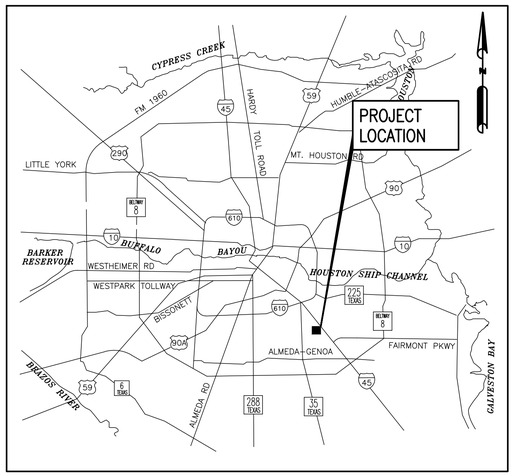
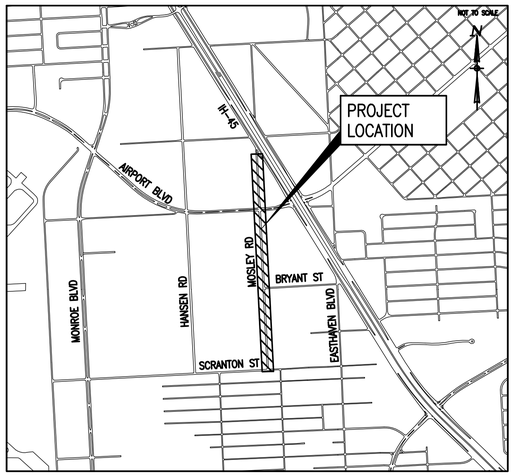
GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION - (TIRZ # 8)
IH-45 TO SCRANTON ST
WBS NO.N-T08000-0004-7



LOCATION MAP
COUNCIL DISTRICT D
N.T.S.



VICINITY MAP
KEY MAP NO. 575 D & H
GIMS MAP NO 5652 B & 5653 D
ZIP CODE NO 77017, 77061 & 77075
N.T.S.

SHEET INDEX

SEE SHEET 2

On Behalf of
TAX INCREMENT REINVESTMENT ZONE No. 8

AUGUST 2023

BASE BID: AIRPORT BLVD TO SCRANTON ST

ALTERNATE 1: AIRPORT BLVD TO IH-45

FLOODPLAIN INFO
THIS PROJECT LIES WITHIN ZONE X UNSHADED PER FIRM PANEL #48201C0895N (EFF. 5/2/2019)

GULFGATE REDEVELOPMENT AUTHORITY

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
TELEPHONE NUMBER: 713-266-6900
TEXAS FIRM NUMBER: F-2614

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
LICENSED PROFESSIONAL ENGINEER
VOID
07/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

NOTE: CITY SIGNATURE VALID FOR ONE YEAR ONLY, AFTER DATE OF SIGNATURE.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

Director of Houston Public Works Date:

SHEET NO 1 OF 111 SHEETS

FOR CITY OF HOUSTON USE ONLY

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No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
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MARC WOODWARD
96012
LICENSED PROFESSIONAL ENGINEER
7/20/2023

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

INDEX OF SHEETS

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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 2 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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GENERAL CONSTRUCTION NOTES

1. CONSTRUCT WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING IN ACCORDANCE WITH THE LATEST EDITION OF THE PUBLICATIONS "STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING" AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING" PUBLISHED BY HOUSTON PUBLIC WORKS.

2. THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT WAS CONDUCTED IN ACCORDANCE WITH CHAPTER 11 OF THE LATEST EDITION OF THE PUBLICATION INFRASTRUCTURE DESIGN MANUAL, PUBLISHED BY HOUSTON PUBLIC WORKS. SOILS REPORT WAS PREPARED BY ECS SOUTHWEST, LLC REPORT NO. 43-2417, DATED JANUARY 21, 2022.

3. UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/811 OR 800-344-8377 AND LONE STAR NOTIFICATION CENTER AT 800-669-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION. UTILITIES MARKED WITHIN THE PUBLIC RIGHT OF WAY OR IN EASEMENTS SHALL COMPLY WITH TAC TITLE 16, PART 1, CHAPTER 18, RULE 18.6 AND THE AMERICAN PUBLIC WORKS ADMINISTRATION (APWA) UNIFORM COLOR CODE.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER, STORM WATER LINES, AND TRAFFIC CONTROL DEVICES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON PUBLIC WORKS, "STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEM, WATER LINES, STORM DRAINAGE, AND STREET PAVING" AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING", REFERENCED ABOVE, AT NO ADDITIONAL COST.

5. CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, HOUSTON PUBLIC WORKS AT 832-394-9098 OR VIA FAX AT 832-395-4424 FOR INSPECTION AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.

6. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIME DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.

7. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS, AND TREES ALONG THE AREA OF EXCAVATION.

8. CONTRACTOR SHALL MAINTAIN A SET OF REDLINE DRAWINGS AND RECORD AS-BUILT CONDITIONS DURING CONSTRUCTION. THESE REDLINE MARKED UP DRAWINGS WILL BE SUBMITTED TO THE DESIGN CONSULTANT WHO WILL MAKE THE CHANGES ON THE ORIGINAL TRACINGS, LABEL EACH SHEET IN THE SET AS "RECORD DRAWINGS", AND RETURN IT TO THE CITY ENGINEER.

STORM NOTES

1. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLET LEADS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED.

2. MINIMUM HORIZONTAL CLEARANCE BETWEEN ANY STORM PIPE AND BOX SHALL BE AT LEAST 48-INCHES FROM EXTERIOR OF THE STORM PIPE OR BOX TO THE EXTERIOR OF THE EXISTING OR PROPOSED PUBLIC OR PRIVATE UTILITY AND OTHER APPURTENANCES. MINIMUM VERTICAL CLEARANCE BETWEEN ANY STORM PIPE AND BOX SHALL BE AT LEAST 24-INCHES FROM EXTERIOR OF THE STORM PIPE OR BOX TO THE EXTERIOR OF THE EXISTING OF PROPOSED PUBLIC OR PRIVATE UTILITY AND OTHER APPURTENANCES.

3. ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF SECTION 02086-ADJUSTING MANHOLES, INLETS, AND VALVE BOXES TO GRADE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF THIS WORK.

5. ALL DITCHES SHALL BE GRADED TO PROPOSED ELEVATIONS TO ENSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREAS SHALL BE REGRADED, SEEDED AND FERTILIZED.

6. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.

STREET AND BRIDGE NOTES:

1. HOUSTON PUBLIC WORKS "STANDARD CONSTRUCTION SPECIFICATIONS" AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING" UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN IS CONSISTENT WITH THE MINIMUM STANDARDS ESTABLISHED IN THE "INFRASTRUCTURE DESIGN MANUAL" REFERENCED AT:
https://edocs.publicworks.houstontx.gov/engineering-and-construction/design-manuals.html

2. FILL AREAS ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 8" IN DEPTH AND EACH COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY PRIOR TO INSTALLATION OF WATER LINE AND FILL AREA SHALL BE SEEDED AND FERTILIZED WITHIN 10 WORKING DAYS.

3. UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURBED INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONTRACT IS COMPLETE.

4. CONTRACTOR SHALL PROVIDE SILT BARRIER FENCE ON ALL STAGE 1 CURB INLETS.

5. EXISTING PAVEMENTS, CURBS, DRIVEWAYS, AND SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF HOUSTON STANDARDS, WITH LATEST ADDENDA AND AMENDMENTS THERETO.

6. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY UPON COMPLETION OF JOB SHALL BE AS GOOD AS OR BETTER THAN PRIOR TO STARTING WORK.

7. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO SATISFACTION OF THE OWNING AUTHORITY.

8. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE #6 BARS 24" LONG 24" C-C DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL.

9. CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAWS CONCERNING EXCAVATION, TRENCHING AND SHORING AS SPECIFIED IN CITY OF HOUSTON ORDINANCE #87-1457.

10. WHEEL CHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON STANDARDS AT ALL INTERSECTIONS WHERE SIDEWALKS EXIST AND THE EXISTING CURB OR SIDEWALK IS DAMAGED OR REMOVED DURING CONSTRUCTION.

11. PRIOR TO STREET CONSTRUCTION, THE CONTRACTOR SHALL CONTACT HOUSTON PUBLIC WORKS AT (PHONE) 832-394-9578 AND COMPLY WITH ALL REQUIREMENTS FOR THE ISSUANCE OF NECESSARY PERMITS/WORK ORDERS FOR STREET CONSTRUCTION.

12. DOUBLE REFLECTORIZED BLUE TRAFFIC MARKERS SHALL BE PLACED 6-INCHES OFFSET OF THE CENTERLINE OF ALL FIRE HYDRANT LOCATIONS BY THE PAVING CONTRACTOR. HYDRANTS LOCATED AT INTERSECTIONS SHALL HAVE A BUTTON PLACED ON EACH STREET.

13. SAW CUT EXISTING CURB AT EACH END AND KNOCK OUT CURB FROM BEGINNING TO END OF PROPOSED DRIVEWAY.

14. SAW CUT EXISTING PAVEMENT A MINIMUM OF 12 INCHES AWAY FROM FACE OF CURB (GUTTER LINE) AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL.

15. REINFORCING STEEL TO BE ELEVATED A MINIMUM OF 3" ABOVE SUBGRADE. (3" MANUFACTURED CHAIRS ARE REQUIRED WITH MAXIMUM SPACING OF 72 INCHES C/C EACH WAY).

GENERAL CONSTRUCTION NOTES FOR STORM WATER POLLUTION PREVENTION PLAN

STORM WATER POLLUTION PLAN (SWPPP) AND STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) COMPLIANCE NOTES:

A.< 1.0 ACRE
- IF AREA IS DISTRIBUTED, (CLEARING AND GRUBBING AND/OR EXCAVATION INVOLVED)
- PROVIDE BMP'S TO PREVENT AND RUNOFF INTO THE CITY'S MS4
- PROVIDE SWPPP NOTES FOR CONSTRUCTION PLANS
- ANY CONSTRUCTION SITE RUNOFF INTO THE CITY'S MS4 IS A VIOLATION OF THE CITY STORM WATER ORDINANCE

B.>1.0<5.0 ACRES
- CONSIDERED SMALL CONSTRUCTION ACTIVITIES
- SUBMIT A CONSTRUCTION SITE NOTICE (CSN) TO THE CITY AND TCEQ
- POST A CONSTRUCTION SITE NOTICES AT THE CONSTRUCTION SITE
- REQUIRED TO DEVELOP SWP3
- NOT REQUIRED TO SUBMIT A NOI OR NOT
- ANY SUPPORTING CONCRETE OR ASPHALT PLANT IS SEPARATELY AUTHORIZED TO DISCHARGE UNDER ANY INDIVIDUAL TPDES PERMIT

C.<5.0 ACRES AND PART OF LARGER COMMON PLAN OF DEVELOPMENT THAT WILL EQUALLY DISTURB
- AREA THAT IS EQUAL TO OR GREATER (>) 5.0 ACRES
- CONSIDERED LARGE CONSTRUCTION ACTIVITIES
- CONTRACTOR IS REQUIRED TO SUBMIT AN NOI TO COH AND TCEQ
- SUBMIT A STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR DESIGNED STRUCTURAL AND NONSTRUCTURAL CONTROL FEATURES
- DEVELOP A SWP3 (SWPPP), STORM WATER POLLUTION PREVENTION PLAN TO BE RETAINED ON SITE DURING CONSTRUCTION OF PROJECTS FROM BEGINNING TO END
- SUBMIT A NOT (NOTICE OF TERMINATION) WITHIN 30 DAYS AFTER FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE. ALL SITE FENCES OR TEMPORARY EROSION CONTROL FEATURES MUST BE REMOVED OR SCHEDULED FOR REMOVAL AS DEFINED UNDER THE SWP3

D.>5.0 ACRES
SAME AS ABOVE

TRAFFIC NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) LATEST EDITION WITH REVISIONS DURING THE ENTIRE CONSTRUCTION PERIOD.

2. NO WORK SHALL BE PERFORMED IN RESIDENTIAL AREAS FROM 7:00PM TO 7:00AM UNLESS OTHERWISE NOTED IN PLANS.

3. CONTRACTOR SHALL MAINTAIN APPROVED NUMBER OF LANES OF TRAFFIC IN EACH DIRECTION DURING CONSTRUCTION WORKING HOURS. TRAFFIC CONTROL PLANS SHALL INCLUDE ONE-WAY AND/OR DETOUR PLANS. CONTRACTOR SHALL MAINTAIN ADA COMPLIANT PEDESTRIAN ACCESS TO BUS STOPS AND ADEQUATE BUS ACCESS TO THE BUS STOP.

4. CONTRACTOR SHALL COVER OPEN PAVEMENT EXCAVATIONS FOR MINOR UTILITY WORK WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, OPEN LANES FOR NORMAL TRAFFIC FLOW WHEN FEASIBLE.

5. CONTRACTOR SHALL SECURE LANE/SIDEWALK/BICYCLE FACILITY CLOSURE PERMITS FROM TRANSPORTATION & DRAINAGE OPERATIONS (MOBILITY PERMIT SECTION AT WWW.GIMS.HOUSTONTX.GOV) BEFORE IMPLEMENTING THE TRAFFIC CONTROL PLAN. THE APPLICATION MUST BE SUBMITTED AT LEAST TEN BUSINESS DAYS PRIOR TO THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN AND/OR BEGINNING CONSTRUCTION WORK. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS, CONSTRUCTION SEQUENCING, AND CONSTRUCTION SCHEDULE WITH THE APPLICATION.

6. CONSTRUCTION SHALL HAVE APPROVED TRAFFIC CONTROL PLAN AND PERMIT AT THE JOB SITE FOR INSPECTION AT ALL TIMES.

7. ACCESS TO DRIVEWAYS ADJACENT TO THE CONSTRUCTION WORK ZONE SHALL BE MAINTAINED AT ALL TIMES AS MUCH AS POSSIBLE. ADDITIONAL CONES AND/OR DELINEATORS MAY BE REQUIRED TO DELINEATE THE DRIVEWAY ACCESS ROUTE THROUGH THE CONSTRUCTION WORK ZONE. A MINIMUM OF ONE TRAVEL LANE SHALL BE MAINTAINED ACROSS THE DRIVEWAY, UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE CITY OF HOUSTON.

8. ADDITIONAL OFF DUTY POLICE OFFICERS/FLAGGERS MAY BE REQUESTED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED AT THE DIRECTION OF THE CITY EVEN IF THEY ARE NOT SPECIFICALLY IDENTIFIED ON THE PROJECT PLANS.

9. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF "TRAFFIC CONTROL PLANS" DURING THE CONSTRUCTION THAN WHAT IS OUTLINED IN THE CONTRACT DRAWINGS, HE/SHE SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING AN ALTERNATE SET OF PLANS TO THE PLAN REVIEW SECTION FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION. THESE PLANS SHALL BE DRAWN TO SCALE ON FULL SIZE BOND PAPER AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS. PLANS WILL BECOME A PART OF THE CONTRACT DRAWINGS.

10. NO LANES SHALL BE CLOSED BETWEEN THE HOURS OF 7:00 AM TO 9:00 AM AND FROM 4:00 TO 6:00 PM M-FR. NO LANES SHALL BE CLOSED BETWEEN THE HOURS OF 7:00 PM TO 7:00 AM M-SAT UNLESS OTHERWISE NOTED.

