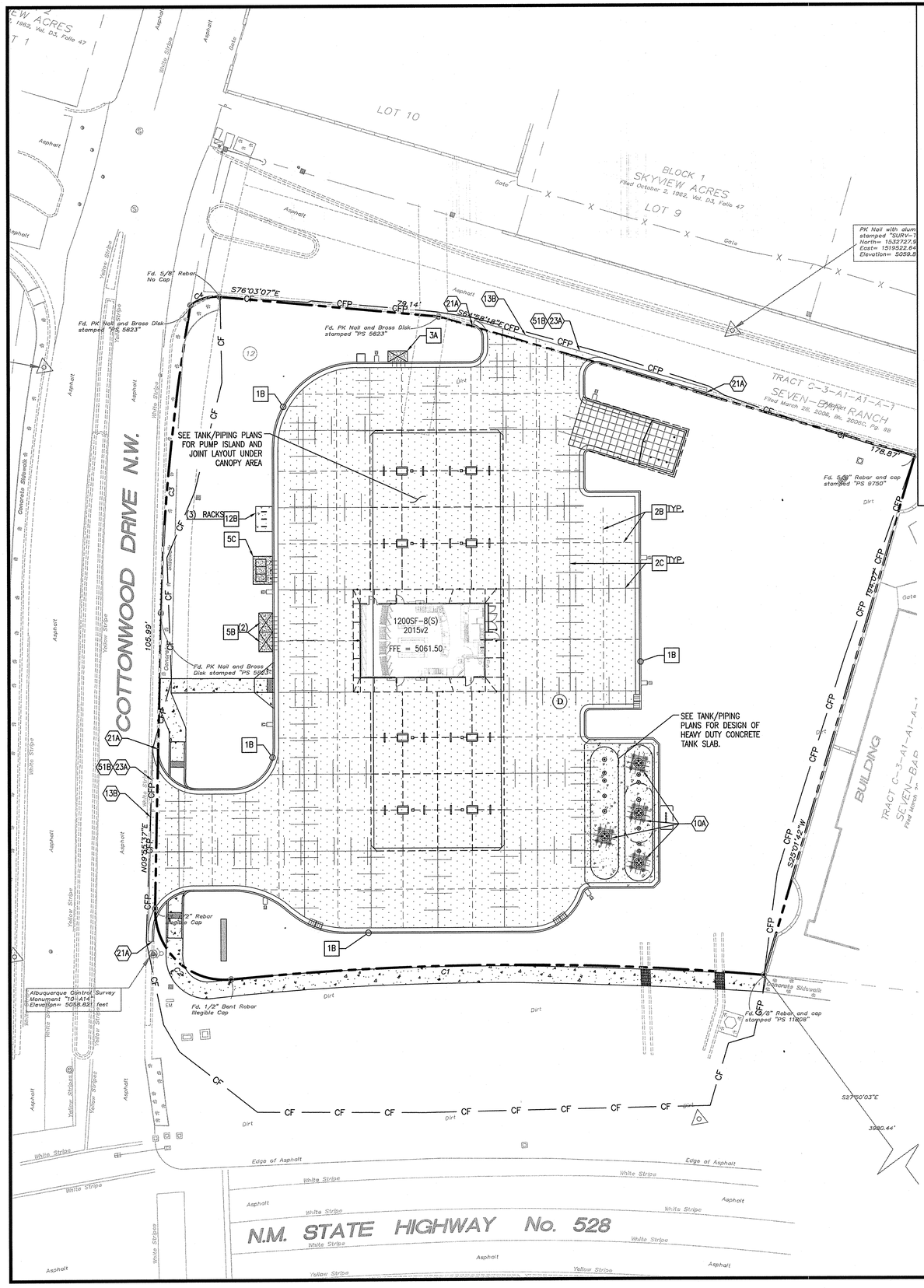
JOHN H. NOURZAD
NEW MEXICO
19062
PROFESSIONAL ENGINEER
AUG 2 3 2017

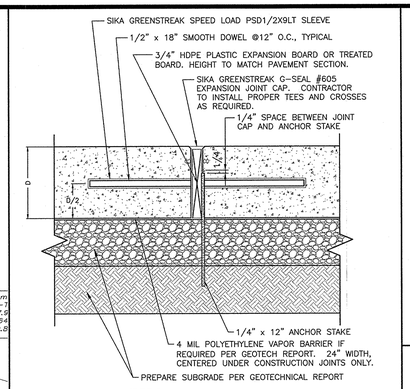
REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

UTILITY PROFILES
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016689710

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730





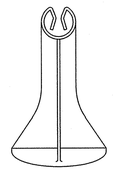
INSTALLATION STEPS:

1. TERMINATE STAKES BELOW THE TOP OF THE BOARD A DISTANCE EQUAL TO THE DEPTH OF THE G-SEAL PROFILE PLUS 1/4" MIN.
   WARNING: ANCHOR STAKES LONGER THAN 12" SHALL NOT BE USED AND CARE SHOULD BE TAKEN NOT TO UNNECESSARILY CONFLICT WITH PRODUCT PIPING TRENCHES.
2. USE FACTORY FABRICATIONS FOR INTERSECTIONS AND CHANGES OF DIRECTION. ENSURE ALL SECTIONS TO BE SPLICED ARE CUT SQUARE AND BOND TOGETHER USING G-SEAL ADHESIVE.
3. SECURE G-SEAL TO THE EXPANSION BOARD WITH STAPLES, NAILES, SCREWS BELOW THE PROFILE RIBS (APPROXIMATELY 18" ON CENTER) OR ADHESIVE TO PREVENT DISLOCATION DURING CONCRETE PLACEMENT.
4. INSERT SPEED LOAD SLEEVES INTO HOLES DRILLED THROUGH EXPANSION BOARDS AT MINIMUM 2" BELOW TOP OF SLAB. ENSURE SPEED LOAD SLEEVES ARE SECURED IN EXPANSION BOARD WITH BASE FLANGE FLAT TO EXPANSION BOARD FACE.
5. INSERT SMOOTH DOWEL INTO SPEED LOAD SLEEVES AND PLACE CONCRETE USING NORMAL PLACEMENT TECHNIQUES. UTILIZING THE G-SEAL AS A SCREED RAIL, VIBRATE CONCRETE TO ENSURE GOOD CONSOLIDATION AROUND G-SEAL, SPEED LOAD AND REBAR.

DOWEL CONSTRUCTION JOINT IN CONCRETE SLAB 2C

N.T.S.

CHAIR SUPPORT (METAL W/PLATE)

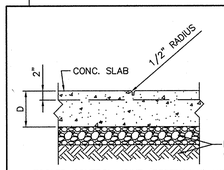


OPTIONAL CHAIR SUPPORT (PLASTIC)

1. CONTRACTOR SHALL UTILIZE THE APPROPRIATE SUPPORT DEVICE TO ACCEPT MESH OR REBAR REINFORCEMENT TYPES.
2. CHAIR SUPPORTS SHALL BE PLACED AT THREE FEET (3') O.C.E.W. MIN. SPACING.
3. SUPPORT SHALL BE SIZED TO PROVIDE ADEQUATE STRUCTURAL SUPPORT DURING CONSTRUCTION AND MAINTAIN THE REINFORCEMENT WITHIN THE CENTER OF THE PAVEMENT SECTION.

CHAIR SUPPORT FOR REINFORCED CONCRETE PAVEMENT

N.T.S.

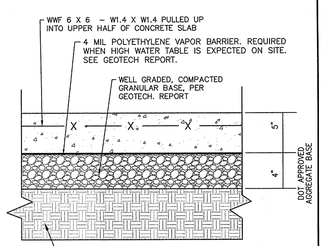


TOOLED CONTROL JOINT (PREFERRED) USE "KRAFT TOOL CO." EXTRA DEEP BIT BRONZE GROVER #CF-317 (OR APPROVED EQUAL)

TOOLED CONTROL JOINT 2B

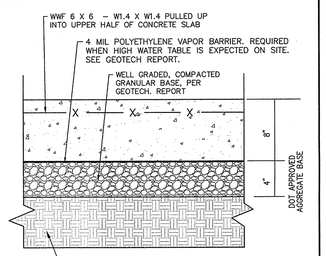
N.T.S.

NOTE:
GC IS REFERRED TO GEOTECHNICAL REPORT PREPARED BY UNITED CONSULTING DATED JUNE 5, 2017. FOR SITE PREPARATION CONDITIONS AND PAVEMENT REQUIREMENTS.



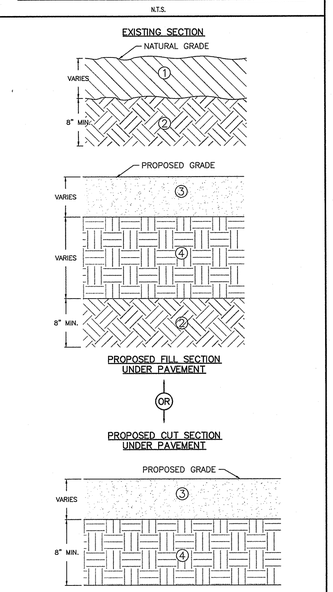
CONCRETE PAVEMENT SECTION

N.T.S.



DUMPSTER SLAB SECTION

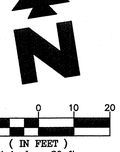
N.T.S.



1. TOPSOIL LAYER – REMOVE SURFACE VEGETATION (MIN. 6") INCLUDING ORGANIC LADEN TOPSOIL, TREES, ROOTS, SOFT SOILS AND OTHER UNSUITABLE MATERIALS TO 5' BEYOND CONSTRUCTION LIMITS FROM THE SITE. THE TOPSOIL AND VEGETATION METERIAL MAY BE STOCKPILE FOR USE IN LANDSCAPING OR DISPOSED FROM THE SITE PER LOCAL JURISDICTIONAL REQUIREMENTS (AS DIRECTED BY MURPHY CONSTRUCTION REPRESENTATIVE).
2. EXISTING SUBGRADE – PRIOR TO FILL OR STONE BASE PLACEMENT, SUBGRADE SHALL BE PROOFROLLED WITH A HEAVY, LOADED PNUEMATIC-TIRED VEHICLE (20 TO 25 TON LOADED DUMP TRUCK), AFTER PROOFROLLING AND PRIOR TO PLACEMENT OF FILL, UPPER SURFACE SOILS SHALL BE SCARIFIED (8" MIN. DEPTH) AND RE-COMPACTED TO 95% STANDARD PROCTOR MAX. DRY DENSITY (PER ASTM-D698). FOR RECOMPACTION, SOILS SHALL BE PROCESSED TO WITHIN ± PERCENT BELOW AND THREE PERCENT ABOVE OPTIMUM MOISTURE CONTENT. AREAS OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD SHALL BE UNDERCUT AND REPLACED WITH CRUSHED STONE OR SELECT FILL MATERIAL AS DESCRIBED IN NOTE 4 BELOW.
3. PROPOSED PAVEMENT AND BASE MATERIAL – SEE PAVEMENT SECTION THIS SHEET.
4. FILL MATERIAL – IMPORTED OR NATIVE FILL MATERIAL – SHALL CONSIST OF HOMOGENEOUS SOILS, FREE FROM ORGANIC MATTER AND DEBRIS, OR PARTICLES LARGER THAN THREE (3) INCHES IN DIAMETER WITH LIQUID LIMIT LESS THAN 40, AND PLASTICITY INDEX BETWEEN 8 AND 20, AND CONSIST OF SILTY-CLAY SANDS (SM-SC), LOW PLASTICITY SANDY CLAYS (CL), OR CLAYEY SANDS (SC) AS DEFINED BY THE UNIFIED SOIL CLASSIFICATION SYSTEM. SELECT FILL SHOULD BE PLACED IN MAXIMUM LIFTS OF 8" AND BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR DRY DENSITY (PER ASTM D-698) AT -1% TO +3% THEORETICAL OPTIMUM MOISTURE.

TYPICAL EARTHWORK SECTIONS

N.T.S.



EXISTING

- Sanitary Sewer Manhole
- Power Pole
- w/underground feed
- Power Pole
- High Voltage Tower
- Guy Wire
- OHW Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- X—X— Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- E Underground Electric line
- COM Underground Communications Line
- G Underground Gas Line
- W Underground Water Line
- SAS Sanitary Sewer Line
- SD Storm Drain Line
- Control Point
- Wall

PROPOSED

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- CF CONSTRUCTION FENCE (SEE DETAIL SHEETS)
- CFP CONSTRUCTION FENCE ON PAVEMENT (SEE DETAIL SHEETS)

GENERAL PAVING NOTES

A. CONCRETE ON ASPHALT UTILITY CUT REPAIRS TO BE DYED TO MATCH SURROUNDING ASPHALT.

B. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON ALL CURB AND GUTTER ADJACENT TO CONCRETE PAVING SHALL BE INSTALLED PER DETAIL 1B (SEE DETAILS SHEET C-12).

C. PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECH REPORT PREPARED BY UNITED CONSULTING DATED JUNE 5, 2017 AND THIS PAVING PLAN OVER THE ENTIRE PARKING LOT AREA AND ALL APPROACH DRIVES.

D. SEE ASSOCIATED PLANS FOR CANOPY, COLUMN, PUMP ISLAND DETAILS AND LAYOUT.

PAVING NOTES

13B LIMITS OF HEAVY DUTY CONCRETE PAVING
21A TAPER CURB TO MATCH EXISTING CURB
51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL.

PAVING DETAILS

1B CONCRETE CURB AND GUTTER

PAVING DETAILS

- CONCRETE PAVING FOR TANK. SEE TANK/PIPING PLANS FOR DESIGN AND DETAILS.
- CONCRETE DUMPSTER SLAB
- CONCRETE PAVING

GENERAL JOINT LAYOUT NOTES

A. THIS PLAN IS FOR RELATIVE LAYOUT AND SCOPE OF WORK PURPOSES ONLY. REFER TO SITE PLAN FOR RELATIONSHIP OF THESE STRUCTURES TO EXISTING CONDITIONS AND REFERENCE POINTS.

B. 1/2" FOAM EXPANSION JOINT MATERIAL SHALL SURROUND THE CANOPY COLUMNS, U-BUMPERS, BOLLARDS AND DISPENSER ISLANDS AT GRADE. SEE TANK-PIPING PLANS (STANDARD YARD AND DRIVE DETAILS)

C. SEE TANK-PIPING PLANS FOR NOTES ON REBAR REINFORCING AROUND UST MANHOLE.

D. SEE TANK-PIPING PLANS CONDUIT PIPING LAYOUT.

E. DOWELED JOINTS SHALL BE LOCATED ON 12" CENTERS, ALONG THE INSIDE OF THE MOST EXTERIOR SLABS. DOWELS SHALL BE SMOOTH TYPE AND INSERTED INTO GREENSTREAK SPEED DOWEL FORMS. THE DOWEL IS LOCATED AT MID-SLAB DEPTH AND HELD IN PLACE LEVEL AND PERPENDICULAR TO THE JOINT USING THE SPEED DOWEL, WHICH REMAINS WITH THE FORM. AFTER THE FORMS ARE STRIPPED, THE DOWELS SHOULD BE CHECKED TO ASSURE FULL INSERTION AND ALIGNMENT IN THE INITIAL SLAB BEFORE POURING THE ADJACENT SLAB. DOWELS OCCURRING UNDER AND PARALLEL TO CONTROL JOINTS SHOULD BE DELETED. SEE TANK-PIPING PLANS FOR ADDITIONAL INFORMATION.

JOINT LAYOUT NOTES

10A TANK MANHOLE REINFORCEMENT (SEE TANK/PIPING PLANS FOR ADDITIONAL DETAILS)
23A ASPHALT ABUTTING JOINT
51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL

JOINT LAYOUT DETAILS – SEE DETAIL SHEETS

2B TOOLED CONTROL JOINT
2C DOWEL CONSTRUCTION JOINT IN CONCRETE SLAB
3A AIR/VAC UNIT MOUNTING SLAB
5B ICE BOX MOUNTING SLAB
5C PROPANE BOX MOUNTING SLAB

ADDITIONAL PAVING NOTES

1. SURFACE COURSE, BASE, AND SUB-GRADE SHALL BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR LOCAL SOILS OR DRAINAGE CONDITIONS AND/OR METHODS.
2. SUBGRADE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR OR AS SPECIFIED BY THE GEOTECHNICAL REPORT WHICHEVER IS MORE STRINGENT.
3. FOLLOW RECOMMENDATIONS IN GEOTECH REPORT FOR RE-ENFORCEMENT OF CONCRETE SECTIONS.

SHEET NO. C-7

JOHN H. NOURZAD
NEW MEXICO
19062
PROFESSIONAL ENGINEER

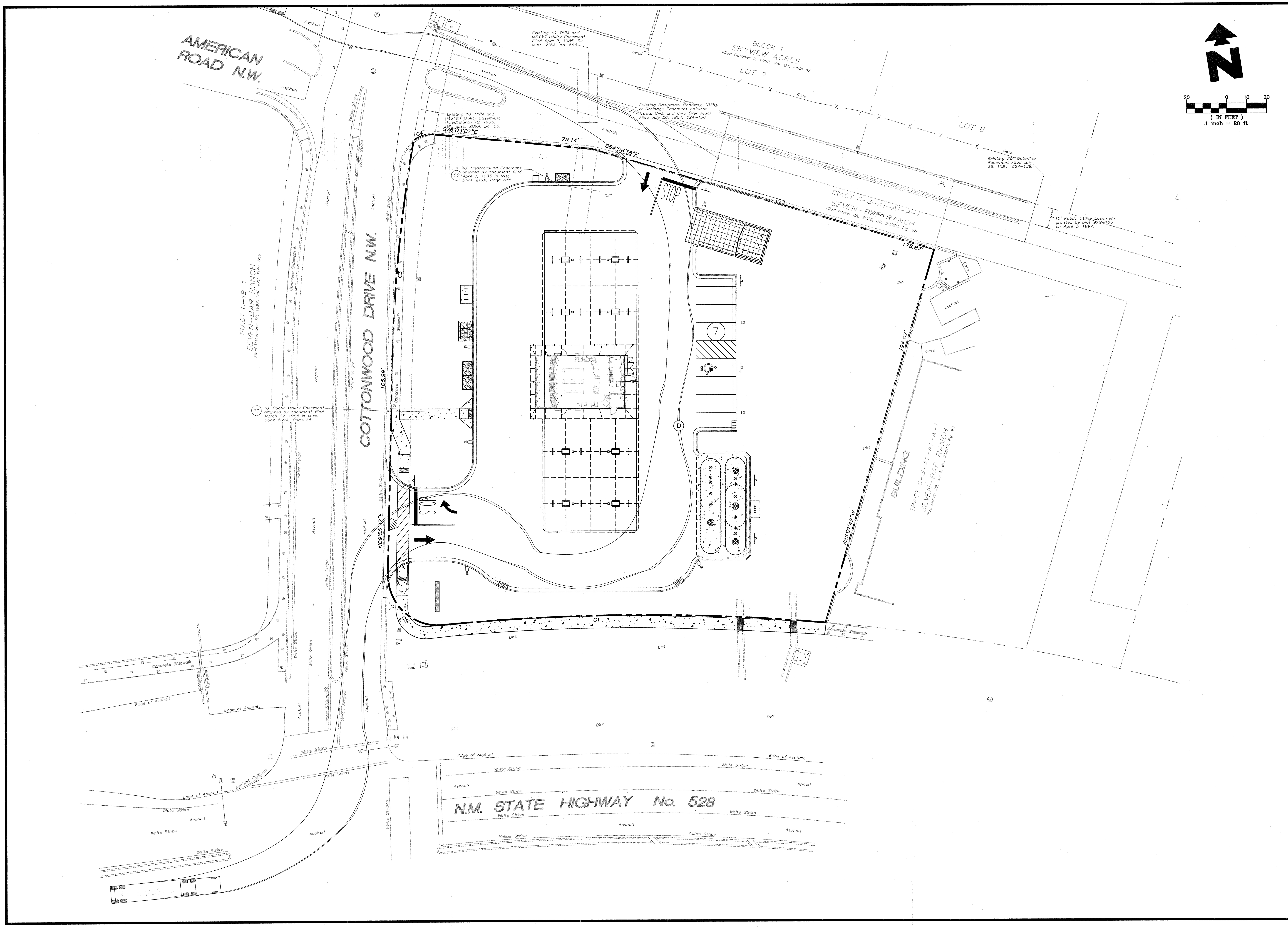
AUG 2 3 2017

REV-0	08-23-17	JN	PRN	DS	PM	DS	DES	DS	DRW
	DATE								

PAVING/JOINT LAYOUT PLAN
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016069710

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730
MURPHY USA



SHEET NO.

C-9

JOHN H. NOURZAD
NEW MEXICO
19062
PROFESSIONAL ENGINEER

AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

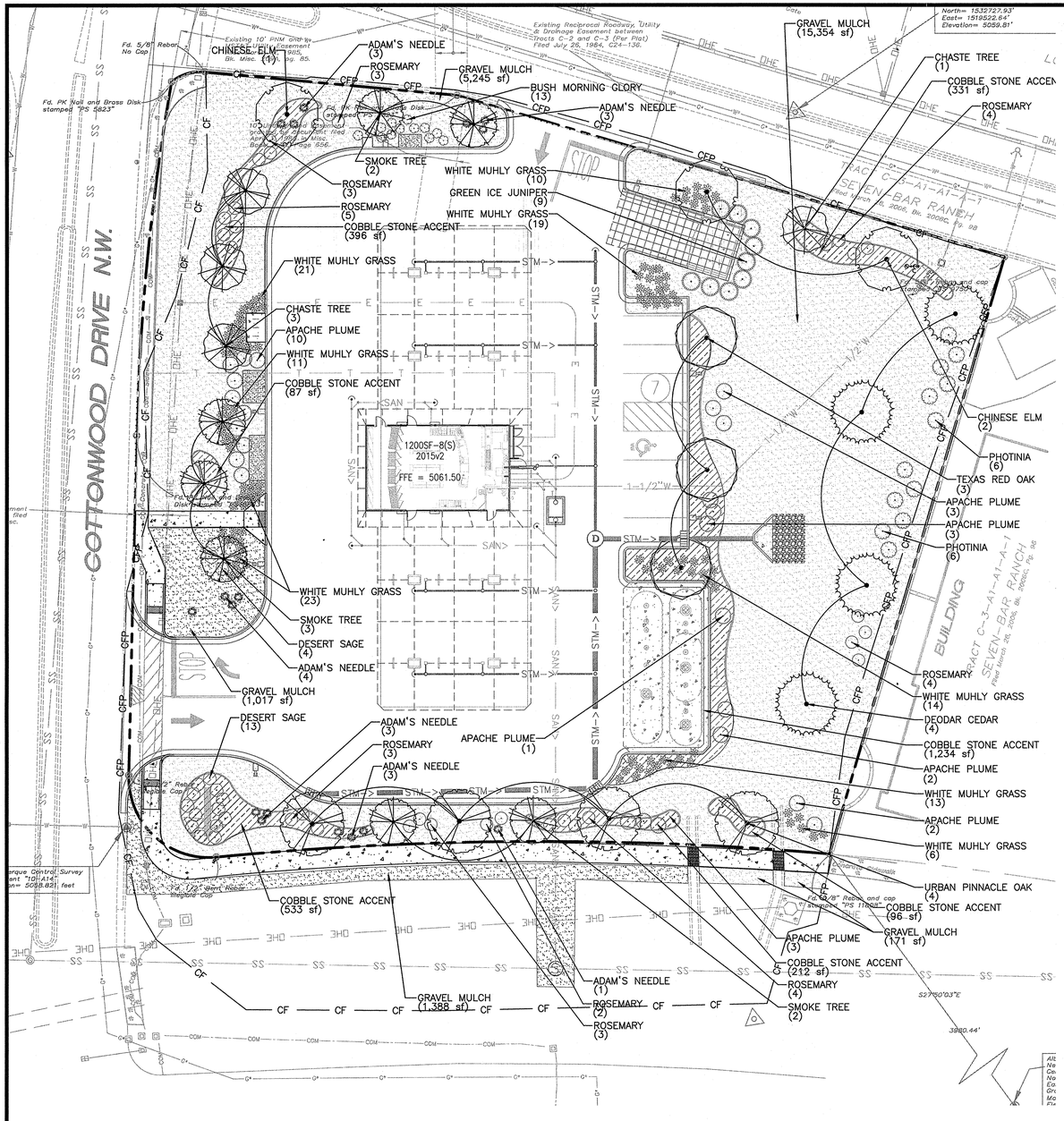
TRUCK ROUTE PLAN

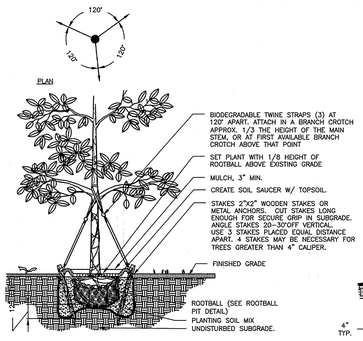
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970

DWG NAME: ALBUQUERQUE, NM
JOB NO.: 20160897.0

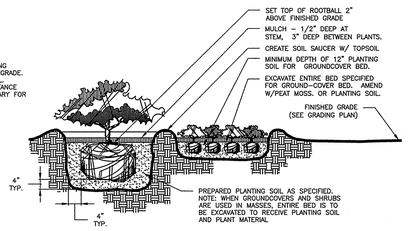
MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730





NOTE:
STRAPS, WIDE, SOFT, BIODEGRADABLE MATERIAL MANUFACTURED FOR THE PURPOSE OF TREE ANCHORING. DO NOT USE HOSE AND WIRE.

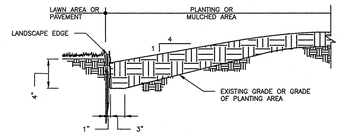
DECIDUOUS TREE PLANTING 50A
N.T.S.



SHRUB PLANTING 50B
N.T.S.

NOTE:
USE TRENCH EDGER AT ALL EDGES OF BEDLINES TO CONTAIN MULCH.

NOTE:
METAL LANDSCAPE EDGE
BY: COL-MET
COLOR: GREEN
TYPE: 1014-6 (14GA)



TRENCH EDGER DETAIL 50R
N.T.S.

LANDSCAPE CALCULATIONS

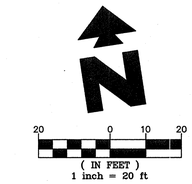
	REQUIRED	PROVIDED
LANDSCAPE AREA		
SITE = 1.25 AC (54,540 SF)	8,181 SF (15%)	24,355 SF (44%)
OFF STREET PARKING AREA LANDSCAPE		
1 TREE PER 10 SPACES	1	3
PROPOSED PARKING SPACES ARE LOCATED IN 100' FROM A TREE TRUNK		
STREET TREES (AMERICAN RD.) - 1 TREE PER 35LF		
(269 LF - 36LF DRIVE) /35LF	6.6(7)	7
COTTONWOOD DR. - 1 TREE PER 35LF		
(259 LF - 36LF DRIVE) /35LF	6.2(7)	7
HWY 528 - 1 TREE PER 35LF		
192 LF/ 35LF =	5.4(6)	6

PLANT SCHEDULE LANDSCAPE

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE	REMARKS
	4	Cedrus deodara / Deodar Cedar	B & B	3"Cal	12–15' H	
	7	Cotinus coggygria 'Golden Spirit' / Smoke Tree	B & B	2.5"Cal	8'–10' HT	Straight trunk; full form
	4	Quercus macrocarpa 'Urban Pinnacle' / Urban Pinnacle Oak	B & B	3"Cal	10'–12' HT	Full Well Rooted, Straight Trunk
	3	Quercus texana / Texas Red Oak.	B & B	3"Cal	12–15' H	Straight trunk; full form
	3	Ulmus parvifolia / Chinese Elm	B & B	3"Cal	12–15' H	Straight trunk; clear 8' above ground
	4	Vitex agnus–castus / Chaste Tree	B & B	2"Cal		

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	SIZE	HEIGHT	WIDTH	REMARKS
	13	Convolvulus cneorum / Bush Morning Glory	3 gal	12" MIN.		Round, full form
	24	Fallugia paradoxa / Apache Plume	7 gal	36" MIN.		Round, full form
	9	Juniperus scopulorum 'Green Ice' TM / Green Ice Juniper	B & B		8' MIN	Full to ground; dense
	117	Muhlenbergia capillaris 'White Cloud' / White Muhly Grass	3 gal			SP. 30" O.C.
	12	Photinia x fraseri / Photinia	7 gal	48" HT MIN.		Dense to ground
	31	Rosmarinus officinalis / Rosemary	7 gal	30" MIN.		Full form
	17	Salvia dorrii / Desert Sage	3 gal	18" MIN,		Dense, full form
	17	Yucca filamentosa 'Color Guard' / Adam's Needle	5 gal			Full, Well Rooted

	GRAVEL MULCH TO MATCH ADJACENT PROPERTY –	23,175 sf
	COBBLE STONE ACCENT –	2,890 sf



EXISTING

- Sanitary Sewer Manhole
- Power Pole w/underground feed
- Power Pole
- High Voltage Tower
- Guy Wire
- OHW — Overhead Wires
- Water Meter
- Water Valve
- Hydrant
- EM — Electric Meter
- Traffic Box
- Overhead Traffic Light Pole
- X—X— Fence
- Hand Railing
- Light Pole
- Bollard
- Concrete Symbol
- Telephone Pedestal
- E — Underground Electric line
- COM — Underground Communications Line
- G — Underground Gas Line
- W — Underground Water Line
- SAS — Sanitary Sewer Line
- SD — Storm Drain Line
- Control Point
- Wall

PROPOSED

- BOUNDARY LINE
- TYPICAL PLANTING WITH QUANTITY AND KEY (SEE PLANT LIST)
- CF — CONSTRUCTION FENCE (SEE CIVL DETAILS)

GENERAL LANDSCAPE NOTES

A. LOCATE ALL UTILITIES AND SITE LIGHTING CONDUITS BEFORE LANDSCAPE CONSTRUCTION BEGINS.

B. NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES PRIOR TO ANY PLANTING.

C. ALL LANDSCAPE MATERIALS SHALL BE IN COMPLIANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK. (ANSI–Z60.1–1986)

D. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE–ESTABLISHED. ANY AREAS DISTURBED SHALL ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

E. THE MURPHY STATION WILL NOT DROP MASTER DEVELOPMENT'S GREEN SPACE BELOW CITY'S REQUIREMENTS.

F. CONTRACTOR IS TO VERIFY LOCATION OF MASTER DEVELOPMENT IRRIGATION SYSTEM, VALVE BOXES, CONTROL BOXES, BACKFLOW PREVENTION DEVICES AND OTHER ITEMS WHICH ARE PART OF THE SYSTEM. IF DAMAGED THEY MUST BE REPAIRED AT CONTRACTOR'S COST.

G. CONTRACTOR IS TO PROTECT EXISTING LANDSCAPING/IRRIGATION MATERIALS.

H. ACCEPTANCE OF GRADING AND SEEDING SHALL BE BY LANDSCAPE ARCHITECT AND/OR OWNER. THE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES FOR A MINIMUM OF ONE (1) YEAR OR UNTIL SECOND CUTTING, WHICHEVER IS LONGER. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, RESEEDING, AND OTHER OPERATIONS NECESSARY TO KEEP ALL LAWN AREAS IN A THRIVING CONDITIONS. UPON FINAL ACCEPTANCE, OWNER SHALL ASSUME ALL MAINTENANCE RESPONSIBILITIES. AFTER LAWN AREA HAVE GERMINATED, AREAS WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON WHATSOEVER SHALL BE RE–SEEDED REPEATEDLY UNTIL ALL AREAS ARE COVERED WITH A SATISFACTORY STAND OF GRASS. MINIMUM ACCEPTANCE OF SEEDED LAWN AREAS MAY INCLUDE SCATTERED BARE SPOTS, NONE OF WHICH ARE LARGER THAN 1 SQUARE FOOT, AND WHEN COMBINED DO NOT EXCEED 2% OF TOTAL SEEDED LAWN AREA.

J. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THESE PLANS, BEFORE PRICING THE WORK.

K. QUANTITIES ON THE PLANT SCHEDULE ARE PROVIDED FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATIONS. IN THE EVENT OF A DISCREPANCY BETWEEN THE LANDSCAPE PLANS AND THE PLANT SCHEDULE, THE LANDSCAPE PLAN WILL TAKE PRECEDENCE. THE CONTRACTOR SHALL INFORM THE LANDSCAPE ARCHITECT IMMEDIATELY UPON DISCOVERING ANY QUANTITY DISCREPANCIES.

L. METAL LANDSCAPE EDGING IS TO BE INSTALLED BETWEEN SOD AND LANDSCAPE PLANTING BEDS.

SHEET NO. C-10

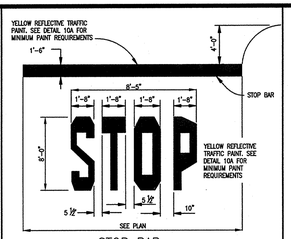
JOHN N. NOURZAD NEW MEXICO 19062 PROFESSIONAL ENGINEER
AUG 23 2017

REV–0	DATE	JN	DS	DS	DS	DRW
	08–23–17	PRN	PM	DES		

LANDSCAPE PLAN
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

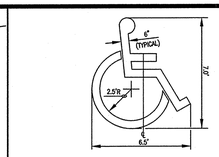
GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016609.10

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



STOP BAR 10B

N.T.S.

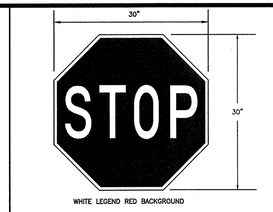


NOTES:

1. LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING.
2. SEE DETAIL 10A FOR MINIMUM PAINT REQUIREMENTS

ACCESSIBLE PARKING SYMBOL 9U

N.T.S.

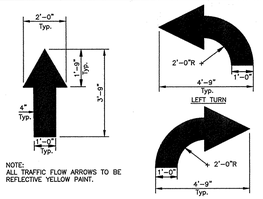


WHITE LEGEND RED BACKGROUND

R1-1

"STOP" SIGN 12C

N.T.S.



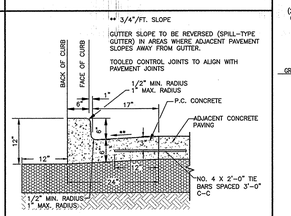
NOTE:
ALL TRAFFIC FLOW ARROWS TO BE REFLECTIVE YELLOW PAINT.

TRAFFIC FLOW ARROW 10A

N.T.S.

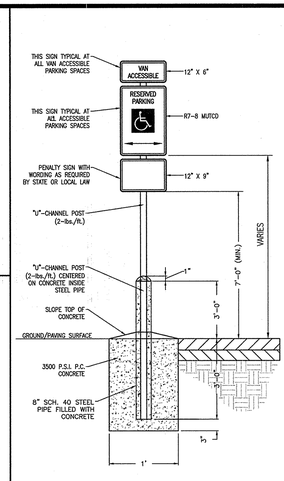
MINIMUM REQUIREMENTS:

1. USE TRAINED AND EXPERIENCED PERSONNEL IN APPLYING THE PRODUCTS AND OPERATING THE EQUIPMENT REQUIRED FOR PROPERLY PERFORMED WORK.
2. PAINT SHALL BE WATERBORNE OR SOLVENT BORNE, COLOR SHALL BE REFLECTIVE YELLOW UNLESS OTHERWISE SPECIFIED. PAVEMENT MARKING PAINTS SHALL COMPLY WITH APPLICABLE STATE AND LOCAL LAWS ENACTED TO ENSURE COMPLIANCE WITH FEDERAL CLEAN AIR STANDARDS. PAINT MATERIALS SHALL CONFORM TO THE RESTRICTIONS OF THE LOCAL AIR POLLUTION CONTROL DISTRICT.
3. WATERBORNE PAINT: PAINTS SHALL CONFORM TO FEDERAL SPECIFICATION TT-P-1952 (LATEST REVISION) AND ALL APPLICABLE ASTM STANDARDS WITHIN THIS SPECIFICATION.
4. SOLVENT BORNE PAINT: PAINT SHALL CONFORM TO FEDERAL SPECIFICATION A-A-2886 OR AASHTO M248. PAINT SHALL BE NON-BLEEDING, QUICK-DRYING, AND ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC-BEARING SURFACE AND BE MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION FOR COLOR YELLOW (UNLESS OTHER COLOR IS OTHERWISE SPECIFIED).
5. GLASS BEADS: AASHTO M 247, TYPE 1 OR FS TT-B-1325, TYPE 1, GRADATION A.
6. APPLY TWO COATS OF PAINT, AT MANUFACTURER'S RECOMMENDED RATE, WITHOUT ADDITION OF THINNER, WITH MAXIMUM OF 100 SQUARE FEET PER GALLON OR AS REQUIRED TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS AND DRY FILM THICKNESS OF 7 ½ MILS PER COAT. PAINT SHALL BE APPLIED FOR A TOTAL DRY FILM THICKNESS OF 15 MILS. APPLY WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES.
7. APPLY GLASS BEADS AT PEDESTRIAN CROSSWALK STRIPING AND AT LANE STRIPING AND ARROWS. BROADCAST GLASS BEADS UNIFORMLY INTO WET MARKINGS AT A RATE OF 6 LB/GAL.



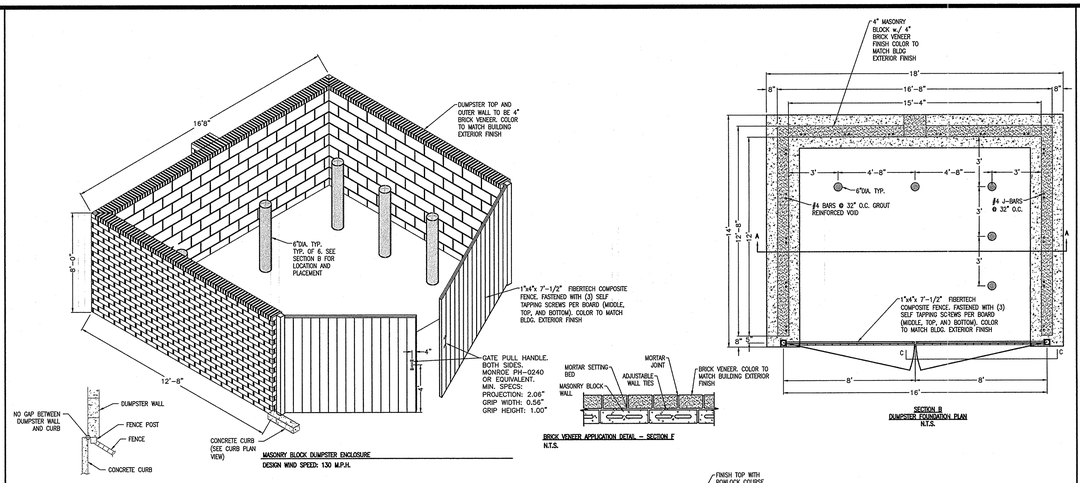
TYPE "B" CONCRETE CURB AND GUTTER 18

N.T.S.



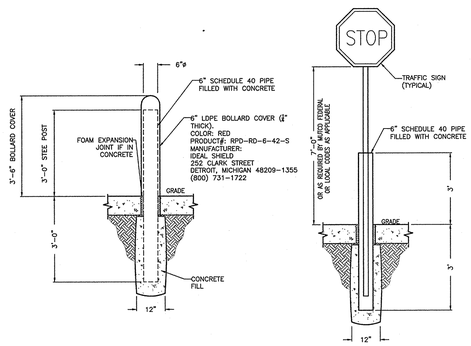
ACCESSIBLE PARKING SIGN 9S

N.T.S.



DUMPSTER ENCLOSURE 2E

N.T.S.