11. FOR SIDEWALK AND WHEELCHAIR RAMPS CLOSURES, REFER TO COH STANDARD DETAIL NO. 02893-18 (CROSSWALK CLOSURES AND PEDESTRIAN DETOURS, SOLAR SCHOOL ZONE FLASHING BEACON).

SWPPP CONSTRUCTION NOTES:

1. CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.

2. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.

3. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.

4. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.

5. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.

- DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- STRUCTURAL CONTROL MEASURES
- LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE

6. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING

DETAILS

1. CITY OF HOUSTON STANDARD DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATERLINES, STORM DRAINAGE, AND STREET PAVING ARE INCORPORATED IN PLANS THAT ARE APPLICABLE TO PROJECT. STANDARD DETAILS ARE AVAILABLE FOR DOWNLOAD AT THE FOLLOWING WEB ADDRESS:
HTTPS://WWW.HOUSTONPERMITTINGCENTER.ORG/OFFICE-CITY-ENGINEER/DESIGN-AND-CONSTRUCTION-STANDARDS#AGENCY-LINKS-1476

2. DETAILS INCLUDED IN PLAN SET SUPERSEDE RELATED COH STANDARD DETAILS.

No.	Date	Revisions	App'd

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
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STATE OF TEXAS — MARK WOODWARD — 96072 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
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GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

GENERAL CONSTRUCTION NOTES

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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
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STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 3 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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CENTERPOINT ENERGY

CAUTION: UNDERGROUND GAS FACILITIES

1. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

   *** WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713)207-5463 OR (713)945-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.

   *** WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.

   *** WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.

   *** FOR EMERGENCIES REGARDING GAS LINES CALL (713) 659-3552 or (713) 207-4200.

2. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

WARNING: OVERHEAD ELECTRICAL LINES

1. OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:

   *** ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX(6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND

   *** OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

2. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 207-2222.

ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY

1. NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6348 OR (713) 207-5769.

AT&T TEXAS/SBC FACILITIES

1. THE LOCATIONS OF AT&T TEXAS/SWBT FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.

2. THE CONTRACTOR SHALL CALL 1-800-344-8377 (TEXAS 811) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.

3. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWBT FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWBT FACILITIES.

4. WHEN AT&T TEXAS/SWBT FACILITIES ARE EXPOSED, THE CONTRACTOR WILL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.

5. THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.

6. PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER KEVIN RAY AT (713) 614-1983 OR E-MAIL HIM AT KR7896@ATT.COM IF CABLE LOCATE REQUESTS ARE NOT COMPLETED FOR OUR AT&T TEXAS/SWBT FACILITIES.

No.	Date	Revisions	App.

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

VERIFICATION OF PRIVATE UTILITY LINES

Mike Brower Date: 07-24-23
CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
Signature valid for six months.

Mike Brower Date: 07-24-23
CenterPoint Energy/UNDERGROUND Electrical facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification)
Signature valid for six months.

Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only.
Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

STATE OF TEXAS
MARK WOODWARD
96612
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PRIVATE UTILITY NOTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 4 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

PEN TABLE: LAN-COH.ctb
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PLOTED: 7/19/2023 3:29 PM
FILE PATH: P:\120\120-12106-013\4-0-Production-Working\4-1-BIM-CAD\General\G004 - Private Utility Notes.dwg

EXISTING PLAN VIEW

- WATER METER
- WATER VALVE (GATE)
- WATER VALVE (BUTTERFLY)
- FIRE HYDRANT/FLUSHING VALVE
- TAPPING SLEEVE & VALVE
- REDUCER (8" 6")
- ROUND CONNECTION
- SANITARY SEWER CLEANOUT & MANHOLE (CO, SAN MH)
- STORM SEWER MANHOLE (STM MH)
- STORM SEWER INLETS ('B' 'B-B' 'C' 'C-1' 'C-2' 'C-2A' 'GRATE')
- CULVERT PIPE AND HEADWALL
- TOP OF CURB ELEVATION (TC=XX.XX)
- GUTTER ELEVATION (G=XX.XX)
- TOP OF PAVEMENT ELEVATION (TP=XX.XX)
- CONTOUR LINE
- ROW LINE
- PROPERTY LINE
- LOT LINES
- EASEMENT LINE
- CENTER LINE OF ROW
- TRANSIT LINE
- EDGE OF DITCHES
- CENTER LINE OF DITCHES
- EDGE OF DITCHES
- FENCE LINE, WOOD
- FENCE LINE, CHAIN LINK
- FENCE LINE, BARBED WIRE
- FENCE LINE, HOG WIRE
- EDGE OF CONCRETE
- CURB LINE
- CONCRETE WALK
- EDGE OF ASPHALT
- EDGE OF SHELL OR GRAVEL
- DIMENSION LINE (28" 3-17)
- CENTERPOINT ENERGY AERIAL LINE (P P P)
- CENTERPOINT ENERGY UNDERGROUND LINE
- GAS LINE
- MISC UNDERGROUND LINE
- PIPELINE OR WESTERN UNION CONDUIT (IDENTIFY CONDUIT)
- AT&T CONDUIT
- CABLE TV
- RAILROAD LINE
- WATER LINE (20" (AND SMALLER) WATER; 24" (LARGER THAN 20") WATER)
- SANITARY SEWER LINE (24" (AND SMALLER) SANITARY SEWER; 30" (LARGER THAN 24") SANITARY SEWER)
- STORM SEWER LINE (24" (AND SMALLER) STORM SEWER; 30" (LARGER THAN 24") STORM SEWER)
- SANITARY SEWER FORCE MAIN
- RECLAIMED WATER LINE (RWL)
- NON-POTABLE WATER LINE (NPW)
- GAS METER
- GAS VALVE
- MISC UNDERGROUND PIPELINE LABLE (A2)

PROPOSED PLAN VIEW

- WATER METER (WM)
- WATER VALVE (GATE) (WV)
- WATER VALVE (BUTTERFLY) (BFWV)
- FIRE HYDRANT/FLUSHING VALVE (FH, WV)
- TAPPING SLEEVE & VALVE (TSAV)
- REDUCER (12" 8")
- ROUND CONNECTION
- SANITARY SEWER CLEANOUT & MANHOLE (CO, SAN MH)
- STORM SEWER MANHOLE (STM MH)
- STORM SEWER INLETS ('B' 'B-B' 'C' 'C-1' 'C-2' 'C-2A' 'GRATE')
- CULVERT PIPE AND HEADWALL
- TOP OF CURB ELEVATION (TC=XX.XX)
- GUTTER ELEVATION (G=XX.XX)
- TOP OF PAVEMENT ELEVATION (TP=XX.XX)
- CONTOUR LINE
- ROW LINE
- PROPERTY LINE
- LOT LINES
- EASEMENT LINE
- CENTER LINE OF ROW
- TRANSIT LINE
- EDGE OF DITCHES
- CENTER LINE OF DITCHES
- EDGE OF DITCHES
- FENCE LINE, WOOD
- FENCE LINE, CHAIN LINK
- FENCE LINE, BARBED WIRE
- FENCE LINE, HOG WIRE
- EDGE OF CONCRETE
- CURB LINE
- CONCRETE WALK
- EDGE OF ASPHALT
- EDGE OF SHELL OR GRAVEL
- DIMENSION LINE (28" 3-17)
- CENTERPOINT ENERGY AERIAL LINE (P P P)
- CENTERPOINT ENERGY UNDERGROUND LINE
- GAS LINE
- MISC UNDERGROUND LINE
- PIPELINE OR WESTERN UNION CONDUIT (IDENTIFY CONDUIT)
- AT&T CONDUIT
- CABLE TV
- MATCH LINE
- RAILROAD LINE
- WATER LINE (20" (AND SMALLER) WATER; 24" (LARGER THAN 20") WATER)
- SANITARY SEWER LINE (24" (AND SMALLER) SANITARY SEWER; 30" (LARGER THAN 24") SANITARY SEWER)
- STORM SEWER LINE (24" (AND SMALLER) STORM SEWER; 30" (LARGER THAN 24") STORM SEWER)
- SANITARY SEWER FORCE MAIN
- RECLAIMED WATER LINE (RWL)
- NON-POTABLE WATER LINE (NPW)
- GAS METER
- GAS VALVE
- MISC UNDERGROUND PIPELINE LABLE (A2)