STEEL BOLLARD 5A

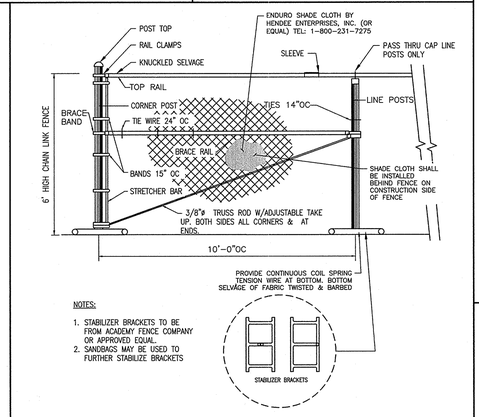
N.T.S.

TRAFFIC SIGN IN BOLLARD 5B

N.T.S.

"MOTORCYCLE PARKING" SIGN 12N

N.T.S.

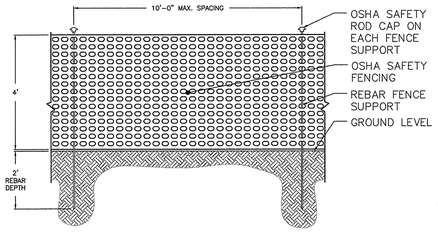


NOTES:

1. STABILIZER BRACKETS TO BE FROM ACADEMY FENCE COMPANY OR APPROVED EQUAL.
2. SANDBAGS MAY BE USED TO FURTHER STABILIZE BRACKETS

CONSTRUCTION SAFETY FENCE 2F

N.T.S.



CONSTRUCTION SAFETY FENCE

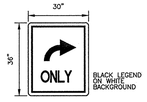
N.T.S.

RED LEGEND WHITE BACKGROUND

R7-1D

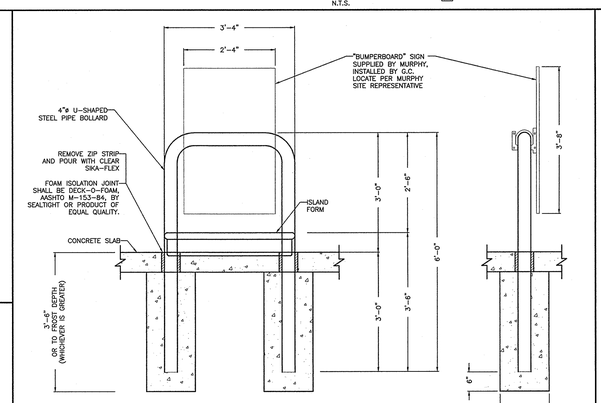
"NO PARKING" SIGN 11K

N.T.S.



"RIGHT TURN ONLY" SIGN 11D

N.T.S.



U-BUMPER DETAIL 5G

N.T.S.

SHEET NO. C-12

JOHN H. NOURZAD NEW MEXICO 19062 PROFESSIONAL ENGINEER

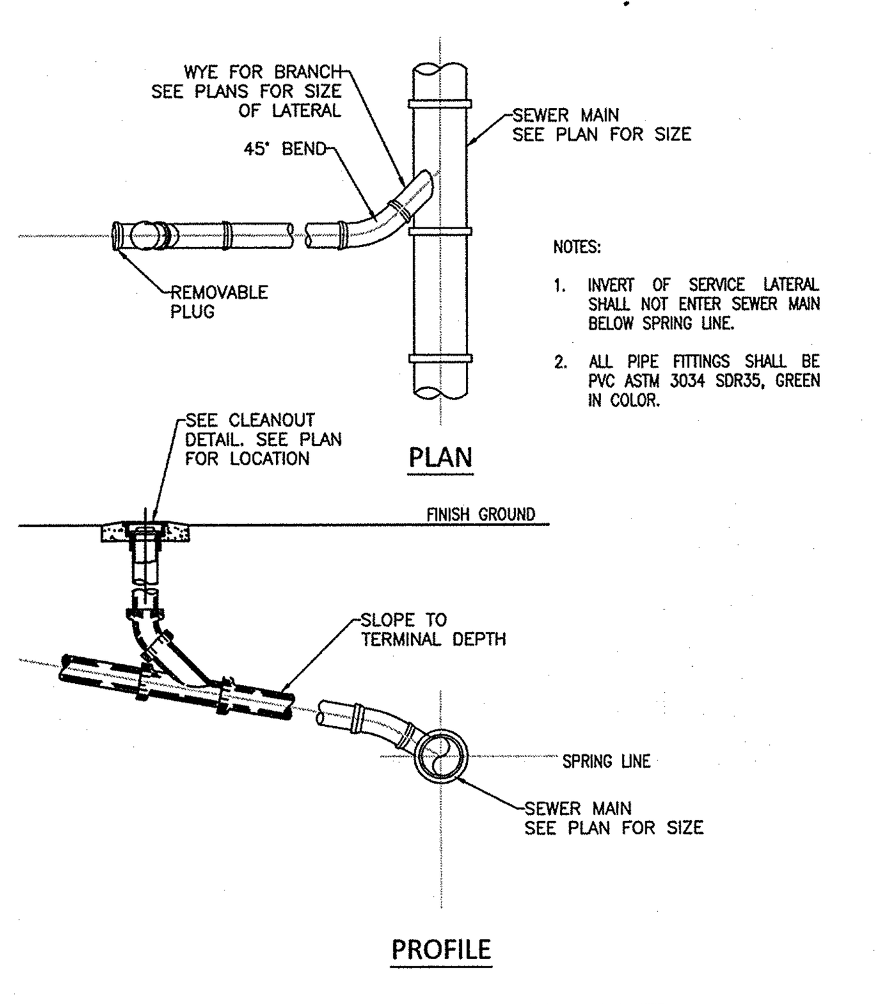
AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

DETAILS
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016089710

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730
MURPHY USA



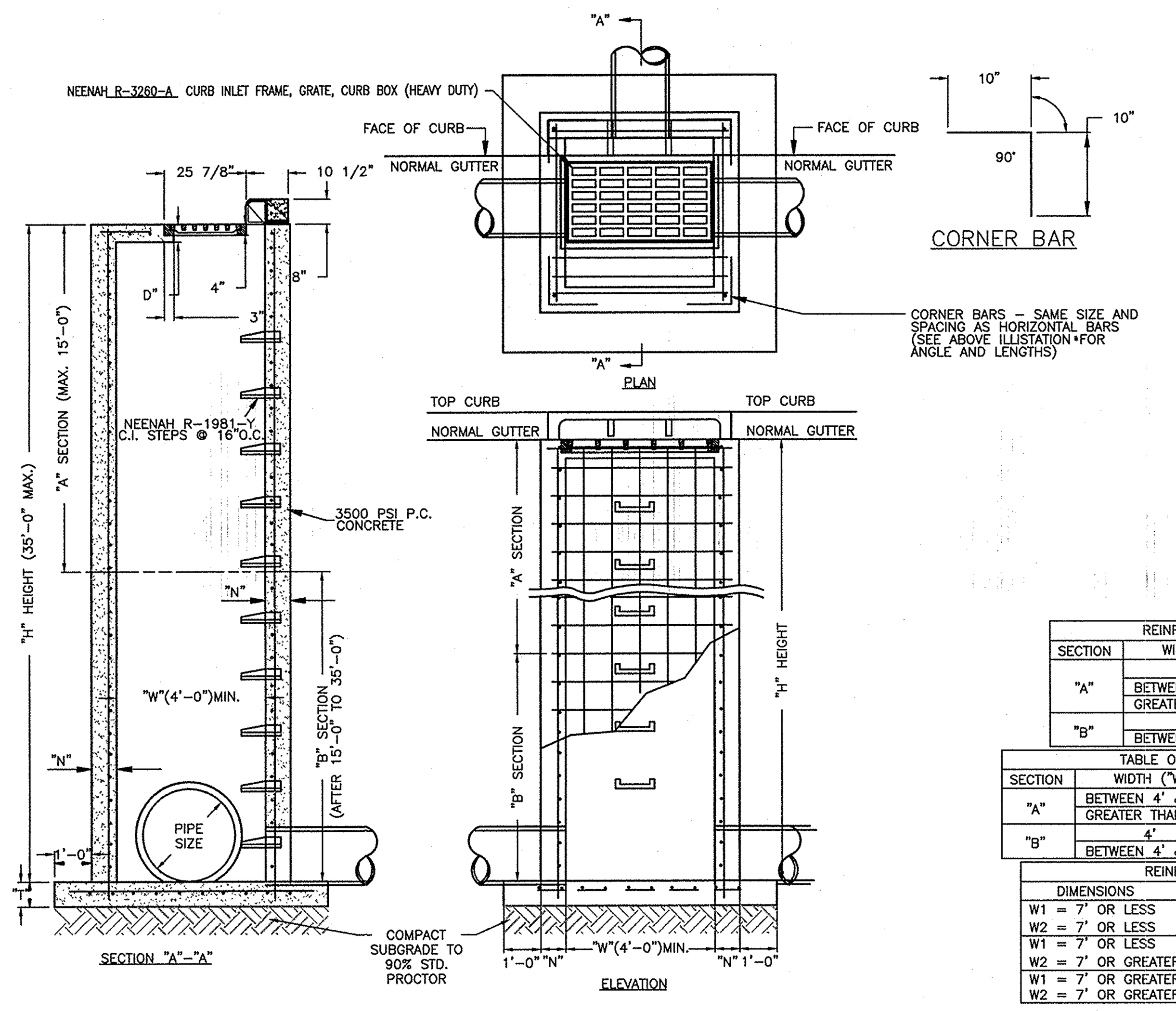
NOTES:

1. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
2. ALL PIPE FITTINGS SHALL BE PVC ASTM 3034 SDR35, GREEN IN COLOR.

SANITARY SEWER WYE CONNECTION WITH CLEAN-OUT

40B

N.T.S.



GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER
2. ALL #4 & #5 REINFORCING BARS TO HAVE 1-1/2" COVER, LARGER SIZES TO HAVE 2" COVER. 3. SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
3. PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF INLET.
4. ALL REINFORCING BARS TO BE GRADE 60.

REINFORCEMENT SCHEDULE, BASE	
SECTION	
"A"	#4's @ 6" E.W.
"B"	#6's @ 6" E.W.

TABLE OF 'W' DIMENSIONS			
PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°
≤24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
DOUBLE	FOR "A" SECTION ONLY		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-6"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

REINFORCEMENT SCHEDULE, WALLS			
SECTION	WIDTH ("W")	HOR.	VERT.
"A"	4'	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'	#4's @ 6"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

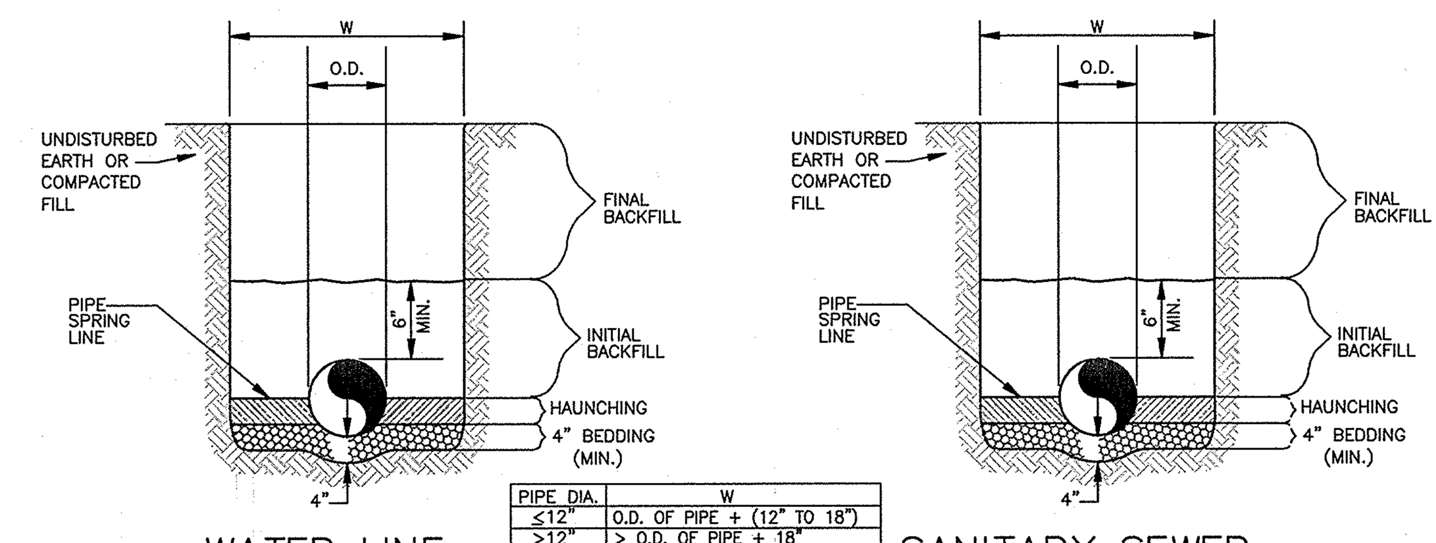
TABLE OF "T" & "N" DIMENSIONS				
SECTION	WIDTH ("W")	"T"	"N"	"D"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
"B"	4'	6" + PIPE THICKNESS	8"	8"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	10"	8"

REINFORCEMENT SCHEDULE, TOP		
DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4'S @ 6" E.W.	DIAGONAL @ COVER
W1 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER

COMBINATION INLET

23E

N.T.S.



PIPE DIA.	W
≤12"	O.D. OF PIPE + (12" TO 18")
>12"	> O.D. OF PIPE + 18"

WATER LINE

N.T.S.

SANITARY SEWER

42B

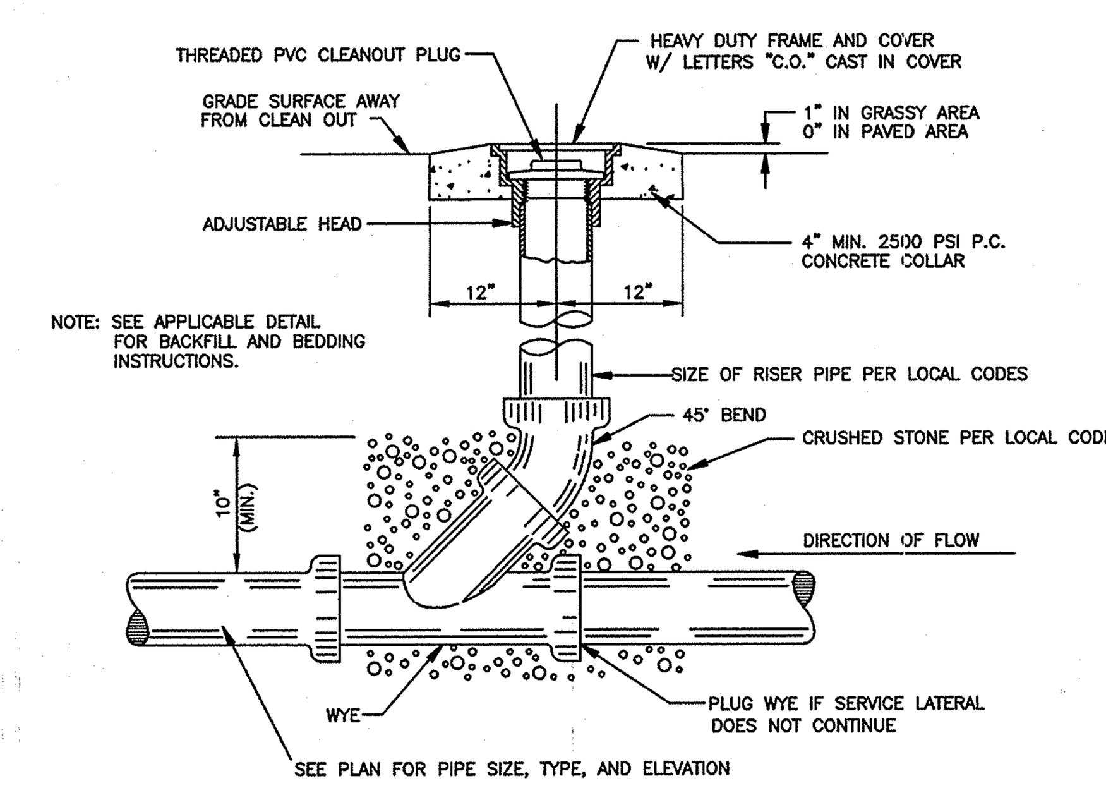
N.T.S.

GENERAL NOTES

1. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321 LATEST EDITION.
2. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR.
3. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
4. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
5. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
6. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
7. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

UTILITY TRENCH AND BEDDING

N.T.S.

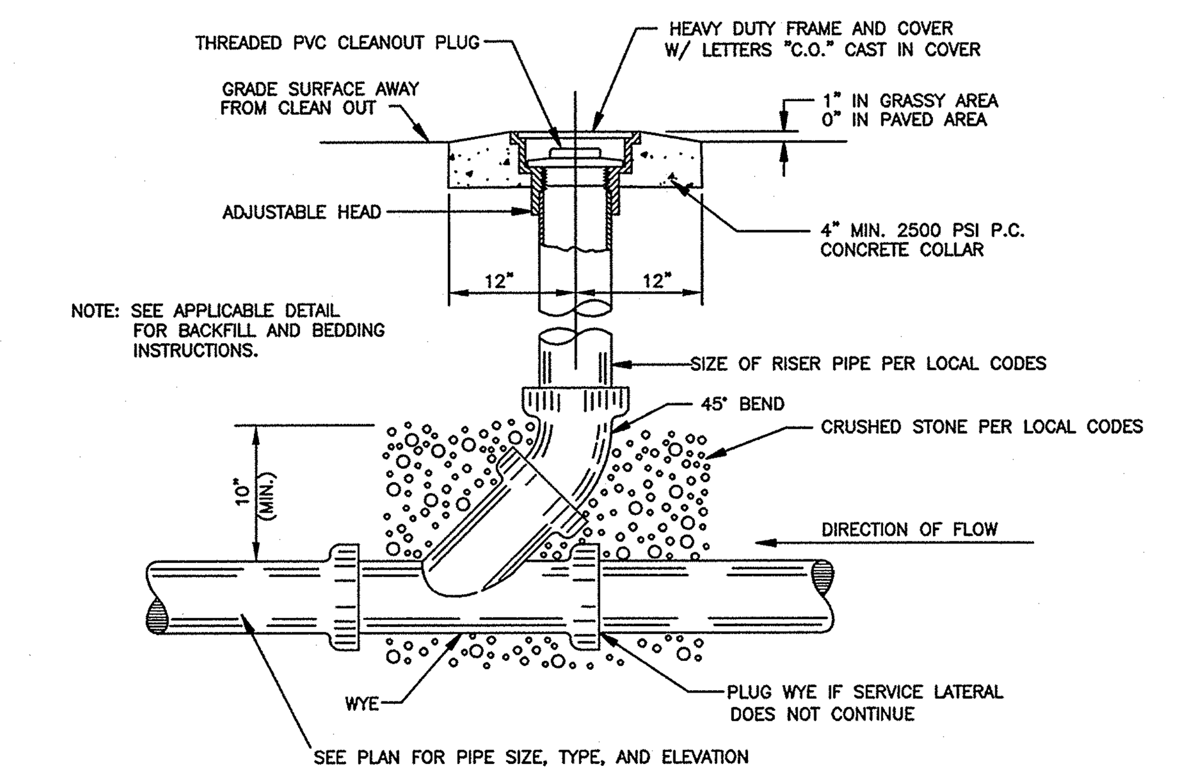


NOTE: SEE APPLICABLE DETAIL FOR BACKFILL AND BEDDING INSTRUCTIONS.

SANITARY SEWER CLEAN-OUT

40C

N.T.S.

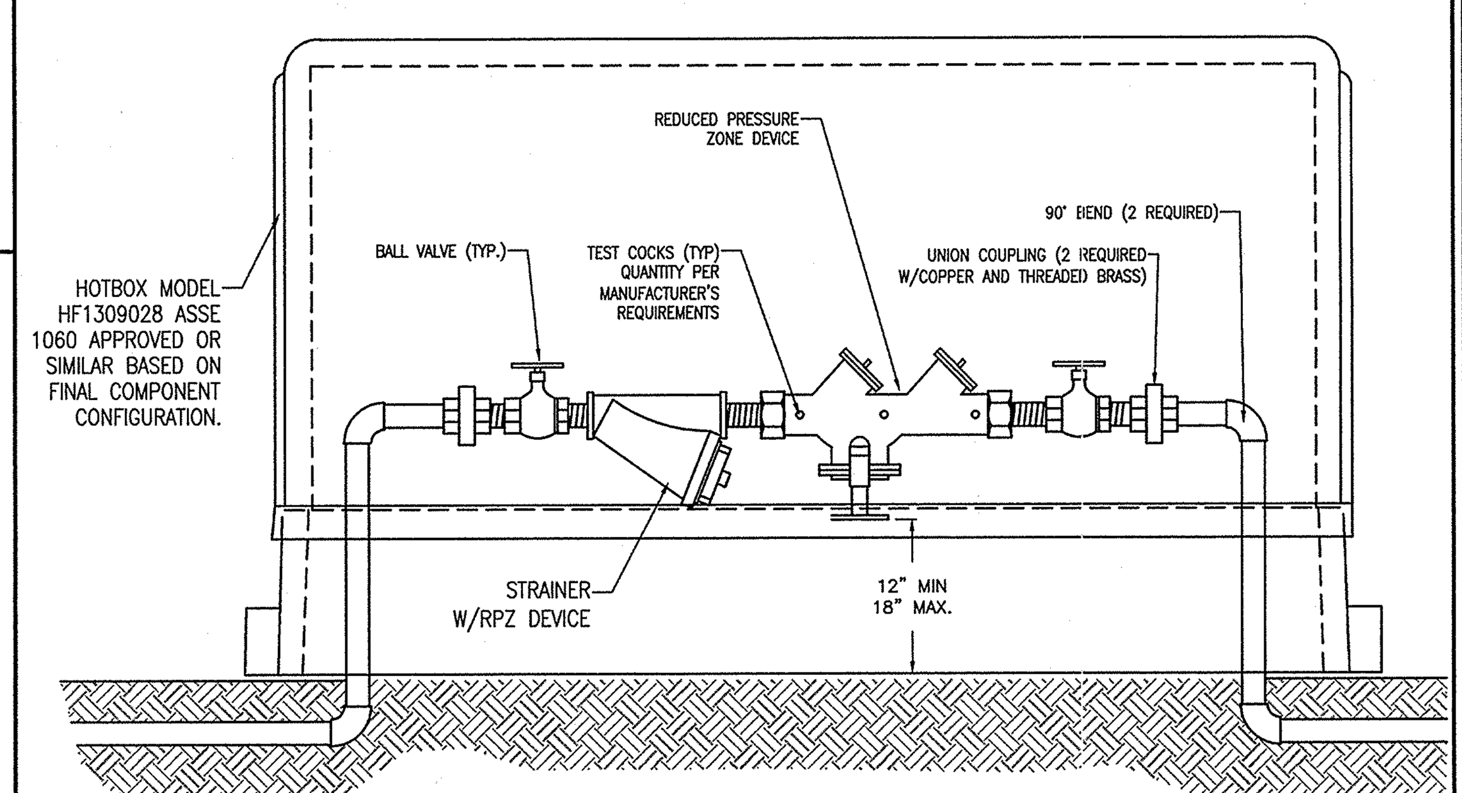


NOTE: SEE APPLICABLE DETAIL FOR BACKFILL AND BEDDING INSTRUCTIONS.

STORM SEWER CLEAN-OUT

27E

N.T.S.



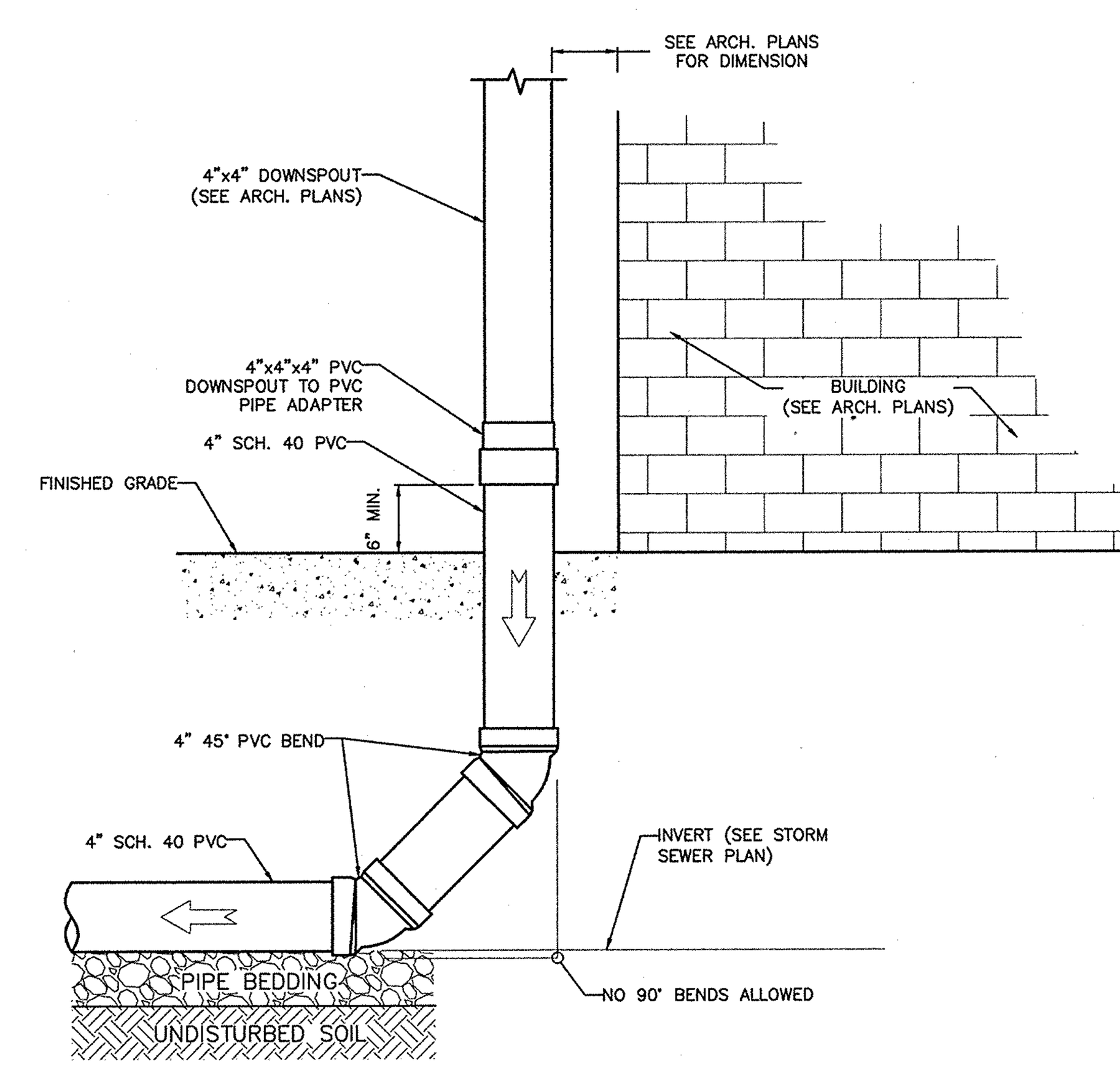
NOTES:

1. ALL DEVICES $\frac{3}{4}$" TO 2 $\frac{1}{2}$" WILL BE INSTALLED WITH TYKE K COPPER, SCHEDULE 80 PVC, THREADED BRASS PIPE, OR AS SPECIFIED IN PLANS.
2. THIS PLAN REPRESENTS AN ACCEPTABLE METHOD FOR PLACEMENT OF A BACKFLOW PREVENTER & VAULT, HOWEVER, ALL LOCAL CODES VARY AND MUST BE ADHERED TO FOR VALVE/METER ASSEMBLY.

ABOVE GROUND REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER – 2 1/2" AND SMALLER

41G

N.T.S.



NOTES:

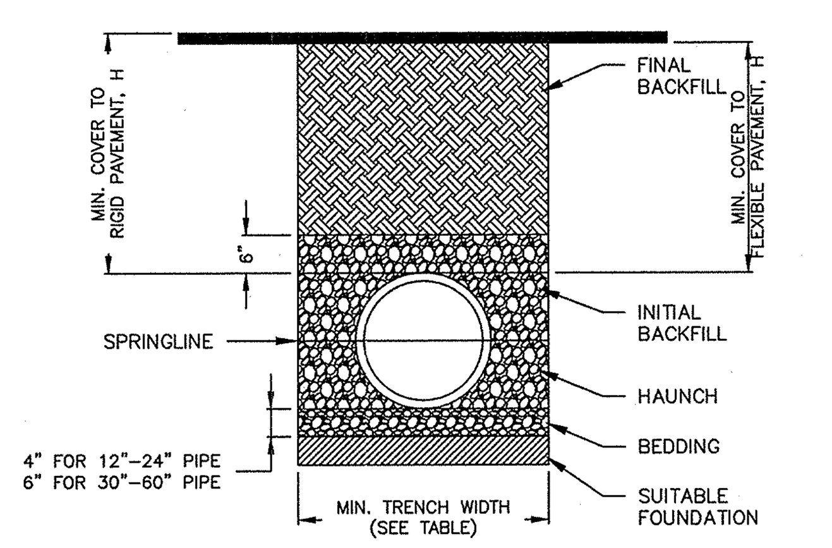
1. SEE CANOPY DRAINAGE SHEET FOR CONTINUATION
2. CONTRACTOR TO VERIFY THERE ARE NO CONFLICTS WITH OTHER UTILITY CONDUITS WHEN INSTALLING UNDERGROUND DRAINAGE PIPES.

ROOF DRAIN DOWNSPOUT CONNECTION

27H

N.T.S.

RECOMMENDED MINIMUM TRENCH WIDTHS



PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LAOD) *
12" – 48" (300mm – 1200mm)	12"	48"
60" (1500mm)	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I		CLASS II		CLASS III
	COMPACTED	DUMPED	95%	90%	95%
4" (100mm)	34	16	23	16	17
6" (150mm)	40	19	27	19	20
8" (200mm)	30	14	21	14	15
10" (250mm)	34	16	23	16	17
12" (300mm)	35	17	24	17	18
15" (375mm)	37	18	25	18	19
18" (450mm)	32	15	22	15	16
24" (600mm)	27	13	19	13	14
30" (750mm)	22	11	16	11	11
36" (900mm)	26	12	18	12	13
42" (1050mm)	24	11	17	11	12
48" (1200mm)	23	11	16	11	12
60" (1500mm)	26	12	18	12	13

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
4	ADDED CLASS 3 MAX COVER COLUMN	RJS	01/27/17	

TRENCH INSTALLATION DETAIL (ASTM F2648)

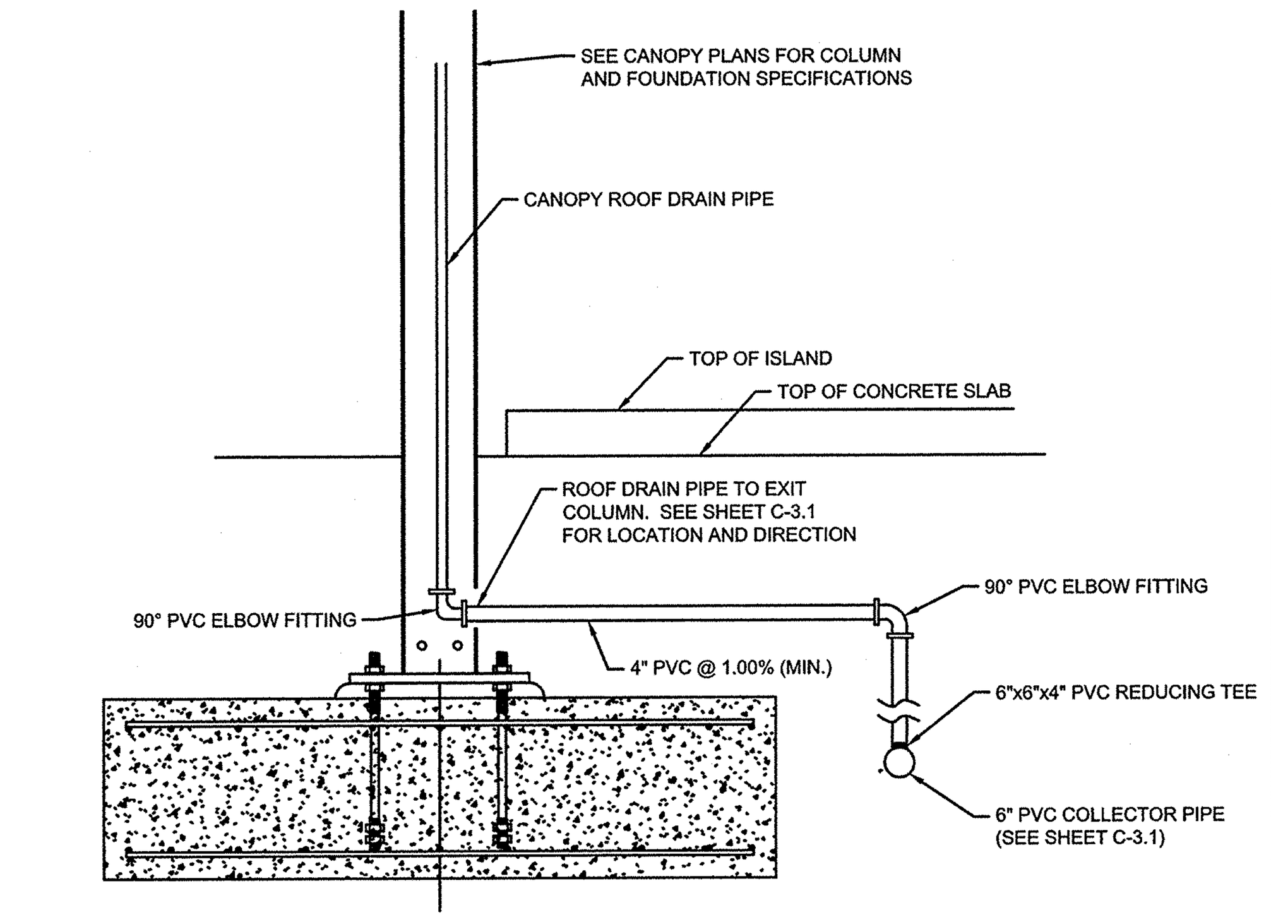
DRAWING NUMBER: STD-101A

ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026

DRAWN BY: JLE | DATE: 8/15/13 | CHK'D BY: | SCALE: NTS | SHEET: 1 OF 1

HDPE PIPE BEDDING

28A



CANOPY DRAIN CONNECTION DETAIL

27J

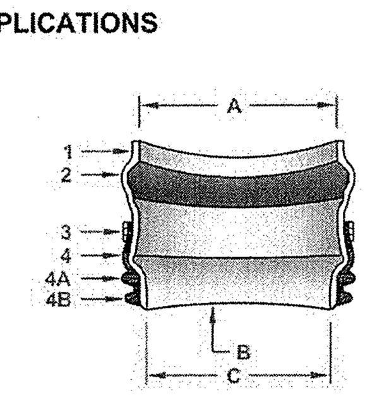
N.T.S.

SDR 35 GASKETED BELL GRAVITY APPLICATIONS

A. EQUIVALENT O.BELL END ACCEPTS PIPE WITH SDR 35, ASTM D3034 OR EQUIVALENT O.D. SPECIFICATION IN 8", 10", 12", 15", 18", 21", 24", 27", AND 30" SIZES. (FOR 4" AND 6" SIZES REFER TO FATBOY SPECIFICATIONS).

B. CURVATURE VARIES WITH MAINLINE DIAMETERS.

C. SPIGOT END PVC SDR 35, ASTM D3034 DIAMETERS: 8", 10", 12", 15", 18", 21", 24", 27" AND 30"



PART	PART NAME	MATERIALS
1	HUB ADAPTOR	PVC SDR 35 ASTM D3034
2	RUBBER GASKET	ASTM F477
3	SECURING CLAMP*	BAND SS #301 SCREW SS #305 HOUSING SS #301
4	RUBBER SLEEVE (AVAILABLE IN NITRILE AND EPDM BY SPECIAL ORDER)	ASTM F477
4A	UPPER SEGMENT**	
4B	LOWER SEGMENT***	

* OPTIONAL: #316 STAINLESS STEEL BAND, SCREW AND HOUSING
** DISTANCE BETWEEN 4A AND 4B WILL VARY BY PRODUCT TYPE
*** WILL NOT APPEAR ON RUBBER SLEEVES FOR CONCRETE OR CLAY PIPE

INSERTA TEE SIZE	HOLE DIAMETER
8" (200 mm)	8 ¾" (222mm)
10" (250 mm)	10 ⅞" (276mm)
12" (300 mm)	12 ⅞" (327mm)
15" (375 mm)	15 ¹³⁄₁₆" (402mm)
18" (450 mm)	19 ⁹⁄₁₆" (503mm)
21" (525 mm)	22 ⁹⁄₁₆" (573mm)
24" (600 mm)	25 ⁵⁄₁₆" (643mm)
27" (675 mm)	28 ½" (724mm)
30" (750 mm)	32 ¹⁷⁄₃₂" (826mm)

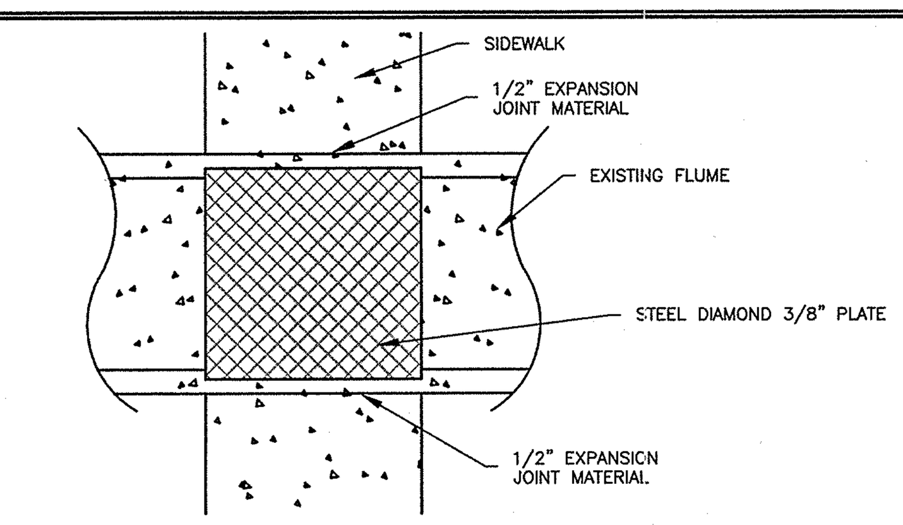
23G

NOTE: RECOMMENDED METHOD OF CUTTING HOLE IS WITH HOLE SAW FOR PVC AND OTHER PLASTICS, AND DIAMOND BIT FOR CONCRETES, CLAY, FRP AND D.I. (SEE INSTALLATION INSTRUCTIONS. HOLE SAWS ARE AVAILABLE FOR PURCHASE OR RENT.)