EXISTING PLAN VIEW

- PAVING HEADER
- BUILDING, RESIDENTIAL (RES. 1-STORY BR. BLDG.)
- BUILDING, COMMERCIAL (COMM. 1-STORY BR. BLDG.)
- TREE
- HEDGE
- IRON PIPE OR IRON ROD MONUMENT (3/4" IP)
- POINT OF INTERSECTION (PI)
- POINT OF CURVE (PC)
- POINT OF TANGENCY (PT)
- POWER POLE (P)
- POWER POLE W/DOWN GUY (P)

PROPOSED PLAN VIEW

- PAVING HEADER
- BUILDING, RESIDENTIAL (RES. 1-STORY BR. BLDG.)
- BUILDING, COMMERCIAL (COMM. 1-STORY BR. BLDG.)
- TREE
- HEDGE
- IRON PIPE OR IRON ROD MONUMENT (3/4" IP)
- POINT OF INTERSECTION (PI)
- POINT OF CURVE (PC)
- POINT OF TANGENCY (PT)
- POWER POLE (P)
- POWER POLE W/DOWN GUY (P)

MISC STANDARD ELEMENTS

- COH NORTH ARROW (N)
- COH BAR SCALE (0' 10' 20' 40'; SCALE: 1"=20')
- REVISION CLOUD/DELTA (1)

EXISTING PROFILE VIEW

- NORTH OR EAST PROPERTY LINE
- SOUTH OR WEST PROPERTY LINE
- NORTH OR EAST CURB
- SOUTH OR WEST CURB
- NORTH OR EAST DITCH
- SOUTH OR WEST DITCH
- NORTH OR EAST CULVERT (CULVERT)
- SOUTH OR WEST CULVERT (CULVERT)
- CENTERLINE OF ROW
- CENTERPOINT ENERGY CONDUIT (CENTERPOINT ENERGY CONDUIT)
- GAS LINE (GAS LINE)
- WESTERN UNION (WESTERN UNION)
- AT&T CONDUIT (AT&T CONDUIT)
- WATER LINE (20" (AND SMALLER) WATER LINE; 24" (LARGER THAN 20") WATER)
- SANITARY SEWER LINE (24" (AND SMALLER) SANITARY SEWER; 30" (LARGER THAN 24") SANITARY SEWER)
- STORM SEWER LINE (24" (AND SMALLER) STORM SEWER; 30" (LARGER THAN 24") STORM SEWER)
- SANITARY SEWER FORCE MAIN
- RECLAIMED WATER LINE (RWL)
- NON-POTABLE WATER LINE (NPW)
- CENTERPOINT ENERGY MANHOLE
- AT&T MANHOLE
- WATER LINE MANHOLE
- SANITARY SEWER MANHOLE & CLEANOUT
- STORM SEWER MANHOLE
- STORM SEWER INLET

PROPOSED PROFILE VIEW

- NORTH OR EAST PROPERTY LINE
- SOUTH OR WEST PROPERTY LINE
- NORTH OR EAST CURB
- SOUTH OR WEST CURB
- NORTH OR EAST DITCH
- SOUTH OR WEST DITCH
- NORTH OR EAST CULVERT (CULVERT)
- SOUTH OR WEST CULVERT (CULVERT)
- CENTERLINE OF ROW
- CENTERPOINT ENERGY CONDUIT (CENTERPOINT ENERGY CONDUIT)
- GAS LINE (GAS LINE)
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- CENTERPOINT ENERGY MANHOLE
- AT&T MANHOLE
- WATER LINE MANHOLE
- SANITARY SEWER MANHOLE & CLEANOUT
- STORM SEWER MANHOLE
- STORM SEWER INLET

PROPOSED PROFILE VIEW

- PVC WATER LINE W/ RESTRAINED JOINTS
- DIP WATER LINE W/ RESTRAINED JOINTS

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 96672 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SYMBOLS AND ABBREVIATIONS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 5 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

FILE PATH: P:\120\120-12106-013\4-0-Production-Working\4-1-BIM-CAD\General\G005 - Symbols And Abbreviations.dwg
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PLOTED: 7/19/2023 3:30 PM

KEYED NOTES

(A) 11" HIGH EARLY STRENGTH REINFORCED CONCRETE PAVEMENT WITH 8" LIME STABILIZED SUBGRADE (8%)

(B) 6" DOWELED CONC CURB

(C) 6" MONOLITHIC CURB AND GUTTER

(D) 1.5' FLUSH CURB/GUTTER

(E) 7" HIGH EARLY STRENGTH REINFORCED CONCRETE DRIVEWAY

(F) 5' WIDE CONC SIDEWALK WITH 6" CEMENT STABILIZED SUBGRADE. SEE NOTE 1

(G) REMOVE, REPLACE AND ADJUST INLET/MANHOLE FRAME AND COVER (STORM AND SANITARY) TO NEW GRADE.

(H) WHEEL CHAIR RAMP WITH TRUNCATED DOMES

(I) SAWCUT (NO EXTRA PAY PER COH SPECIFICATION 02221)

(J) TIE INTO EXISTING SIDEWALK/WALKWAY. TRANSITION PROPOSED SIDEWALK TO EXISTING SIDEWALK WITHIN ±10-FEET TIE-INS TO BE ADA COMPLIANT

(K) 4" TYPE D HMAC SURFACE, 11" TYPE B BLACK BASE COURSE, AND 8" LIME STABILIZED SUBGRADE (8%)

(L) STANDARD CONCRETE PAVING HEADER

(M) REPAIR DITCH BERM TO NEW ROADWAY GRADE.

(N) CONNECT RCP TO EXISTING, USE A PIPE COLLAR AS NECESSARY. MAINTAIN EXIST FLOWLINE ELEVATIONS, PIPE COLLAR INCIDENTAL TO PROP RCP.

(O) REMOVE AND REPLACE RETAINING WALL (UP TO 4-FEET IN HEIGHT) AND 8" THICK ASPHALT TRANSITION W/8-INCH CEMENT STABILIZED SAND (1-FOOT). MAINTAIN SAME HEIGHT OF RETAINING WALL.

(P) 24" RCP LEAD W/RING GRATE

(Q) REHABILITATE ENTIRE EXISTING INLET AND REPLACE/INSTALL FRAME COVER WITH SOLID CAST IRON PLATES. ON NATURAL GROUND SET TOP OF INLET 2-INCHES ABOVE FINISHED GRADE WITH 8" APRON AROUND INLET TOP. ON CONCRETE SURFACE, MAKE FLUSH WITH FINISHED GRADE.

(R) REHABILITATE/GROUT (NON-SHRINK) ENTIRE EXISTING MANHOLE RISER FROM TOP OF RCB TO TOP OF PROPOSED PAVEMENT SURFACE. REPLACE EXISTING FRAME AND COVER.

(S) CONNECT TO EXISTING RCB. MATCH FLOWLINE OF EXISTING PIPE.

(T) REINFORCED CONCRETE BOX REHABILITATION – INSIDE JOINT REPAIR (DESILTING, DEWATERING AND JOINT GROUTING), SEE SPEC 01270S.