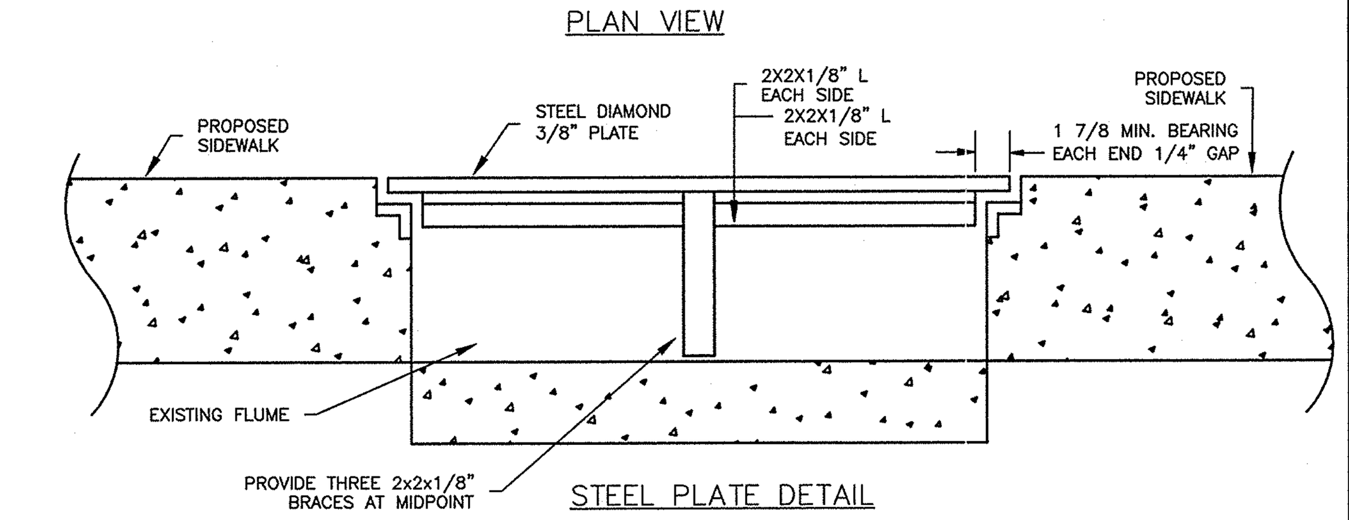
INSERTA TEE | PO BOX 714
CORNELIUS, OR 97116
PH:(503) 357-2110 FAX:(503) 359-5417
SALES@INSERTATEE.COM

SDR 35 GASKETED BELL GRAVITY APPLICATION SPECIFICATIONS

SCALE: NTS
DATE: 9/12/2013
DRAWN BY: KLJ



PLAN VIEW



STEEL PLATE DETAIL

STEEL PLATE OVER FLUME

17S

SHEET NO. C-13

JOHN H. NOURZAD NEW MEXICO 19062 PROFESSIONAL ENGINEER

AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

DETAILS

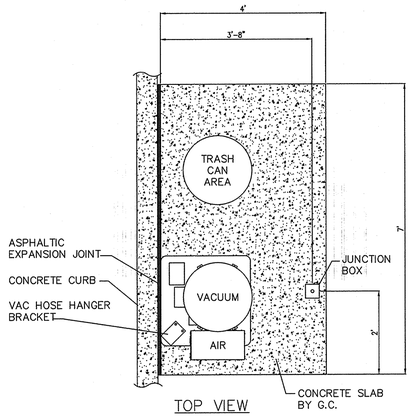
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970

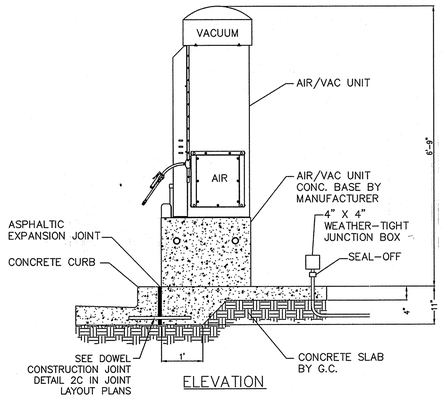
DWG NAME: ALBUQUERQUE, NM
JOB NO: 20160897.0

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730

MURPHY USA



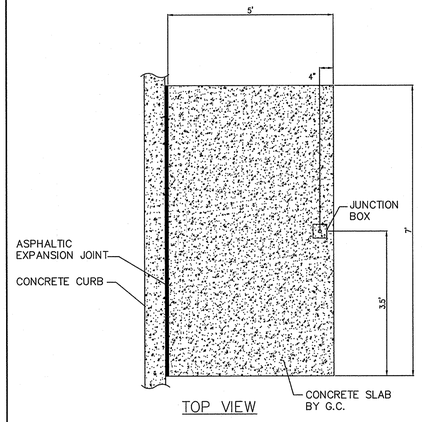
TOP VIEW



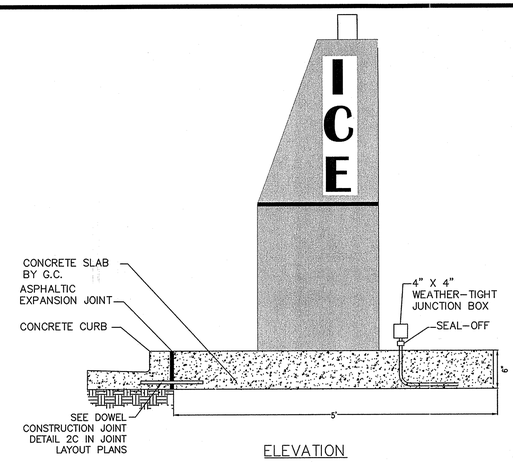
ELEVATION

AIR/VAC MOUNTING SLAB DETAIL 3A

SCALE: N.T.S.



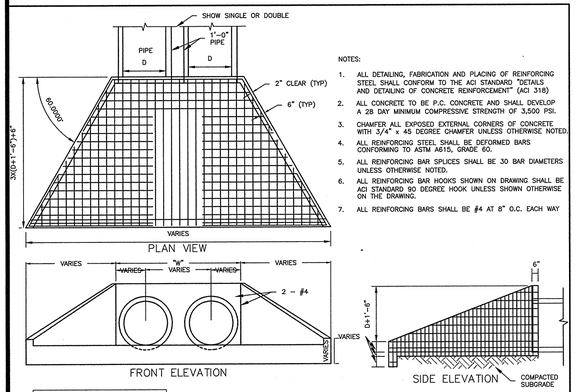
TOP VIEW



ELEVATION

ICE MACHINE SLAB DETAIL 5B

SCALE: N.T.S.



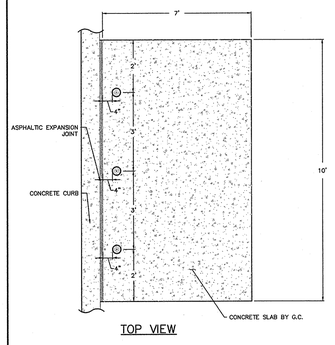
NOTES:

1. ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE ACI STANDARD "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 318)
2. ALL CONCRETE TO BE P.C. CONCRETE AND SHALL DEVELOP A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI.
3. CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 3/4" x 45 DEGREE CHAMFER UNLESS OTHERWISE NOTED.
4. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
5. ALL REINFORCING BAR SPLICES SHALL BE 30 BAR DIAMETERS UNLESS OTHERWISE NOTED.
6. ALL REINFORCING BAR HOOKS SHOWN ON DRAWING SHALL BE ACI STANDARD 90 DEGREE HOOK UNLESS SHOWN OTHERWISE ON THE DRAWING.
7. ALL REINFORCING BARS SHALL BE #4 AT 8" O.C. EACH WAY

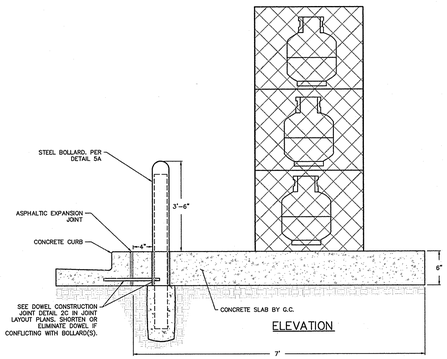
TABLE OF "W" DIMENSIONS			
PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°
18"	3'-0"	3'-0"	3'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
DOUBLE	FOR "A" SECTION ONLY		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-8"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

CONCRETE HEADWALL 19A

N.T.S.



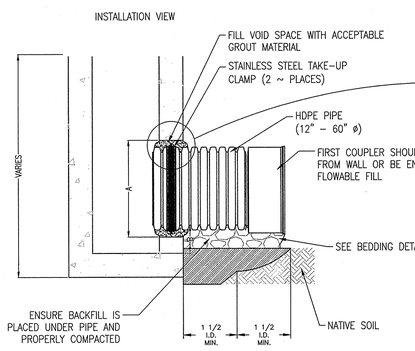
TOP VIEW

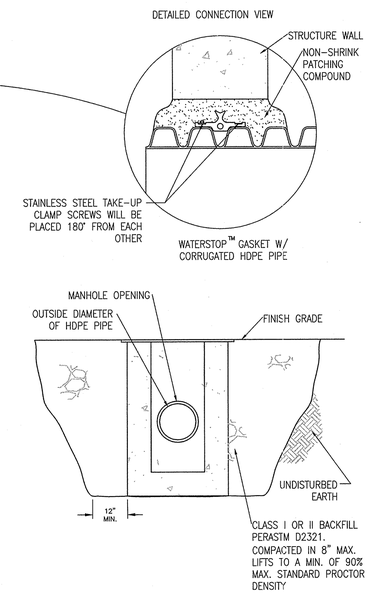


ELEVATION

PROPANE SLAB DETAIL 5C

N.T.S.

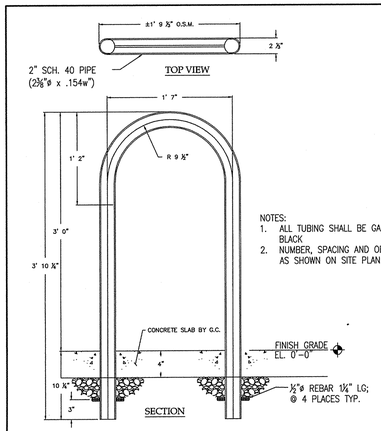




PIPE SIZE (IN)	PIPE OD (IN) WT	"A" MIN. HOLE ø (IN)	"B" MIN. DISTANCE PIPE INVERT TO STRUCTURE INVERT (IN)
6	6.9	11.90	4.0
8	9.1	13.10	4.0
10	11.4	16.40	4.0
12	14.5	19.50	4.0
15	18.0	23.00	4.0
18	22.0	27.00	4.2
24	28.0	33.00	4.5
30	36.0	41.00	5.2
36	42.0	47.00	5.5
42	48.0	53.00	5.7
48	54.0	59.00	5.7
60	67.0	72.00	6.4

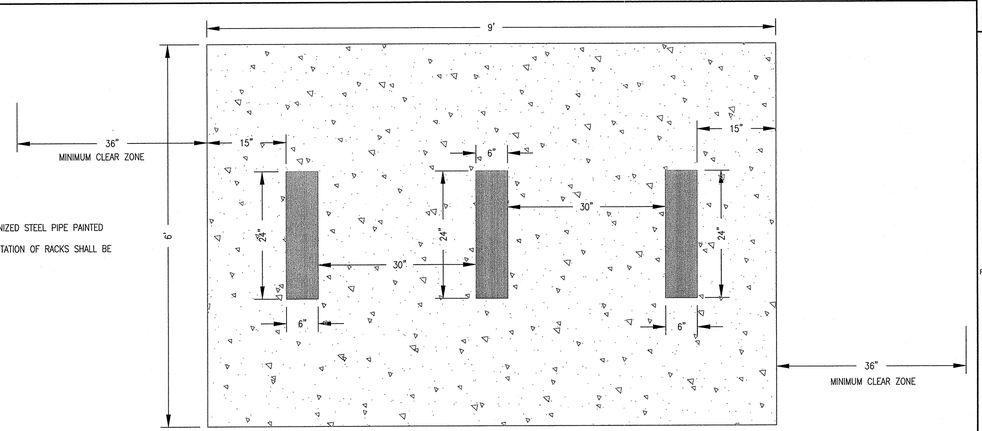
WATERSTOP STRUCTURE CONNECTION FOR HDPE PIPE CONNECTION TO CONCRETE STRUCTURE 7.3F

N.T.S.



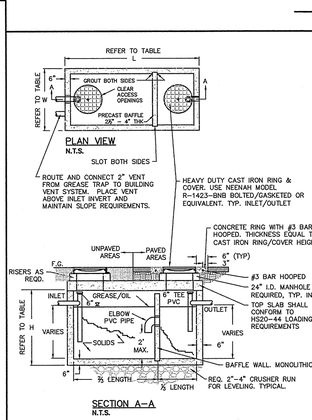
NOTES:

1. ALL TUBING SHALL BE GALVANIZED STEEL PIPE PAINTED BLACK
2. NUMBER, SPACING AND ORIENTATION OF RACKS SHALL BE AS SHOWN ON SITE PLAN.



BIKE RACK 22B

N.T.S.



SECTION A-A

N.T.S.

GALLON CAPACITY	*OUTSIDE DIMENSIONS			INLET TEE HEIGHT.	OUTLET TEE HEIGHT.
	LENGTH(L)	WIDTH(W)	HEIGHT(H)	*VARIES BASED ON TANK SIZE	
500	7'-0"	3'-0"	3'-0"	3'-0"	3'-0"
750	7'-0"	3'-0"	3'-0"	3'-0"	3'-0"
1000	8'-6"	5'-3"	4'-6"	4'-0"	3'-10"
700	7'-0"	3'-0"	3'-0"	3'-0"	3'-0"

*DIMENSIONS OF PREFAB CONCRETE TANKS MAY VARY BASED ON MANUFACTURER, HOWEVER THE GALLON CAPACITY MUST BE EQUIVALENT TO THE TANK SIZE SPECIFIED FOR INSTALLATION.

BAFFLE STANDS 50" IN HEIGHT AND IS 2 3/8"-4" IN THICKNESS REINFORCED W/ 6"-6-10 WIRE MESH.

PIPE DIAMETER MAY VARY STANDARD 2"-6" PVC PIPE REQ'D ON WALL WITH ELBOW TURNED DOWN MAX. 2" OFF TANK BOTTOM

BAFFLE WALL*

N.T.S.

NOTES:

1. ANY ALTERNATIVE PRETREATMENT SYSTEMS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
2. USE CONCRETE PREFAB TANKS.
3. ALL MANHOLES MUST ADJUST TO FINISH GRADE. SEE GRADING/UTILITY PLANS

*MINIMUM SPECIFICATIONS:

1. DESIGN LOADING AASHTO H520-44
2. CONCRETE MINIMUM STRENGTH 4500 PSI AT 28 DAYS AND MEET THE REQUIREMENTS OF ACI 318 LATEST EDITION.
3. DESIGN SHALL CONFORM TO LATEST ASTM C1613 SPECIFICATIONS FOR "PRE-CAST CONCRETE GREASE INTERCEPTOR TANKS"; AND ASTM C858 LATEST EDITION FOR "UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
4. STEEL REINFORCEMENT SHALL CONFORM TO LATEST REQUIREMENTS OF ASTM C890 (STRUCTURAL DESIGN LOADING FOR WATER AND WASTEWATER STRUCTURES) AND SHALL UTILIZE GRADE 60 REBARS CONFORMING TO ASTM A615 OR WWF CONFORMING TO ASTM A 185 OR BOTH.
5. ALL PLUMBING SHALL BE PVC, SCHEDULE 40, WATERTIGHT SEAL AT ALL PIPE CONNECTIONS IN WALLS PER ASTM C-923.
6. JOINTS TO BE SEALED WITH 1" DIAMETER BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C990 LATEST EDITION.
7. INSTALLATION SHALL BE DONE PER MANUFACTURER'S SPECIFICATIONS.

PREFABRICATED GREASE TRAP 39G

SHEET NO. C-14

JOHN H. NOURZAD NEW MEXICO 19062 PROFESSIONAL ENGINEER

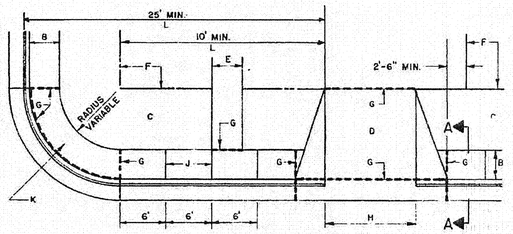
AUG 23 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

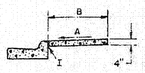
DETAILS
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO: 2016069710

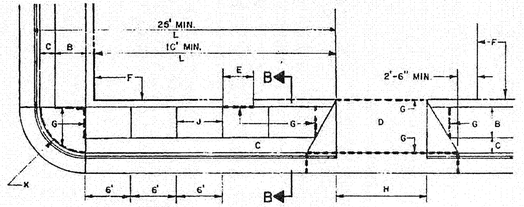
MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



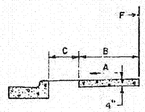
PLAN
CURB TYPE SIDEWALK



SECTION A-A



PLAN
OFFSET TYPE SIDEWALK



SECTION B-B

GENERAL NOTES

1. DEVIATIONS FROM THESE STANDARDS SHALL BE SUBMITTED TO THE CITY ENGINEER AND/OR CITY TRAFFIC ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
2. SUBGRADE UNDER SIDEWALKS AND DRIVEPADS SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 301.

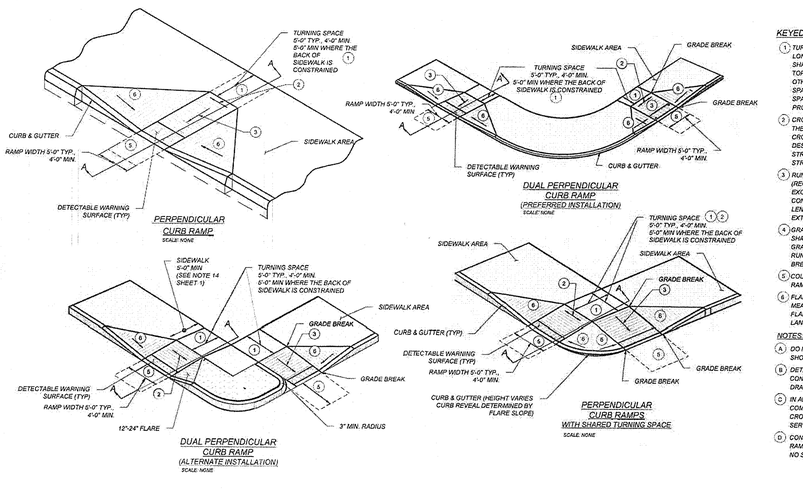
CONSTRUCTION NOTES

A. SLOPE 1(VERTICAL) TO 50(HORIZONTAL).
B. SIDEWALK WIDTHS SHALL BE IN ACCORDANCE WITH CHAPTER 23 OF THE DEVELOPMENT PROCESS MANUAL.
C. SETBACK TO BE DETERMINED BY AVAILABLE RIGHT-OF-WAY. SEE CHAPTER 23 OF DEVELOPMENT PROCESS MANUAL.
D. SEE DRIVEPAD DETAIL, DWG 2425.
E. WALKWAY VARIABLE.
F. PROPERTY LINE.
G. ½" EXPANSION JOINTS WHERE SIDEWALK OR DRIVEPAD ABUTS BUILDINGS, FENCES, WALLS OR OTHER IMMOVABLE OBJECTS.
H. 12 FT. MIN. 22 FT. MAX. – RESIDENTIAL.
12 FT. MIN., 26 FT. MAX. – LIGHT COMMERCIAL.
20 FT. MIN., 35 FT. MAX.– HEAVY COMMERCIAL.
J. CONTRACTION JOINTS.
K. FOR CURB ACCESS RAMPS, SEE DWGS 2440 & 2441.
L. CHECK DIMENSION FROM BOTH PROPERTY LINE AND FLOW LINE. USE IN AREAS WHERE DRIVEPAD IS FARTHEST FROM INTERSECTION.

3D

CITY OF ALBUQUERQUE	
REVISIONS	PAVING SIDEWALK DETAILS
1 11/6/91 4/12/94	DWG. 2430 AUG.1986

SUMMARY
FILENAME



KEYED NOTES

1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
3. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
4. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
5. COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.
6. FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.
B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-6/12 OF THE STANDARD DRAWINGS.
C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.
D. CONCRETE HEADER CURBS CONSTRUCTED AS FART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.