(U) ADJUST TO FINISHED GRADE

(V) REMOVE AND REPLACE RETAINING WALL (UP TO 4-FEET IN HEIGHT). MAINTAIN SAME HEIGHT OF RETAINING WALL.

(X) DRIVEWAY NUMBER (SEE DRIVEWAY SCHEDULE)

No.	Date	Revisions	App.

NOTES:

1. KEEP SIDEWALK PARALLEL TO ROADWAY AS MUCH AS POSSIBLE UNLESS SHOWN DIFFERENTLY ON PLANS. ABOVE-GRADE FEATURES/OBSTACLES (TREES, POWER POLES, FIRE HYDRANT, ETC.) ARE NOT ALLOWED WITHIN SIDEWALK. WHEN NECESSARY TO DEVIATE AROUND THEM, USE LEGIBLE AND SMOOTH TRANSITIONS. DO NOT NARROW SIDEWALK WIDTH TO LESS THAN 3 FEET FOR SUCH DEVIATIONS.

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SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL
ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

KEYED NOTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.

HORZ: NTS
VERT: NTS

SHEET NO. 6 OF 111

DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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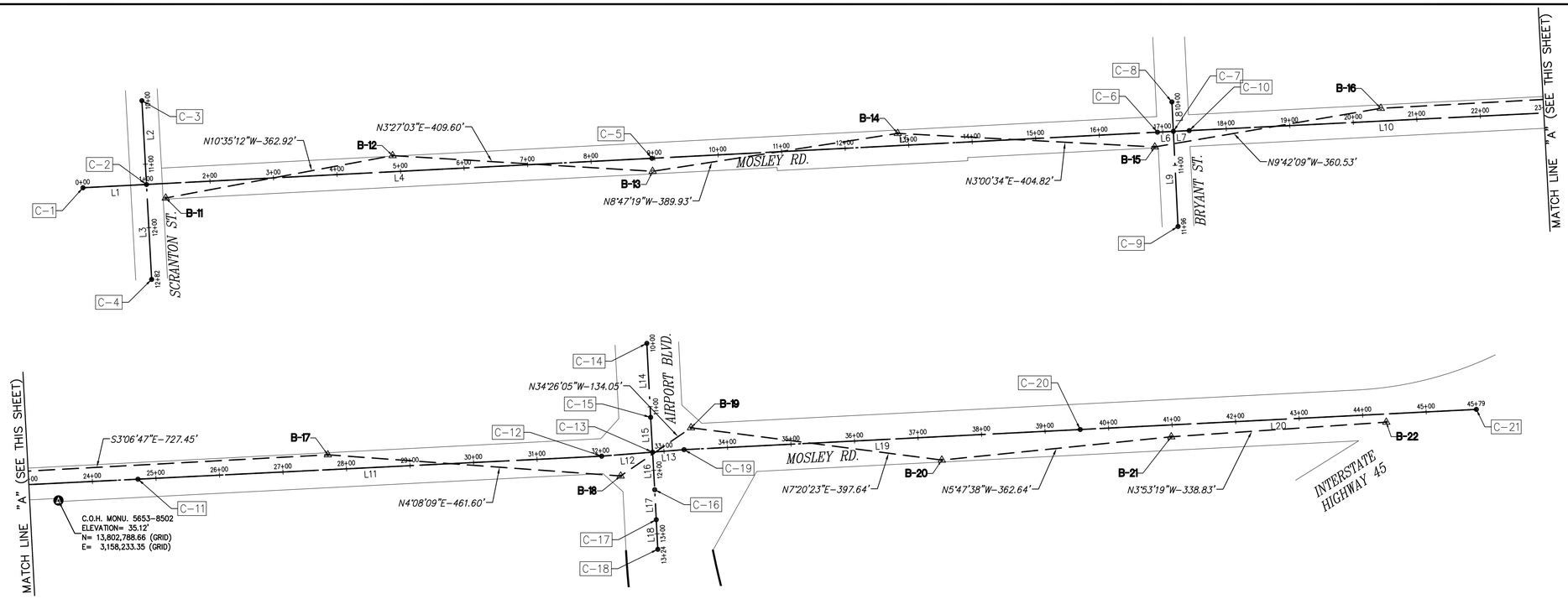
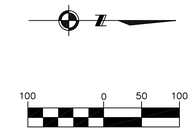




No.	Date	Revisions	App.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 Feet NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

NOTE:

ALL BEARINGS AND COORDINATES ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983, (2011) (EPOCH 2010.00). ALL DISTANCES ARE IN SURFACE.

THE COORDINATES SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE NO. 4204 STATE PLANE GRID COORDINATES (NAD83) AND MAY BE BROUGHT TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR 0.999870017.

LEGEND:

B-X	SURVEY CONTROL POINT NUMBER
C-X	DESIGN BASELINE POINT NUMBER
▲	SURVEY CONTROL POINT
•	DESIGN BASELINE POINT
ⓐ	CITY OF HOUSTON MONUMENT
D. BL:	DESIGN BASELINE
S. BL:	SURVEY BASELINE

DESIGN BASELINE POINTS DATA

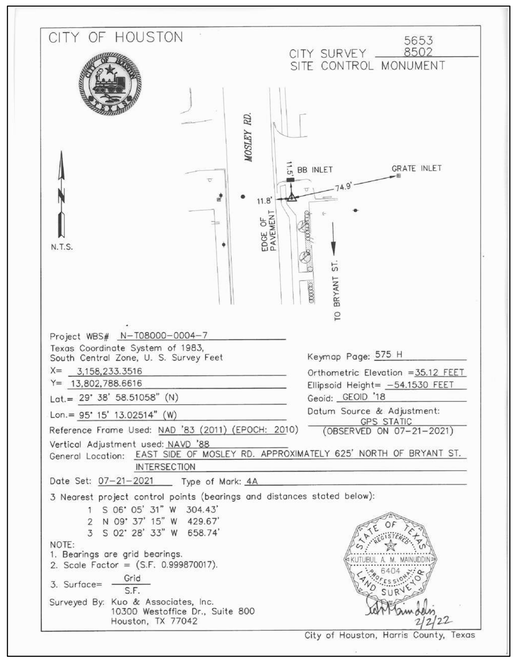
POINT No.	D. BL STA.	NORTHING (SURFACE)	EASTING (SURFACE)	NORTHING (GRID)	EASTING (GRID)
C-1	0+00.00	13,802,239.59	3,158,736.57	13,800,445.53	3,158,325.98
C-2	1+00.00	13,802,339.45	3,158,731.40	13,800,545.38	3,158,320.82
C-3	10+00.00	13,802,332.27	3,158,599.62	13,800,538.20	3,158,189.06
C-4	12+81.54	13,802,347.59	3,158,880.75	13,800,553.52	3,158,470.15
C-5	8+95.86	13,803,134.25	3,158,690.28	13,801,340.07	3,158,279.71
C-6	16+91.72	13,803,929.04	3,158,649.16	13,802,134.77	3,158,238.59
C-7	10+46.41	13,803,954.07	3,158,647.93	13,802,159.79	3,158,237.36
C-8	10+00.00	13,803,951.76	3,158,601.58	13,802,157.48	3,158,191.01
C-9	11+96.16	13,803,961.41	3,158,797.50	13,802,167.13	3,158,386.91
C-10	17+41.76	13,803,979.03	3,158,646.70	13,802,184.75	3,158,236.13
C-11	24+71.75	13,804,708.12	3,158,610.48	13,802,913.74	3,158,199.91
C-12	32+01.74	13,805,437.21	3,158,574.26	13,803,642.73	3,158,163.70
C-13	32+82.02	13,805,517.24	3,158,567.94	13,803,722.76	3,158,157.38
C-14	10+00.00	13,805,508.19	3,158,396.82	13,803,713.71	3,157,986.28
C-15	11+16.51	13,805,514.14	3,158,513.18	13,803,719.66	3,158,102.62
C-16	12+30.55	13,805,520.59	3,158,627.03	13,803,726.11	3,158,216.46
C-17	12+77.73	13,805,523.01	3,158,674.14	13,803,728.53	3,158,263.57
C-18	13+24.38	13,805,525.41	3,158,720.74	13,803,730.92	3,158,310.16
C-19	33+31.66	13,805,566.72	3,158,564.04	13,803,772.24	3,158,153.48
C-20	39+55.33	13,806,189.59	3,158,532.37	13,804,395.02	3,158,121.82
C-21	45+79.00	13,806,812.46	3,158,500.70	13,805,017.81	3,158,090.15

DESIGN BASELINE: LINE TABLE

LINE #	BEARING	LENGTH
L1	N2° 57' 41.47"W	100.00
L2	N86° 52' 52.14"E	131.97
L3	N86° 52' 52.14"E	149.57
L4	N2° 57' 41.47"W	795.86
L5	N2° 57' 41.47"W	795.86
L6	N2° 49' 31.62"W	25.06
L7	N2° 49' 31.62"W	24.99
L8	N87° 08' 45.63"E	46.41
L9	N87° 11' 24.38"E	149.75
L10	N2° 50' 38.25"W	729.99
L11	N2° 50' 38.25"W	729.99
L12	N4° 30' 40.33"W	80.29
L13	N4° 30' 40.33"W	49.64
L14	N87° 04' 15.94"E	116.51
L15	N86° 45' 32.25"E	54.86
L16	N86° 45' 32.25"E	59.18
L17	N87° 03' 16.65"E	47.18
L18	N87° 03' 28.56"E	46.66
L19	N2° 54' 38.35"W	623.67
L20	N2° 54' 38.35"W	623.67

SURVEY BASELINE POINTS DATA (TEMPORARY BENCHMARK)

POINT No.	NORTHING (SURFACE)	EASTING (SURFACE)	NORTHING (GRID)	EASTING (GRID)	ELEVATION	D. BL STA.	OFFSET	DESCRIPTION
B-11	13,802,369.69	3,158,752.72	13,800,575.61	3,158,342.14	36.73'	1+29.09	22.86R	SET 5/8" I.R. W/ CAP
B-12	13,802,726.43	3,158,686.05	13,800,932.31	3,158,275.47	36.54'	4+88.80	25.30L	SET "X" CUT
B-13	13,803,135.28	3,158,710.70	13,801,341.11	3,158,300.12	35.87'	8+95.84	20.45R	SET 5/8" I.R. W/ CAP
B-14	13,803,520.63	3,158,651.13	13,801,726.41	3,158,240.55	35.93'	12+83.75	19.14L	SET 5/8" I.R. W/ CAP
B-15	13,803,924.90	3,158,672.38	13,802,130.62	3,158,261.80	35.38'	16+86.38	22.97R	SET 5/8" I.R. W/ CAP
B-16	13,804,280.27	3,158,611.62	13,802,485.95	3,158,201.05	34.94'	20+44.38	20.09L	SET 5/8" I.R. W/ CAP
B-17	13,805,006.65	3,158,572.11	13,803,212.23	3,158,161.55	34.63'	27+71.82	23.51L	SET 5/8" I.R. W/ CAP
B-18	13,805,467.05	3,158,605.40	13,803,672.57	3,158,194.84	33.96'	32+29.04	33.40R	SET 5/8" I.R. W/ CAP
B-19	13,805,577.60	3,158,529.61	13,803,783.11	3,158,119.05	34.61'	33+44.27	33.84L	SET 5/8" I.R. W/ CAP
B-20	13,805,971.99	3,158,580.40	13,804,177.45	3,158,169.84	34.22'	37+35.57	36.92R	SET 5/8" I.R. W/ CAP
B-21	13,806,133.77	3,158,543.80	13,804,538.18	3,158,133.24	34.01'	40+97.75	18.68R	SET 5/8" I.R. W/ CAP
B-22	13,806,670.82	3,158,520.82	13,804,876.19	3,158,110.27	34.33'	44+36.52	12.90R	SET "X" CUT



Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

KUO & associates, Inc.
Consulting Engineers & Surveyors
10300 Westoffice Dr., Suite 800, Houston, Texas 77042
Tel: 713-575-6700, Fax: 713-575-0025, www.kuoassociates.com
TBPELS Firm Registration No. F-4578
TBPELS Firm Registration No. 1007560

SURVEYED BY:
KUO & ASSOCIATES
FB NO. FB# P-6234

STATE OF TEXAS REGISTERED KUTTIBEL A. M. MANUDHIN 6404 PROFESSIONAL LAND SURVEYOR
VOID
04/01/2022

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHAB AND PEDESTRIAN SAFETY – (TIRZ # 8)

SURVEY CONTROL MAP SHEET (1 OF 2)

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1" = 100'
	VERT: N/A
SHEET NO. 7 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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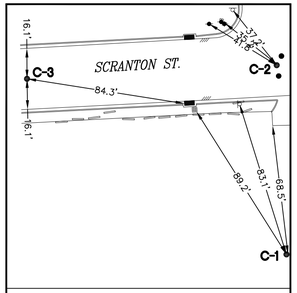
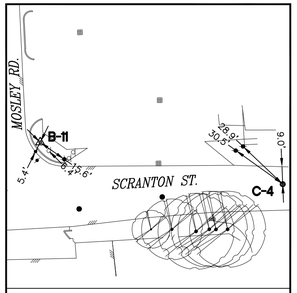
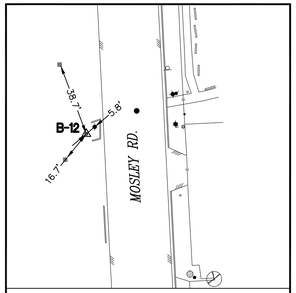


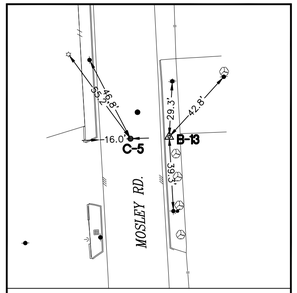
C-1, C-2 & C-3



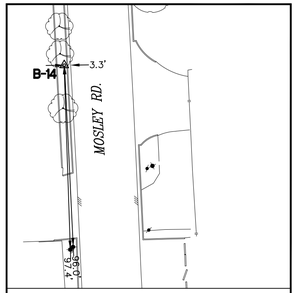
C-4 & T.B.M. B-11



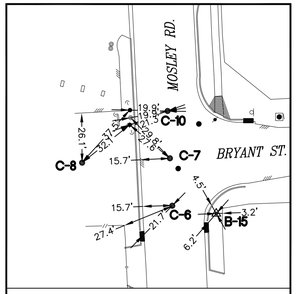
T.B.M. B-12



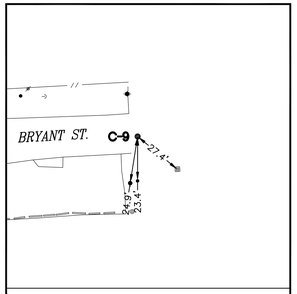
C-5 & T.B.M. B-13



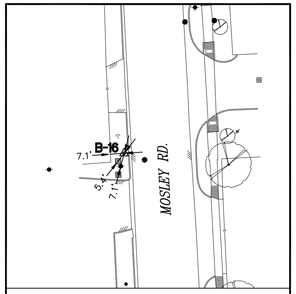
T.B.M. B-14



C-6,C-7,C-8,C-10 & T.B.M. B-15



C-9



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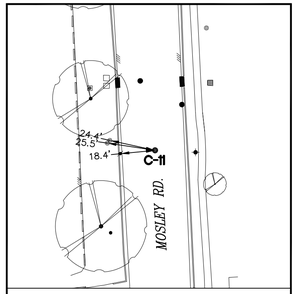