3M

NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PERPENDICULAR
CURB RAMPS

APPROVED: CHIEF ENGINEER — DATE 1-13-15

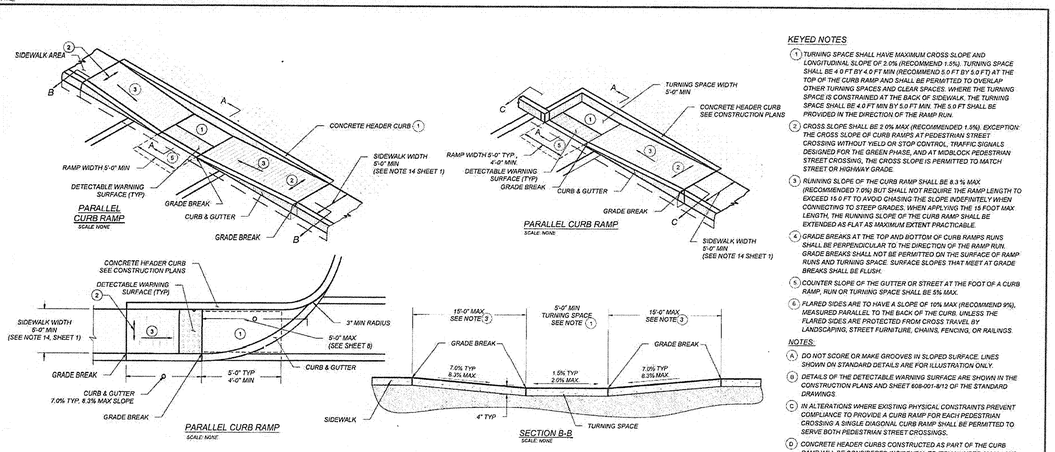
608-001-2 — 608- 2 of 12

MICHAEL J. SMELKER — NEW MEXICO — 15350 — REGISTERED PROFESSIONAL ENGINEER — 1-13-15

file path

DRAWING SCALE = NOT TO SCALE

SUMMARY
FILENAME



KEYED NOTES

1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
3. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
4. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
5. COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.
6. FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.
B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-6/12 OF THE STANDARD DRAWINGS.
C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.
D. CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.

3M

NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PARALLEL
CURB RAMPS

APPROVED: CHIEF ENGINEER — DATE 1-13-15

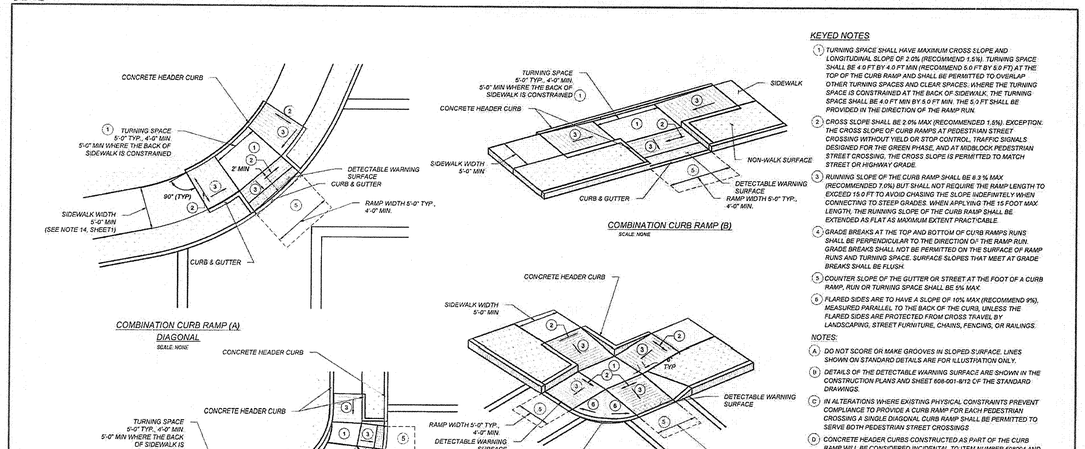
608-001-3 — 606- 3 of 12

MICHAEL J. SMELKER — NEW MEXICO — 15350 — REGISTERED PROFESSIONAL ENGINEER — 1-13-15

file path

DRAWING SCALE = NOT TO SCALE

SUMMARY
FILENAME



KEYED NOTES

1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
3. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
4. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
5. COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.
6. FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.
B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-6/12 OF THE STANDARD DRAWINGS.
C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.
D. CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.

3M

NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

COMBINATION
CURB RAMPS

APPROVED: CHIEF ENGINEER — DATE 1-13-15

608-001-5 — 608-5 of 12

MICHAEL J. SMELKER — NEW MEXICO — 15350 — REGISTERED PROFESSIONAL ENGINEER — 1-13-15

file path

DRAWING SCALE = NOT TO SCALE

SHEET NO. C-15

JOHN H. NOURZAD — NEW MEXICO — 19062 — PROFESSIONAL ENGINEER

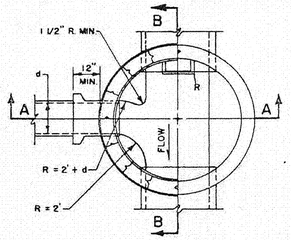
AUG 2 3 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

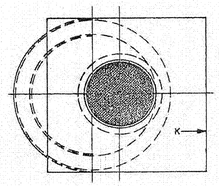
DETAILS
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016009710

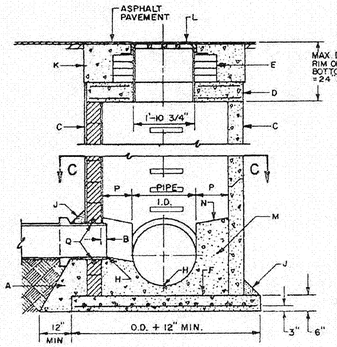
MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730



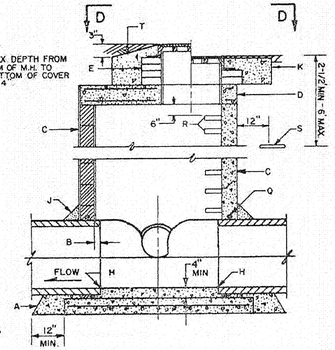
PLAN AT C-C



PLAN AT D-D



CROSS SECTION A-A



CROSS SECTION B-B

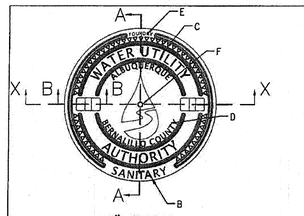
GENERAL NOTES

1. USE TYPE "C" MANHOLE FOR DEPTHS OF LESS THAN 6' MEASURED FROM INVERT TO RIM.
2. CONTRACTOR HAS OPTION TO CONSTRUCT TYPE "C" MANHOLE IN LIEU OF TYPE "E" MANHOLE FOR DEPTHS OF 6' OR MORE.
3. DESIGN APPLIES TO 4' TO 6' I.D. MANHOLES.
4. MANHOLE GREATER THAN 18' IN DEPTH SHALL ONLY BE CONSTRUCTION PRECAST CONCRETE SECTIONS.
5. USE NON-SHRINK GROUT FOR JOINTS, FILLETS AND PENETRATIONS.
6. COMPACT ALL BACKFILL AROUND MANHOLE TO 95%.
7. POSITION MANHOLE OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.

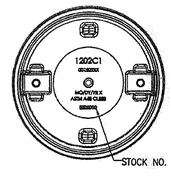
CONSTRUCTION NOTES

A. CONCRETE PIPE SUPPORTS SHALL EXTEND OUTSIDE OF MANHOLE TO BELL OF FIRST JOINT AND SHALL CRADLE PIPE TO SPRING LINE NOT APPLICABLE FLEXIBLE PIPE.
B. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRINGLINE OF PIPE.
C. MANHOLE MAY BE CONSTRUCTED OF CONCRETE BLOCK, GR. MS BRICK, POURED CONCRETE OR PRECAST REINFORCED CONCRETE IF BLOCK OR BRICK PLASTER INSIDE AND OUT WITH 1/2" MORTAR. SEE DWG. 2118 FOR DETAILS.
D. PRECAST CONCRETE COVER, SEE DWG. 2107.
E. USE MAX., 4 COURSES GR. MS BRICK ON UNPAVED STREET FOR FUTURE ADJUSTMENT OF MANHOLE FRAME TO PAVEMENT GRADE PLASTER INSIDE WITH 1/2" MORTAR.
F. CONCRETE BASE TO BE POURED IN PLACE USING NO. 4 BARS AT 6" O.C. EA. WAY FOR MANHOLE DEPTH OF 16' OR GREATER. NO. 4 BARS AT 12" O.C. EA. WAY FOR MANHOLE LESS THAN 16' IN DEPTH.
H. INVERT ELEVATION OF STUB OR LATERAL AS SHOWN ON PLANS.
J. 6" GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.
K. USE A 5' X 5' CONCRETE PAD IN ALL AREAS.
L. FRAME AND COVER, SEE DWG. 2110.
M. CONCRETE, SEE SECTION 101.
N. SLOPE 1" PER FT. FROM PIPE CROWN.
P. SHELF TO BE 9" WIDE MIN.
Q. APPROVED WATERSTOP TO BE COMPATIBLE WITH TYPE OF PIPE.
R. STEPS TO BE INSTALLED AS PER SPEC. SECTION 920.
S. EMD (IN UNPAVED AREAS).
T. IN UNPAVED AREAS SET FRAME TO GRADE AND SLOPE TOP OF PAD.

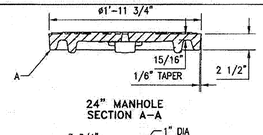
REVISIONS	CITY OF ALBUQUERQUE
11-14-91	SEWER MANHOLE TYPE "C"
	DWG. 2101 AUG. 1986



24" MANHOLE TOP VIEW

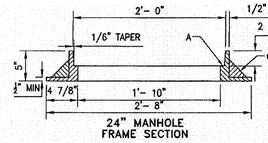


24" MANHOLE BOTTOM VIEW



24" MANHOLE SECTION A-A

24" MANHOLE SECTION B-B



24" MANHOLE FRAME SECTION

24" GENERAL NOTES:

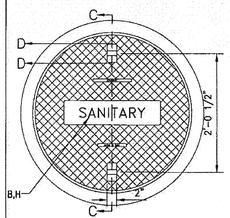
1. STANDARD 24" CAST IRON M.H. FRAME AND DUCTILE IRON COVER. WEIGHTS: COVER = 127 LBS., FRAME = 150 LBS. TOTAL = 277 LBS. (TOLERANCE = ±5%)
2. REFERENCE SPEC. SECTION 130.
3. ONLY PRODUCTS CAST IN THE USA WILL BE ACCEPTABLE.

36" GENERAL NOTES:

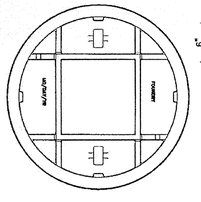
1. STANDARD 36" CAST IRON M.H. FRAME AND COVER. WEIGHTS: COVER = 355 LBS., FRAME = 315 LBS. TOTAL = 670 LBS. (TOLERANCE = ±5%)
2. REFERENCE SPEC. SECTION 130.
3. ONLY PRODUCTS CAST IN THE USA WILL BE ACCEPTABLE.

CONSTRUCTION NOTES:

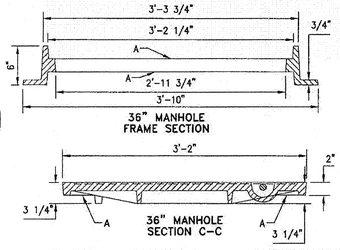
A. MACHINED OR GROUND BEARING SURFACES.
B. "SANITARY" CAST ON COVER TO IDENTIFY SANITARY SEWER.
C. LETTER SIZE TO BE 1 1/4" IN HEIGHT RAISED LETTERING.
D. LETTER SIZE TO BE 3/4" IN HEIGHT RAISED LETTERING.
E. LETTER SIZE TO BE 3/8" MIN. IN HEIGHT RAISED LETTERING.
F. 3/4" DIA VENT HOLE REQUIRED.
G. GUSSETS OPTIONAL IF REQUIRED BY MANUFACTURER.
H. 2" LETTERS (RECESSED FLUSH).



36" MANHOLE TOP VIEW

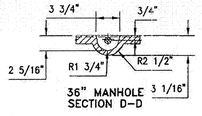


36" MANHOLE BOTTOM VIEW



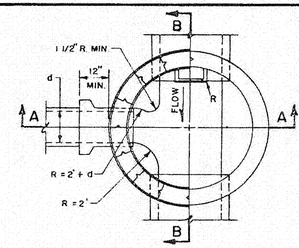
36" MANHOLE FRAME SECTION

36" MANHOLE SECTION C-C

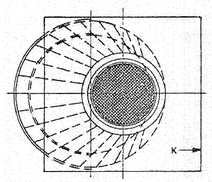


36" MANHOLE SECTION D-D

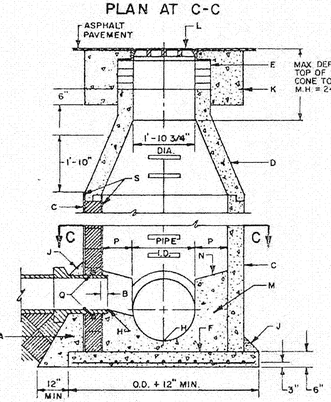
REVISIONS	WATER AUTHORITY
	SEWER MANHOLE FRAME AND COVERS
	DWG. 2109 JANUARY 2011



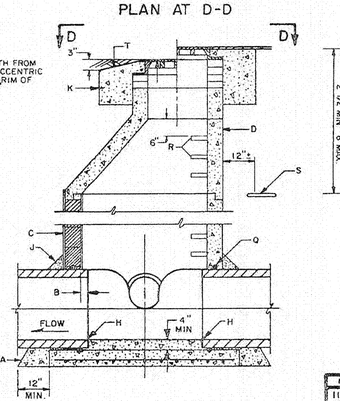
PLAN AT C-C



PLAN AT D-D



CROSS SECTION A-A



CROSS SECTION B-B

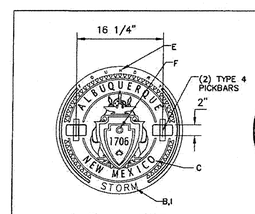
GENERAL NOTES

1. TYPE "E" MANHOLE NOT TO BE USED FOR DEPTHS LESS THAN 6' MEASURED FROM INVERT TO RIM.
2. MANHOLE GREATER THAN 18' IN DEPTH SHALL BE OF PRECAST CONCRETE SECTIONS ONLY.
3. DESIGN APPLIES TO 4' AND 6' I.D. MANHOLES.
4. USE NON-SHRINK GROUT FOR JOINTS, FILLETS AND PIPE PENETRATIONS.
5. COMPACT ALL BACKFILL AROUND MANHOLES TO 95%.
6. POSITION MANHOLE OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.

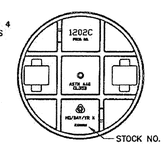
CONSTRUCTION NOTES:

A. CONCRETE PIPE SUPPORTS SHALL EXTEND OUTSIDE OF MANHOLE TO BELL OF FIRST JOINT AND SHALL CRADLE PIPE TO SPRING LINE NOT APPLICABLE FLEXIBLE PIPE.
B. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRINGLINE OF PIPE.
C. MANHOLE MAY BE CONSTRUCTED OF CONCRETE BLOCK, GR. MS BRICK, POURED CONCRETE OR PRECAST REINFORCED CONCRETE, IF BLOCK OR BRICK PLASTER INSIDE AND OUT WITH 1/2" MORTAR, SEE DWG. 2118 FOR DETAILS.
D. PRECAST REINFORCED CONCRETE ECCENTRIC CONE. THE CONTRACTOR SHALL PROVIDE SHOP DWGS. FOR APPROVAL.
K. USE MAX., 4 COURSES GR. MS BRICK ON UNPAVED STREET FOR FUTURE ADJ. OF FRAME TO PAVEMENT GRADE PLASTER INSIDE WITH 1/2" MORTAR.
F. BASE TO BE POURED IN PLACE USING NO. 4 BARS AT 6" O.C. EA. WAY FOR MANHOLE DEPTH OF 16' OR GREATER NO. 4 BARS AT 12" O.C. EA. WAY FOR MANHOLES LESS THAN 16' DEEP.
H. INVERT ELEVATION OF STUB OR LATERAL AS SHOWN ON PLANS.
J. 6" GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.
K. USE A 5' X 5' CONCRETE PAD IN ALL AREAS.
L. MANHOLE FRAME AND COVER, SEE DWG. 2110.
M. CONCRETE, SEE SECTION 101.
N. SLOPE 1' PER FT. FROM PIPE CROWN.
P. SHELF TO BE 9" WIDE MIN.
Q. APPROVED WATERSTOP TO BE WITH TYPE OF PIPE.
R. STEPS TO BE INSTALLED AS PER SPEC. SECTION 920.
S. EMD (IN UNPAVED AREAS).
T. IN UNPAVED AREAS SET FRAME TO GRADE AND SLOPE TOP OF PAD.

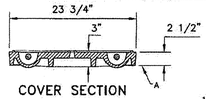
REVISIONS	CITY OF ALBUQUERQUE
11-14-91	SEWER MANHOLE TYPE "E"
23D	DWG. 2102 AUG. 1986



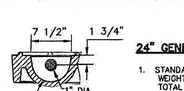
24" MANHOLE TOP VIEW



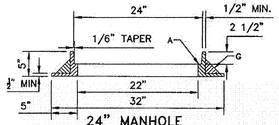
24" MANHOLE BOTTOM VIEW



COVER SECTION



PICKBAR DETAIL



24" MANHOLE FRAME SECTION

24" GENERAL NOTES:

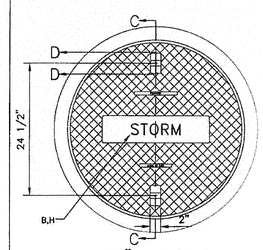
1. STANDARD 24" CAST IRON M.H. FRAME AND COVER. WEIGHTS: COVER = 180 LBS., FRAME = 145 LBS. TOTAL = 325 LBS. (TOLERANCE = ±5%)
2. REFERENCE SPEC. SECTION 130.
3. ONLY PRODUCTS CAST IN THE USA WILL BE ACCEPTABLE.

36" GENERAL NOTES:

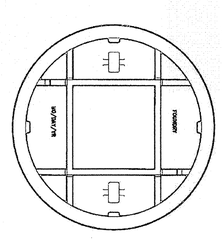
1. STANDARD 36" CAST IRON M.H. FRAME AND COVER. WEIGHTS: COVER = 355 LBS., FRAME = 315 LBS. TOTAL = 670 LBS. (TOLERANCE = ±5%)
2. REFERENCE SPEC. SECTION 130.
3. ONLY PRODUCTS CAST IN THE USA WILL BE ACCEPTABLE.

CONSTRUCTION NOTES:

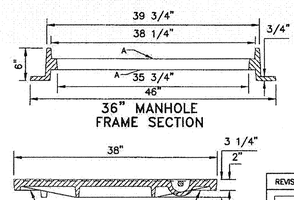
A. MACHINED OR GROUND BEARING SURFACES.
B. "STORM" CAST ON COVER TO IDENTIFY STORM DRAINAGE.
C. LETTER SIZE TO BE 1 1/4" IN HEIGHT RAISED LETTERING.
D. LETTER SIZE TO BE 3/4" IN HEIGHT RAISED LETTERING.
E. LETTER SIZE TO BE 3/8" MIN. IN HEIGHT RAISED LETTERING.
F. 3/4" DIA VENT HOLE REQUIRED.
G. GUSSETS OPTIONAL IF REQUIRED BY MANUFACTURER.
H. 2" LETTERS (RECESSED FLUSH).
I. LETTER SIZE TO BE 1" IN HEIGHT RAISED LETTERING.



36" MANHOLE TOP VIEW

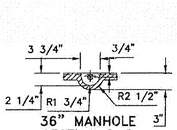


36" MANHOLE BOTTOM VIEW



36" MANHOLE FRAME SECTION

36" MANHOLE SECTION C-C



36" MANHOLE SECTION D-D

REVISIONS	CITY OF ALBUQUERQUE
23D	STORM MANHOLE FRAME AND COVERS
	DWG. 2110 JANUARY 2011

SHEET NO. C-16

JOHN H. NOURIAD NEW MEXICO 19062 PROFESSIONAL ENGINEER
AUG 23 2017

REV-0	08-23-17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

DETAILS
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

Greenberg Farrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016069710

MURPHY OIL USA, INC.
MURPHY USA
200 PEACH STREET
EL DORADO, AR 71730

CONCRETE SPECIFICATIONS

A. CEMENT
1. PROVIDE AN APPROVED STANDARD BRAND PORTLAND CEMENT CONFORMING TO ASTM C 150.
2. PROVIDE TYPE I NORMAL STRENGTH OR TYPE III HIGH EARLY STRENGTH.

B. AIR ENTRAINED CEMENT
1. PROVIDE AN APPROVED STANDARD BRAND TYPE I–A PORTLAND CEMENT CONFORMING TO ASTM C 494.

C. ALL CONCRETE FLAT WORK SHALL HAVE A MINIMUM OF 4" COMPACTED GRANULAR BEDDING.

D. FINE AGGREGATES
1. PROVIDE FINE AGGREGATES CONFORMING TO ASTM C 33 CONSISTING OF NATURAL SAND HAVING CLEAN, HARD, STRONG, DURABLE, UNCOATED GRAINS, FREE OF INJURIOUS AMOUNTS OF DUST, LUMPS, SOFT OR FLAKY PARTICLES, SHALE, ALKALI, ORGANIC MATTER, OR OTHER DELETERIOUS SUBSTANCES.
2. PROVIDE FINE AGGREGATES WITH A MINIMUM OF NINE PERCENT PASSING THROUGH A NO. 100 SIEVE.
3. IN ADDITION NOT MORE THAN 45 PERCENT IS TO BE RETAINED BETWEEN ANY TWO CONSECUTIVE SIEVES.

E. COARSE AGGREGATES
1. PROVIDE COARSE AGGREGATES CONFORMING TO ASTM C 33 CONSISTING OF CRUSHED STONE OR WASHED GRAVEL HAVING A CLEAN, HARD, STRONG, DURABLE, UNCOATED, PARTICLE FREE FROM INJURIOUS AMOUNTS OF SOFT OR FLAKY PIECES, ALKALI, ORGANIC MATTER, OR OTHER DELETERIOUS SUBSTANCES.
2. PROVIDE COARSE AGGREGATE WITH A MAXIMUM OF 1–1/2 INCHES, WITH A MINIMUM OF 95 PERCENT PASSING A 1–1/2 INCH SIEVE.
3. NOT MORE THAN FIVE PERCENT IS TO PASS A NO. 4 SIEVE.

F. WATER
1. USE CLEAN WATER FREE OF INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALI, SILTS, ORGANIC MATERIALS, OR OTHER SUBSTANCES THAT MAY BE DELETERIOUS TO CONCRETE OR STEEL.

G. ALL CONCRETE SHALL BE PLACED ON VAPOR BARRIER OF 4 MIL OR GREATER POLYETHYLENE TO ASSURE COMPLETE HYDRATION OCCURS.

H. CONCRETE MIX DESIGN
1. REQUIRE BATCH TICKETS TO BE FURNISHED UPON DELIVERY OF THE CONCRETE TO ENSURE CONCRETE MEETS THE SPECIFICATION. CONTRACTOR TO PROVIDE PLANT BATCH CERTIFICATIONS TO OWNER'S FIELD REPRESENTATIVE.
2. PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH A MINIMUM OF SIX BAGS (564 LBS.) OF CEMENT IN EACH CUBIC YARD OF CONCRETE CONFORMING TO ASTM C 94 FOR READY–MIXED CONCRETE. ALL CONCRETE SHALL BE CERTIFIED AS HIGH–EARLY STRENGTH, 4000 P.S.I. 28–DAY COMPRESSIVE STRENGTH READY–MIXED CONCRETE.
3. DO NOT EXCEED THE MAXIMUM WATER CEMENT RATIO OF 0.44 (FIVE GALLONS/BAG OF CEMENT).
4. PROVIDE CONCRETE WITH A MAXIMUM FOUR INCH SLUMP WHEN TESTED WITH A STANDARD SLUMP CONE CONFORMING TO ASTM C 143. SLUMP SHALL BE 4–5".

a. IF CONCRETE DEVELOPS CONSISTENCY OF DIFFICULT WORKABILITY, THEN A SUPER PLASTICIZER ADMIXTURE MAY BE USED WHEN APPROVED BY MURPHY OIL USA, INC.
b. DO NOT ADD WATER TO INCREASE SLUMP.

5. CALCIUM CHLORIDE SHALL NOT BE USED.
6. CURING COMPOUND TO BE MASTER BUILDERS' MASTERKURE OR TAMS INDUSTRIES' TRI–DOR 44, APPLIED PER MANUFACTURER'S SPECIFICATIONS.

I. PROVIDE AIR ENTRAINED CONCRETE FOR ALL CONCRETE TO BE FINISHED INCLUDING FOUNDATIONS, WALKS, PAVEMENTS, AND RETAINING WALLS.
1. AIR ENTRAINED IS TO BE A MINIMUM OF FIVE PERCENT AND MAXIMUM OF SEVEN PERCENT BY VOLUME.
2. MEASURE THE AIR CONTENT AT THE POINT OF DISCHARGE INTO FORMS.

J. PLACING CONCRETE
1. MIX AND PLACE CONCRETE FOLLOWING ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. SCHEDULE CONCRETING THAT ONCE STARTED REMAINS A CONTINUOUS OPERATION UNTIL THE PARTICULAR SECTION OR PANEL HAS BEEN COMPLETED.
3. PROVIDE CONSTRUCTION JOINTS AS INDICATED.
4. DEPOSIT CONCRETE INTO THE FINAL POSITION AT THE SPECIFIED SLUMPS WITHOUT SEGREGATION BY RE–HANDLING OR FLOWING.

a. DEPOSIT CONCRETE AT A RATE THAT CONCRETE REMAINS PLASTIC AND FLOWABLE INTO THE SPACES BETWEEN THE REINFORCING BARS.
b. DO NOT DEPOSIT FRESH CONCRETE ON CONCRETE THAT HAS HARDENED SUFFICIENTLY TO CAUSE FORMATION OF SEAMS OR PLANES OF WEAKNESS WITH THE SECTION OR PANEL.
c. DO NOT DEPOSIT PARTIALLY HARDENED CONCRETE OR CONCRETE THAT HAS BEEN CONTAMINATED BY FOREIGN MATERIALS.
d. DO NOT RE–TEMPER CONCRETE.

5. THOROUGHLY COMPACT CONCRETE BY MEANS OF MECHANICAL VIBRATORS SUPERVISED BY EXPERIENCED PERSONNEL.

a. PROVIDE SUFFICIENT VIBRATION INTENSITY TO CAUSE FLOW OR SETTLEMENT AROUND REINFORCEMENT, EMBEDDED ITEMS, AND CORNERS OF THE FORMS: BUT NOT LONG ENOUGH TO CAUSE SEGREGATION OF THE MIX.
b. SUPPLEMENT MECHANICAL VIBRATION BY HAND SPADING IN CORNERS AND ANGLES OF THE FORMS AND ALONG FORM SURFACES WHILE THE CONCRETE IS PLASTIC TO ENSURE EVEN DENSE SURFACES FREE FROM AGGREGATE POCKETS OR HONEYCOMBS.

6. PROTECT CONCRETE FROM EXCESSIVE HEAT AND PREMATURE DRYING BY THE USE OF KRAFT PAPER AND WATER MIST.
7. COAT CONCRETE AFTER ALL FINISHING IS COMPLETE USING THE SPECIFIED CURATIVE AGENTS.
8. IF SAW CUTTING IS EMPLOYED, IT MUST OCCUR FROM 8–12 HOURS AFTER INITIAL SET. a) SPALLING DUE TO SAW CUTTING ACTIONS MAY RESULT IN REJECTION OF THE CONCRETE WORK.

K. COLD WEATHER REQUIREMENTS
1. FOLLOW THE REQUIREMENTS OF ACI 306.1–90 AND THE FOLLOWING

a. REFER TO: "RECOMMENDED PRACTICES FOR COLD WEATHER MASONRY CONSTRUCTION" AS PUBLISHED BY INTERNATIONAL MASONRY INDUSTRY ALL WEATHER COUNCIL FOR TYPICAL COLD WEATHER MASONRY PRACTICES TO BE FOLLOWED.
b. PROVIDE ADEQUATE EQUIPMENT FOR HEATING CONCRETE MATERIALS, AND FOR PROTECTION OF THE CONCRETE DURING FREEZING OR NEAR FREEZING WEATHER.
c. MAINTAIN CONCRETE MATERIALS, REINFORCEMENT, FORM WORK, FILLERS, AND GROUND TO BE IN CONTACT WITH THE CONCRETE FREE OF FROST. DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE.
d. PROVIDE CONCRETE, DELIVERED IN COLD WEATHER, WITH THE FOLLOWING TEMPERATURES AIR TEM MIN. CONCRETE TEMP. 30–40 °F 60 °F 0–30 °F 65 °F BELOW 0 °F 70 °F
e. WHEN PRODUCING CONCRETE WITH HEATED AGGREGATES, HEATED WATER OR BOTH, DO NOT ALLOW CONCRETE TO EXCEED 90°F DURING PRODUCTION OR TRANSPORTATION.
f. ALL CONCRETE SLABS PLACED AT AIR TEMPERATURES FROM 20°F TO 50°F MAY HAVE AN ACCELERATING WATER REDUCING ADMIXTURE ADDITIVE ADDED TO ACCELERATE SETTING TIME AND STRENGTH ADMIXTURE COMPLYING WITH ASTM C 494, TYPE C.

1. ACCEPTABLE ADMIXTURES AR EUCLID CHEMICAL COMPANY'S "ACCELGAURD 90", OR EQUAL PRODUCTS BY W.R. MEADOWS, INC. OR W.R. GRACE & CO.
   (a) ADD ACCELGUARD 80 W./ WATER & AGGREGATE TO THE READY MIX CONCRETE TRUCK, BUT DO NOT DISPENSE ONTO DRY CONCRETE.
   (b) FOR TEMPERATURES 32° F – 60° F, ADD AT A RATE OF 16OZ./100 LBS. OF CONCRETE.
   (c) FOR TEMPERATURES BELOW 32° F, HEAT AGGREGATE AND USE WARM WATER SO THAT WHEN MIXED CONCRETE TEMPERATURE WILL BE ABOVE 60°.
2. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR THE QUANTITY TO BE ADDED TO THE CONCRETE MIX, DEPENDING UPON THE AMBIENT TEMPERATURE, DESIRED RATE OF ACCELERATION, EARLY STRENGTH GAIN, AND STRIPPING SCHEDULE. g) MAINTAIN CONCRETE ABOVE 50°F IN A MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS AFTER PLACEMENT FOLLOWING THE RECOMMENDATIONS OF ACI 308–92.

CONCRETE (CONTINUED)

L. HOT WEATHER REQUIREMENTS
1. FOLLOWING THE REQUIREMENTS OF ACI 305R.
2. DURING HOT WEATHER, TAKE STEPS TO REDUCE CONCRETE TEMPERATURE AND WATER EVAPORATION BY PROPER ATTENTION TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION, AND CURING.
3. THE PREFERRED PROTECTION IS A COVERING OF KRAFT PAPER, CONFORMING TO ASTM C 171, FOR A TWENTY FOUR HOUR PERIOD AFTER PLACEMENT.

M. CONCRETE FORMWORK
1. PROVIDE DRESSED LUMBER OR MANUFACTURED FORMS CONFORMING TO THE SHAPE, LINES, AND DIMENSIONS OF CONCRETE STRUCTURES INDICATED ON THE DRAWINGS: FREE FROM DEFECTS AND SUFFICIENTLY TIGHT TO PREVENT LEAKAGE OF MORTAR.
2. ALL WOODEN FORMS TO BE NO LESS THAN THE SPECIFIED DEPTH OF THE SLAB TO BE POURED, AND NOT LESS THAN NOMINAL 2" X 4" SIZE.
3. STAKING FOR STRAIGHT SECTIONS SHALL OCCUR NOT LESS FREQUENTLY THAN EVERY FOUR FEET AND SHALL BE BOTH INSIDE AND OUTSIDE OF THE FORM.
4. FOR CURVES, STAKING SHALL OCCUR NOT LESS THAN EVERY FOOT, AND SHALL BE BOTH INSIDE AND OUTSIDE OF THE FORM.
5. STEEL FORMS SHALL BE STAKED ACCORDING TO THEIR DESIGN REQUIREMENTS.
6. ALL REMOVABLE FORMS SHALL BE COATED WITH FORM – RELEASE OIL PRIOR TO PLACEMENT OF CONCRETE.
7. CYLINDRICAL FORMS SHALL BE OF NEW SONOTUBE OR EQUIVALENT DISPOSABLE MATERIALS.
   a. THESE MATERIALS MUST BE REMOVED COMPLETELY AFTER USE. ISLAND FORMS SHALL BE POSITIONED USING MASONRY BLOCKING AND STEEL STAKES BOTH INSIDE AND OUTSIDE OF THE FORM, TO ACHIEVE AN AVERAGE AS PER REVEAL HEIGHT AS MEASURED AT THE CENTER OF ANY LONG SIDE OF THE ISLAND, SEE DRAWINGS FD–1 AND FD–2
8. THE SIDES OF THE ISLAND FORM SHALL BE SHIMMED AGAINST THE STAKES TO PROVIDE A PERFECTLY PLUMB FREEBOARD.
9. ALL EDGES CREATED BY REMOVABLE FORMS SHALL BE TOOL–RADIUSED AFTER SURFACE FINISHING TO PROVIDE A SMOOTH BORDER ON ALL SLABS.
10. FORMS SHALL BE REMOVED NO SOONER THAN 24 HOURS FROM THE TIME OF THE POUR.
11. PROPERLY BRACE OR TIE FORMS TOGETHER TO MAINTAIN SHAPE AND POSITION.
12. PROVIDE SQUARE EDGE WOOD OR, IF AVAILABLE, METAL FORMS FOR FLOOR SLABS.
13. BEFORE POURING CONCRETE, REMOVE ALL DEBRIS FROM THE FORMWORK.
14. WET DOWN FORMWORK PRIOR TO PLACEMENT, OR APPLY A FORM RELEASE AGENT FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
15. DO NOT REMOVE FORMWORK AND BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT, CONSTRUCTION LOADS, AND DESIGN LOADS WHICH ARE LIABLE TO BE IMPOSED ON IT.
16. REMOVE FORMS IN A MANNER TO ASSURE THE COMPLETE SAFETY OF THE STRUCTURE.
17. DO NOT PLACE ANY CONCRETE IF THE SUB GRADE HAS STANDING WATER OR IS MUDDY.

N. STEEL REINFORCEMENT
1. PROVIDE REINFORCING BARS CONFORMING TO ASTM A 615, GRADE 60 FREE OF LOOSE FLAKY RUST, MUD, OIL, OR OTHER COATINGS WHICH WILL ADVERSELY AFFECT BONDING CAPACITY.
2. PLACE REINFORCEMENT ACCURATELY AND ADEQUATELY SUPPORTED BY CONCRETE MASONRY UNITS OR OTHER APPROVED SPACERS.
3. SECURE REINFORCEMENT AGAINST DISPLACEMENT WITHIN TOLERANCES SPECIFIED IN "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
4. HOLD BARS IN PLACE USING A MINIMUM 18 GAUGE ANNEALED IRON WIRE.
5. SPLICES IN DEFORMED REINFORCING BARS WILL NOT BE PERMITTED UNLESS APPROVED BY MURPHY OIL USA, INC.
6. REINFORCING ROD TO COMPLY WITH ASTM 615, GRADE 60.

O. ALTERNATE WELDED WIRE FABRIC REINFORCEMENT
1. ONLY WHEN INDICATED ON THE DRAWINGS, PROVIDE WELDED WIRE FABRIC CONFORMING TO ASTM A 185 FOR 6X6 W2.9 X W2.9 IN FLAT SHEETS UNLESS OTHERWISE INDICATED.
2. INSTALL WELDED WIRE FABRIC IN LENGTHS AS LONG AS PRACTICAL.
3. THE MINIMUM OVERLAP LENGTH, MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET, IS NOT TO BE LESS THAN ONE SPACING OF CROSS WIRES PLUS TWO INCHES.

P. FOUNDATIONS
1. PROVIDE SMOOTH FINISH AT ALL EXPOSED SURFACES.
2. CONSTRUCT CORNERS WITH A ONE INCH CHAMFER.
3. INCREASE THE DEPTH OF FOUNDATIONS, IF REQUIRED BY FROST LINE CONDITIONS OR BY LOCAL CODES.
4. OBTAIN MURPHY OIL USA, INC. APPROVAL OF ADDITIONAL DEPTH REQUIREMENTS BEFORE PLACING CONCRETE.
5. CONSTRUCT TOP ELEVATION OF FOUNDATIONS TO WITHIN +1/4 INCH OF THE ELEVATION INDICATED ON THE DRAWINGS. 6. INSTALL ANCHOR BOLTS WITH A HORIZONTAL TOLERANCE OF +1/8 INCH AND A VERTICAL ALIGNMENT OF +1/8 INCH OUT OF PLUMB.

Q. GROUT
1. PROVIDE NON–METALLIC, NON–SHRINK, PREMIXED NON–STAINING GROUT CONTAINING SELECTED SILICA SANDS, ASTM C 150 TYPE I PORTLAND CEMENT, AND SHRINKAGE COMPENSATING AGENTS.
2. ACCEPTABLE PRODUCTS ARE "EMBECO" BY MASTER BUILDERS AND "FIVE STAR GROUT" BY U.S. GROUT CORPORATION.