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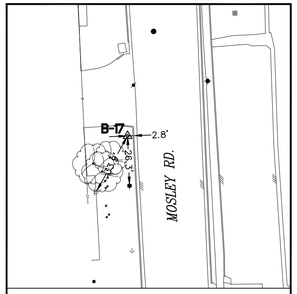
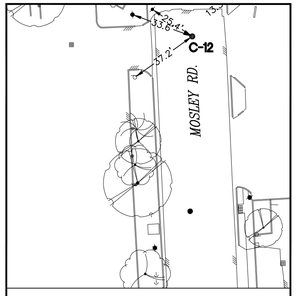


T.B.M. B-17



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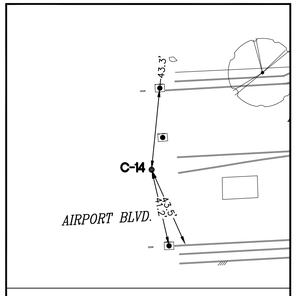

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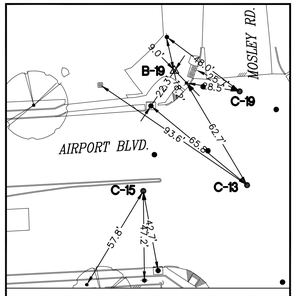
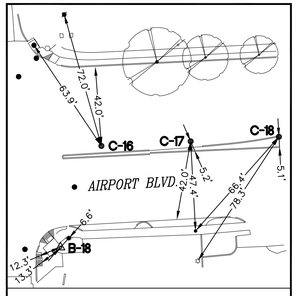
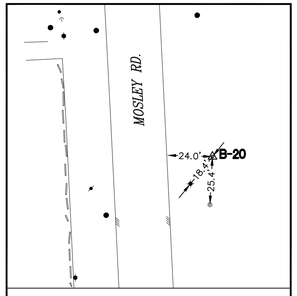


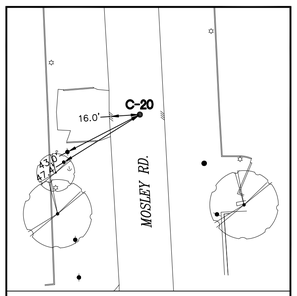
C-13, C-15, C-19 & T.B.M. B-19



C-16, C-17, C-18 & T.B.M. B-18



T.B.M. B-20



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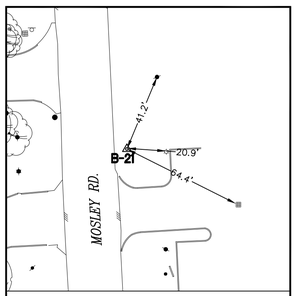

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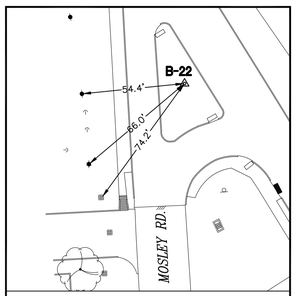
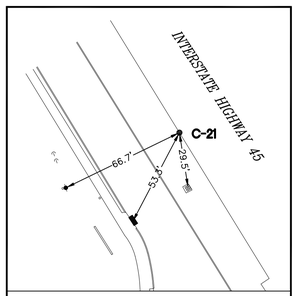
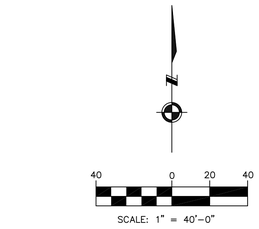


T.B.M. B-22



C-21



EXIST. TOPOGRAPHIC LEGEND

MANHOLE	LIGHT
GRATE INLET	SIGN
B/BB INLET	POWER POLE
FIRE HYDRANT	POWER POLE W/LIGHT
SIGNAL POLE	DOWN GUY
FENCE	TREE
BUSH	PLANTER
WATER VALVE	BUILDING
HIGH BANK	WATER METER
	HEDGE ROW

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
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2925 Briarpark Drive Houston, TX 77042

KUO & associates, Inc.
Consulting Engineers & Surveyors
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Tel: 713-975-8769, Fax: 713-975-0920, www.kuoassociates.com
TBPELS Firm Registration No. F-4578
TBPELS Firm Registration No. 1007560

SURVEYED BY:
KUO & ASSOCIATES
FB NO. FB# P-6234

STATE OF TEXAS — REGISTERED — KUTTIKAT A. MANJOOR — 5464 — PROFESSIONAL LAND SURVEYOR

VOID

08/01/2022

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHAB AND PEDESTRIAN SAFETY – (TIRZ # 8)

SURVEY CONTROL MAP
SHEET (2 OF 2)

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1" = 40'
	VERT: N/A
SHEET NO. 8 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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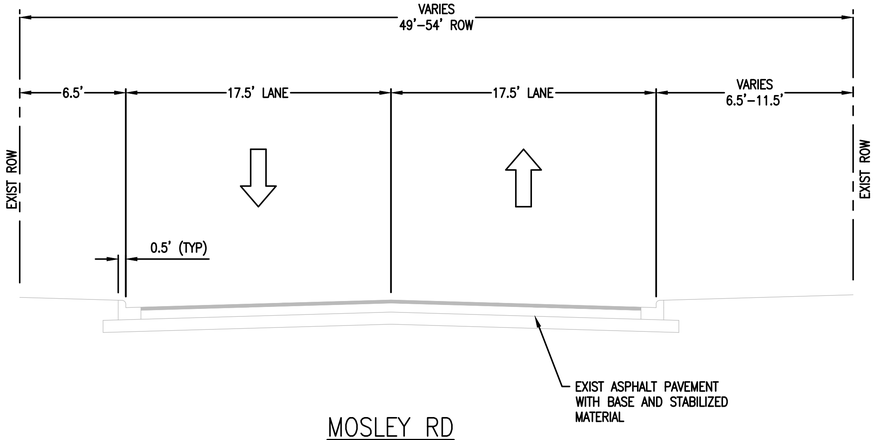
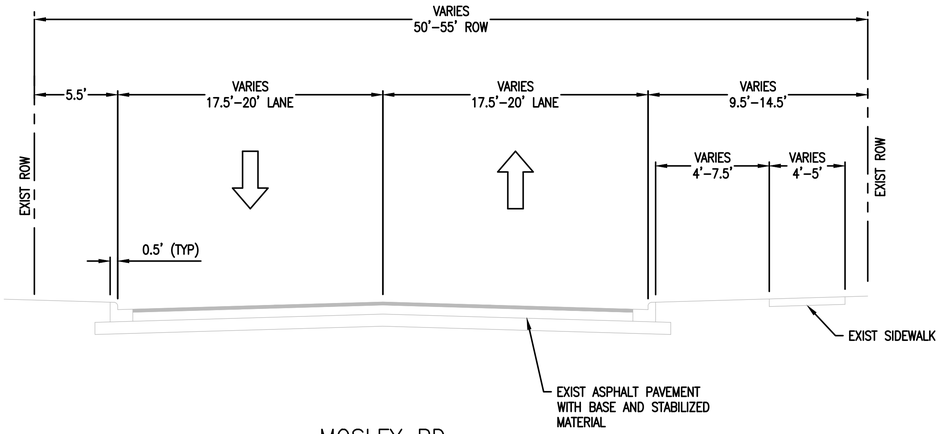