SHEET NO. C-17

JOHN H. NOURZAD NEW MEXICO 19062 PROFESSIONAL ENGINEER

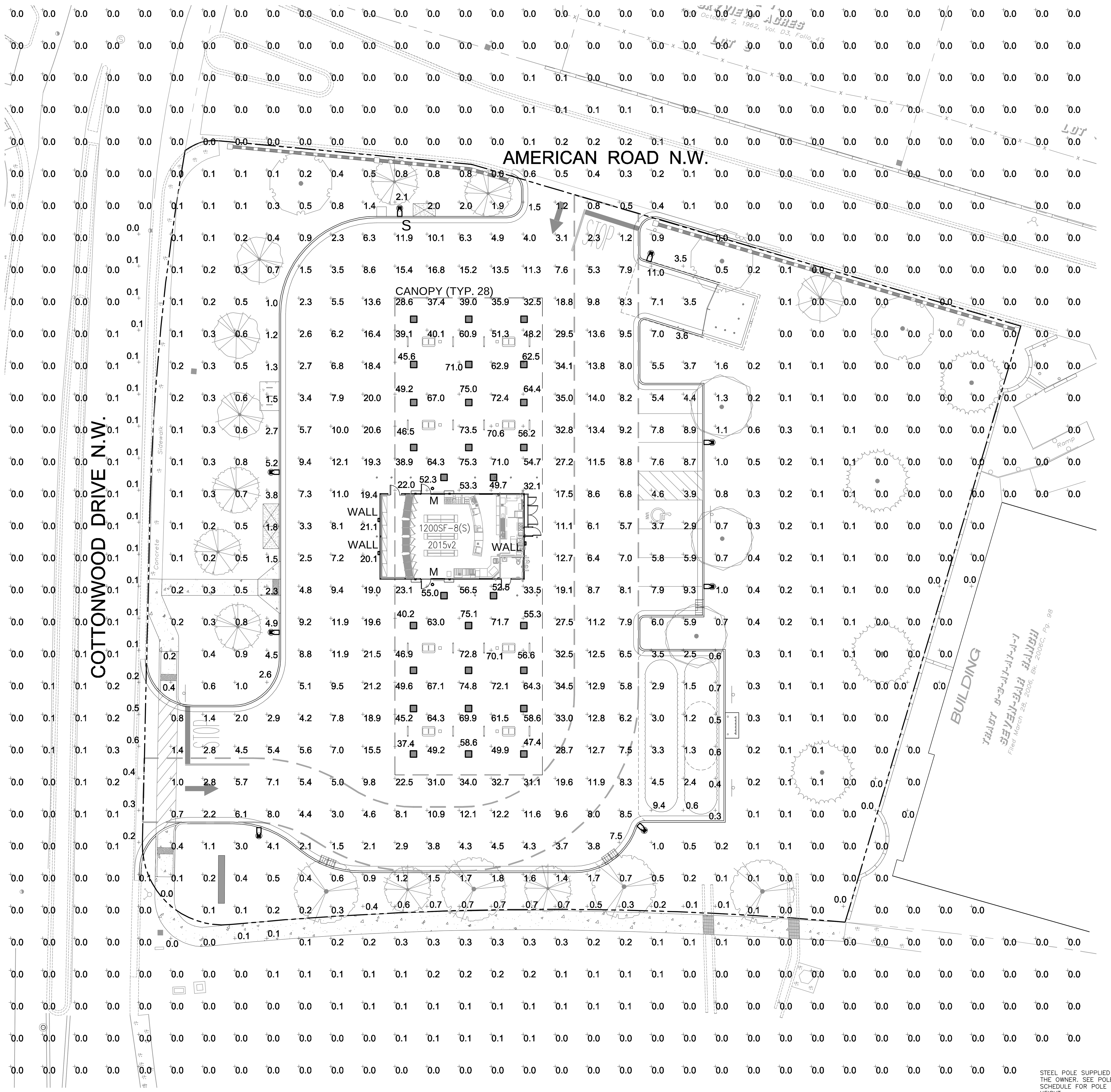
AUG 2 3 2017

REV–0	08–23–17	JN	DS	DS	DS
	DATE	PRN	PM	DES	DRW

DETAILS
MURPHY EXPRESS
3751 HIGHWAY 528 NW
ALBUQUERQUE NEW MEXICO

GreenbergFarrow
1430 W. PEACHTREE ST. NW SUITE 200
ATLANTA, GA 30309
PHONE: (404) 601 4000
FAX: (404) 601 3970
DWG NAME: ALBUQUERQUE, NM
JOB NO.: 2016809.10

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730
MURPHY USA



1 PHOTOMETRIC SITE PLAN
SCALE: 1"=20'-0"

LUMINAIRE SCHEDULE

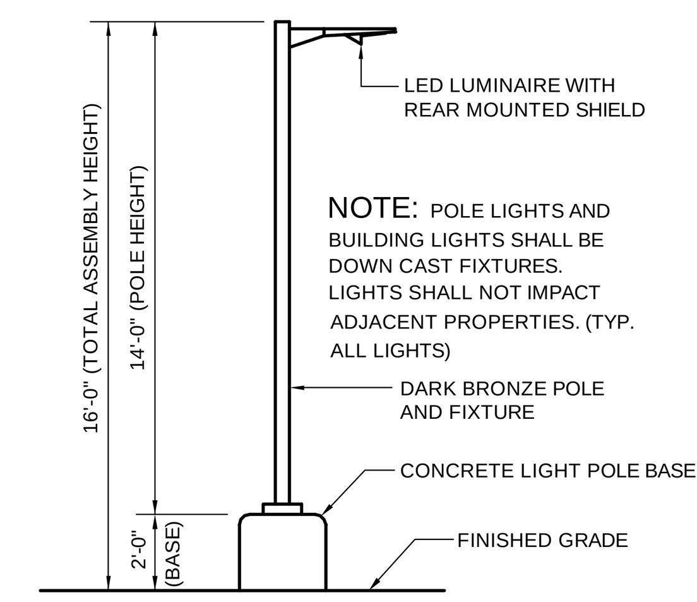
MOUNTING CONFIG	SYMBOL	QTY	ASSEMBLY HEIGHT	POLE HEIGHT	LUMENS	TOTAL WATTS	MODEL NUMBER	DESCRIPTION
S	▭□	8	16'-0"	14'-0"	11400	97	XLCS-FT-HSS-LED-SS-CW-UE-BRZ	LSI LIGHTING, SLICE MEDIUM LED SERIES AREA LIGHT, SUPER SAVER, COOL WHITE, SINGLE HEAD FLAT LENS FIXTURE, FORWARD THROW WITH REAR MOUNTED SHIELD
CANOPY	■	28	15'-0"	N/A	18633	132	CRUS-SC-LED-HO-50-UE-WHT	LSI LIGHTING, LEGACY SERIES, LOW WATT, FLAT LENS CANOPY FIXTURE
WALL	▭	3	8'-3"	N/A	4109	42	XSPWA03MC-UZP	CREE LIGHTING, XSP WALL MOUNT LUMINAIRE, 5700k CCT, WITH PHOTOCELL SENSOR
M	○	2	8'-3"	N/A	1800	20	LR6-18L-35K-120V-A-DR W/LT6A	CREE LIGHTING, LR-6 DOWN LIGHT LUMINAIRE, 3500k CCT, 1800 LUMENS FULLY RECESSED ENTRY LIGHTS WITH HOUSING RC6-12W-GU24

NOTES: ALL AREA SITE LIGHT FIXTURES AND POLES TO BE MOUNTED ON CONCRETE BASE PER DETAIL, THIS SHEET
ALL ANCHOR BOLTS TO BE ORIENTED IN THE SAME DIRECTION (SQUARE) AT INSTALLATION PER MANUFACTURER'S SPECIFICATIONS.
ALL FIXTURES ARE FULL CUT-OFF FIXTURES

POLE SCHEDULE

MOUNTING CONFIG	SYMBOL	QTY	POLE HEIGHT	MODEL NUMBER	DESCRIPTION
S	▭□	8	14'-0"	5SQB3-S11G-14-S-BRZ-5BC	LSI LIGHTING, STEEL SQUARE POLE, BOLT-ON ARM MOUNT, BRONZE

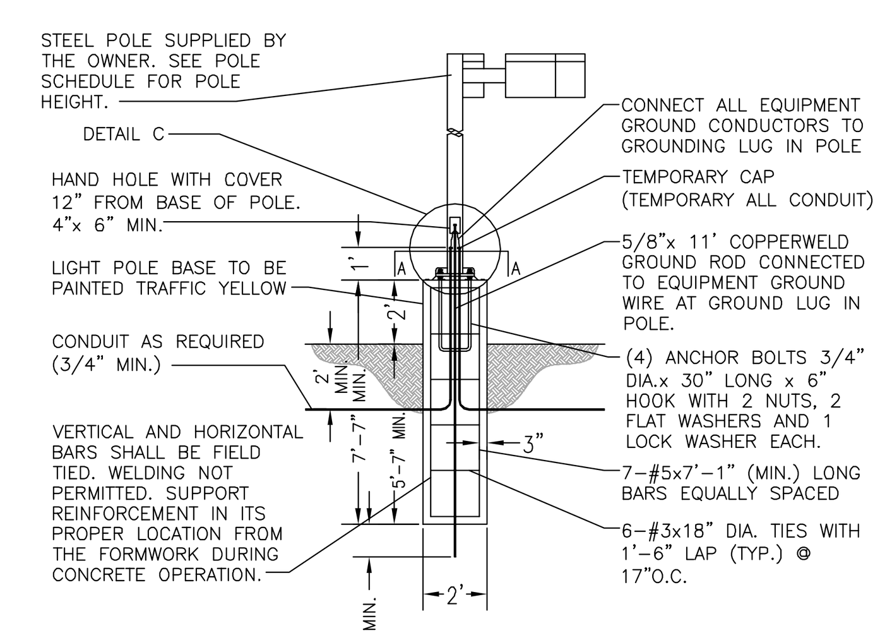
NOTES: ALL AREA SITE LIGHT FIXTURES AND POLES TO BE MOUNTED ON CONCRETE BASE PER DETAIL, THIS SHEET
POLES RATED TO 100 MPH WIND VELOCITY



2 AREA LIGHT DETAIL
SCALE: NOT TO SCALE

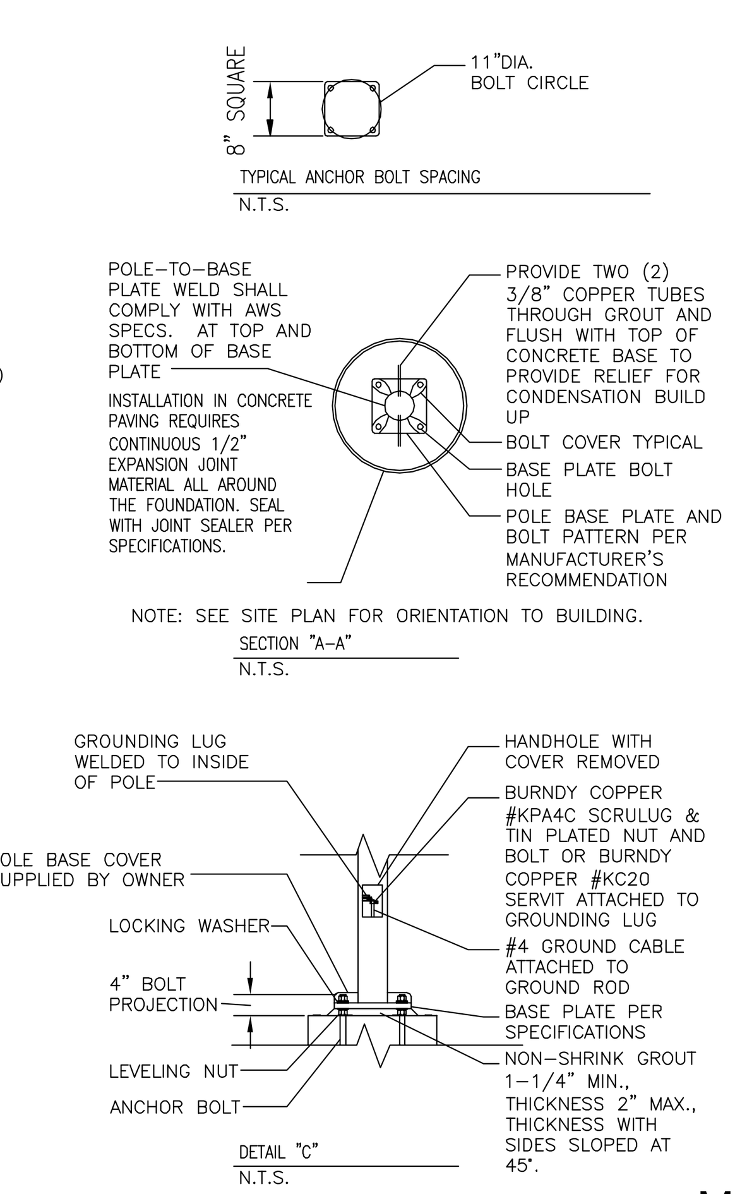
CALCULATION SUMMARY

LABEL	UNITS	AVG	MAX	MIN
CANOPY	FC	52.79	75.3	22.0
PROPERTY LINE	FC	10.30	75.3	0.0



NOTES:

1. 4000 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL
2. FOUNDATION IS DESIGNED TO WITHSTAND WINDS OF 130MPH.
3. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
4. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
5. FOUNDATION SHALL HAVE A MINIMUM ALLOWABLE END BEARING OF 2000 PSI.
6. FOUNDATION HAS BEEN DESIGNED FOR A COHESIVE SOIL BASED ON A MINIMUM COHESIVE VALUE OF 1000 PSI.
7. FOUNDATION HAS BEEN DESIGNED FOR A GRANULAR SOIL BASED ON A MINIMUM LATERAL SOIL PRESSURE OF 1000 PSI, UTILIZING AASHTO FIGURE 1.8.2C(4) OF "EMBEDMENT OF POSTS WITH OVERTURNING LOADS".
8. EXPOSED CONCRETE AND GROUT SHALL BE PAINTED TRAFFIC YELLOW.
9. DETAIL FOR 22' POLE WITH MAX. FIXTURE EPA 14.4 SQ. FT.
10. SEE LOCAL CONSULTANT PLAN OR APPLICABILITY



TYPICAL LIGHT POLE BASE DETAIL 13A
NOT TO SCALE

NOTES:

PLAN WAS BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS, LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.

THE STUDY IS BASED ON REQUESTED ILLUMINATION LEVELS, LUMINAIRE LOCATIONS, OR ADDITIONAL CRITERIA BY THE AUTHORITIES HAVING JURISDICTION.

THE CALCULATED PHOTOMETRIC LEVELS MAY OR MAY NOT MEET CERTAIN STANDARDS OR RECOMMENDED PRACTICES OF IESNA.

THE PHOTOMETRIC PLAN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS UTILIZING CURRENT INDUSTRY STANDARD LAMP RATINGS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY (IES) APPROVED METHODS. LABORATORY TESTS ARE MADE UNDER OPTIMUM CONDITION, WITH LAMP OUTPUT AT RATED VALUE, AND IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS.

ACTUAL ILLUMINANCE LEVELS MAY DIFFER DUE TO VARIABLE FIELD CONDITIONS SUCH AS (BUT NOT LIMITED TO): VARIANCE IN LAMP LUMEN OUTPUT; LAMP TILT FACTOR; BALLAST WATTAGE OUTPUT; LINE VOLTAGE AT BALLAST; REFLECTOR SPECULARITY; LAMP LUMEN DEPRECIATION; AND LUMINAIRE DIRT DEPRECIATION.

THE 26'-0" MOUNTING HEIGHT IS THE ACTUAL ASSEMBLY (POLE, BASE, AND FIXTURE) AND MAY DIFFER FROM THE FROM THE LUMINAIRE'S LUMINOUS APERTURE.

THIS PLAN IS FOR RELATIVE LAYOUT AND SCOPE OF WORK PURPOSES ONLY. REFER TO SITE PLAN PREPARED BY LOCAL CONSULTANT FOR RELATIONSHIP OF THESE LUMINAIRES AND THEIR LOCATIONS TO EXISTING STRUCTURES AND REFERENCE.

LED AREA LIGHTS - LSI SLICE SMALL (XLCS)

US & Int'l. patents pending

SMARTTEC™ - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

ENERGY SAVING CONTROL OPTION - DIM - 0-10 volt dimming enabled with controls by others.

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Select high-brightness LEDs in Cool White (5000K), or Neutral White (4000K) color temperature, 70 CRI.

DISTRIBUTION/PERFORMANCE - Types 3, FT, 5 and enhanced 5E and FTE. Exceptional uniformity creates bright environment at lower light levels. Internal Louver (IL) option available for improved backlight control without sacrificing street side performance for FT distribution.

HOUSING - One-piece, die-formed aluminum housing contains factory prewired driver. Wiring access door (with safety lanyard) located underneath.

OPTICAL UNIT - Clear tempered flat glass lens permanently sealed to weather-tight aluminum optic frame creates an IP65 rated optical unit (includes pressure-stabilizing breather).

MOUNTING - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations without the need for extension arms. Use with 3" reduced drilling pattern. A round pole plate is required for mounting to round poles. Wall mount available by ordering wall mounting bracket (BKS-XBO-WM-*-CLR). Proprietary pole quick mount accessories available with horizontal mounting or fixed 15° angled mounting (PQMH-KIT-CLR and PQM15-KIT-CLR) for mounting to square poles. See Accessory Ordering Information chart for all brackets.

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277 VAC (50/60Hz input), and 347-480 VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

DRIVER - Available in SS (Super Saver) and HO (High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Available in black, bronze and white. Other standard LSI finishes available. Consult factory.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - One fixture: 17.5 lbs. (7.9 kg). Packed two per carton: 30 lbs. (13.6 kg).

LISTING - UL listed to U.S. and international safety standards. Suitable for wet locations. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

DOE LIGHTING FACTS
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

LIGHT OUTPUT - XLCS

		Lumens (Nominal) Type 3	Type FT	Type 5	Type5E	TypeFTE	Watts (Nominal)
Cool White	SS	10100	11400	11400	8200	7800	97
Cool White	HO	14000	15500	15700	11600	10600	140
Neutral White	SS	9700	10400	10800	7900	7500	97
Neutral White	HO	13400	14700	15200	11000	10500	140

LED Chips are frequently updated therefore values may increase.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

ARRA Funding Compliant, DLC, cULus LISTED wet location, RoHS COMPLIANT, CE, FC, IP65

Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.

Project Name ____ Fixture Type ____
Catalog # ____
01/04/17
© 2017
LSI INDUSTRIES INC.

MANUFACTURER SPECIFICATION SHEET FOR SITE FIXTURES

LED CANOPY LIGHT - LEGACY™ (CRUS)

AC distribution utilizes a reflector which alters the look from a standard S distribution

US & Int'l. patents pending.

HOUSING - Low profile, durable die-cast, aluminum construction, providing a reliable weather-tight seal.

LEDS - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI (nominal).

DRIVE CURRENT - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).

OPTICS / DISTRIBUTION - Choice of Symmetrical or Asymmetrical, which directs light through a clear tempered glass lens, to provide a uniform distribution of light to vertical and horizontal surfaces.

OPTICAL UNIT - Features an ultra-slim 7/8" profile die-cast housing, with a flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

PRESSURE STABILIZING VENT - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

HAZARDOUS LOCATION - Designed for lighter than air fuel applications. Product is suitable for Class 1 Division 2 only when properly installed per LSI installation instructions (consult factory).

DRIVER - State-of-the-art driver technology superior energy efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards. 0-10 V dimming supplied standard with all drive currents.

DRIVER HOUSING - Die-cast aluminum, wet location rated driver/electrical enclosure is elevated above canopy deck to prevent water entry, provide easy "knock-out" connection of primary wiring and contributes to attaining the lowest operating temperatures available. Seals to optical housing via one-piece molded silicone gasket.

OPERATING TEMPERATURE - -40°C to 50°C (-40°F to +122°F)

ELECTRICAL - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

FINISH - Standard color is white and is finished with LSI's DuraGrip® polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

INSTALLATION - One person installation. No additional sealant required. Installs in a 12" or 16" deck pan. Deck penetration consists of a 4" hole, simplifying installation and water sealing. Unit is designed to quickly retrofit into existing Scottsdale (4") hole as well as openings for Encore and Encore Top Access and to reconnect wiring for the SC/ECTA without having to relocate the conduit. Retro panels are available for existing Encores (see back page) as well as kits for recessed and 2x2 installations (see separate spec sheets). Support brackets are provided standard, to prevent sagging of deck.

SHIPPING WEIGHT - 27 pounds (single pack), 48 pounds (double pack).

EXPECTED LIFE - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

WARRANTY - Limited 5-year warranty.

LISTING - UL and ETL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for wet locations.

PHOTOMETRICS - Please visit our web site at **www.lsi-industries.com** for detailed photometric data.

DOE LIGHTING FACTS
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

Consult Factory

Class 1, Division 2 – Standard on SS & LW.

T5 Temperature Classification – The surface temperature of this product will not rise above 100°C., within a 40°C ambient.

Gas Groups A,B,C, and D – Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane, Methane & Propane.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

RoHS COMPLIANT, ETL Intertek wet location, IP67, CE, cULus LISTED wet location, DLC

Project Name ____ Fixture Type ____
Catalog # ____
04/29/16
© 2016
LSI INDUSTRIES INC.

MANUFACTURER SPECIFICATION SHEET FOR CANOPY FIXTURE

DATE	DRAWN BY	DES. BY

No.	REVISION

Galloway
Planning. Architecture. Engineering.
6162 S. Willow Drive, Suite 320
Greenwood Village, CO 80111
303.770.8884 O
303.770.3636 F
www.gallowayUS.com

MURPHY EXPRESS

MURPHY EXPRESS
ALBUQUERQUE, NEW MEXICO
(3751 HIGHWAY 528 NW)

Project No:	MOC9604
Sheet Scale:	1"=20'-0"
Designed By:	JMG
Drawn By:	JMG
Date:	August, 2017
Disk File:	L1 Photometric-Albuquerque, NM

PHOTOMETRIC SITE PLAN

L-1.0