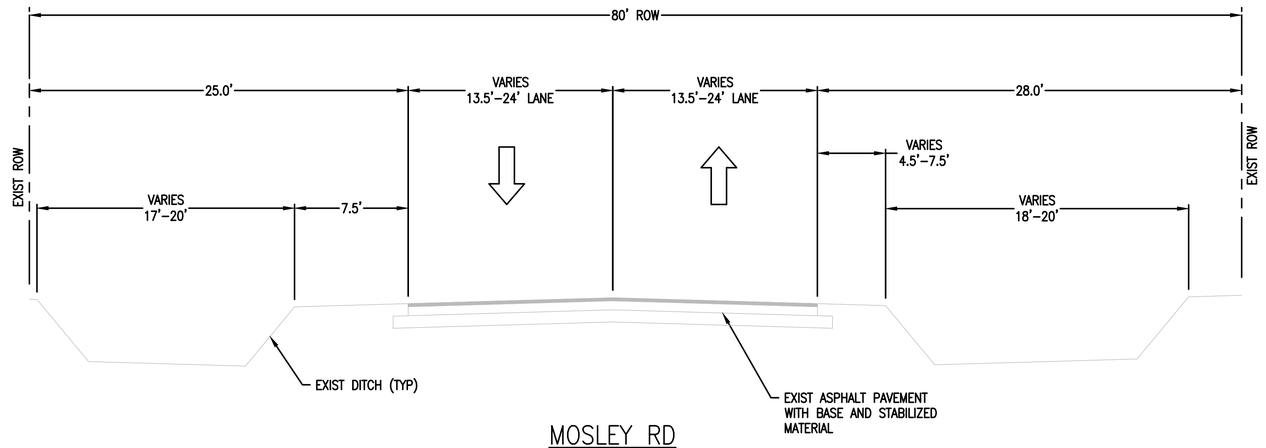
MOSLEY RD
STA 1+37.70 TO STA 27+20.50



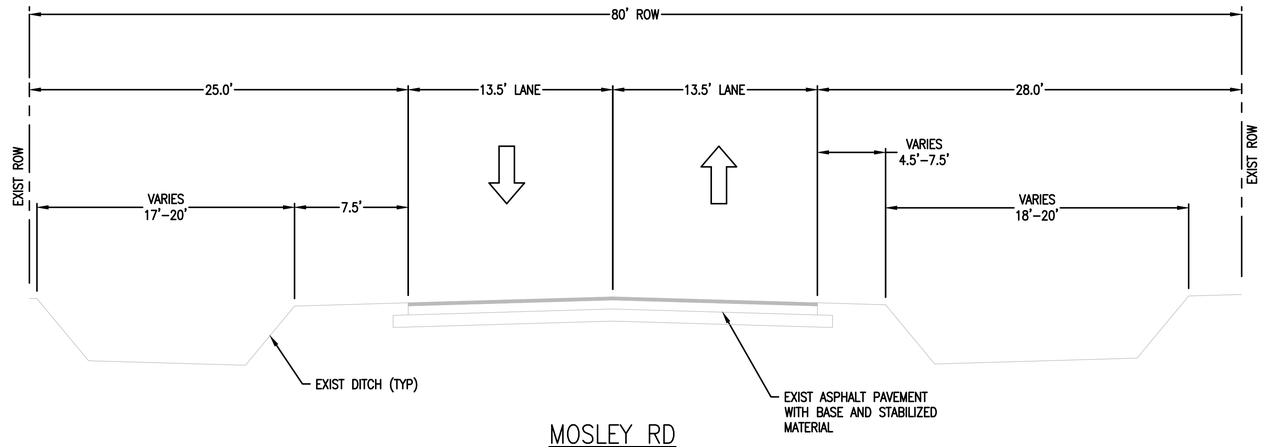
MOSLEY RD
STA 27+20.50 TO STA 32+21.00

LEGEND

DIRECTION OF TRAFFIC



MOSLEY RD
STA 33+39.00 TO STA 34+29.00



MOSLEY RD
STA 34+29.00 TO STA 43+73.00

POSTED SPEED LIMIT = 30 MPH

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

EXISTING TYPICAL SECTIONS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 9 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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GENERAL NOTES

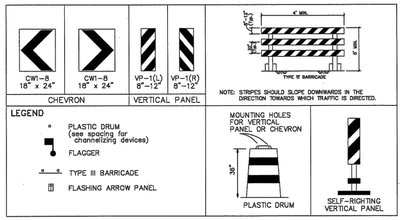
1. The Contractor shall provide and install traffic control devices in conformance with Part VI of the Texas Manual on Traffic Control Devices (TMUTCD)
2. All signs and traffic control devices shall conform the latest version of the TMUTCD
3. No lanes shall be closed during the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM Monday thru Friday without approval of the City Traffic Engineer.
4. No work shall be performed in residential areas from 7:00 PM to 7:00 AM.
5. Contractor shall maintain approved number of through lanes of traffic in each direction during construction working hours. Traffic control plans shall include one-way and/or detour plans. Contractor shall maintain ADA compliant pedestrian access to bus stops and adequate bus access to all the bus stops.
6. Contractor shall maintain traffic lanes and detours according to traffic control plans during working hours.
7. Contractor shall cover open pavement excavations for minor utility work with anchored steel plate during non-working hours, and open lanes for normal traffic flow when feasible.
8. If the Contractor chooses to use a different method of "Traffic Control Plans" during the construction than what is outlined in the contract drawings, the Contractor shall be responsible for prepare and submit an alternate set of traffic control plans to the City of Houston Project Manager for approval ten working days prior to implementation. These plans shall be drawn to scale and reproducible in mylars and shall be sealed by a Licensed Engineer in the State of Texas. Transportation & Drainage Operations representative approval is required to accept the proposed changes.
9. Contractor shall secure lane/sidewalk/bicycle facility closure permits from Transportation & Drainage Operations (Mobility Permit Section at http://www.gims.houstontx.gov/portalWS/MainPortal.aspx) before implementing the traffic control plans, construction sequencing, and construction schedule with the application.
10. Contractor shall have approved traffic control plan and permit at the job site for inspection at all times.
11. During pavement surface restoration projects; the Contractor shall not open closed lanes until the pavement surface has cured enough to allow vehicular traffic according to City of Houston Standard Specifications.
12. The Contractor is responsible for scheduling and coordinating all construction activities with stake holders in the vicinity including emergency response agencies such as Houston Police Department, Houston Fire Department, and Metropolitan Transit Authority.
13. Contractor shall be responsible for issuing all work directives to all sub-contractors, utility companies, and all other entities performing construction work associated with the project.
14. Nothing in these notes or plans shall relieve the Contractor of the responsibility for job site conditions during the course of construction of the project; including safety of all modes of transportation, persons, and property, and that this requirement shall apply continuously and not be limited to working hours.
15. The Transportation & Drainage Operations (Mobility Permits Group) per the direction of the City Traffic Engineer have the right to demand the installation of additional traffic control devices or modifications of these plans and notes, as deemed necessary to promote the safe and orderly flow of traffic, including pedestrians and bicycles, through the construction work zone. The Contractor shall comply with these additional requests or modifications with due diligence.
16. All existing traffic control signs and pavement markings shall be maintained in visible locations during construction unless prior written approval is obtained from City of Houston Project Manager. The Contractor shall restore or replace (at the discretion of the City Traffic Engineer) any pavement marking or signing damage during construction operations, including Raised Pavement Markers (RPMs).
17. When entering or leaving roadways carrying public traffic, the Contractor's equipment whether empty or loaded shall in all cases yield to public traffic with assistance of Contractor provided certified flagger/peace officer.
18. Access to driveways adjacent to the construction work zone shall be maintained at all times as much as possible. Additional cones delineators may be required to delineate the driveway access route through the construction zone. A minimum of a travel lane shall be maintained across the driveways, unless prior written approval is obtained from City of Houston Project Manager.
19. Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor.
20. The Contractor shall submit an application for temporary parking restrictions if there are parking meters located at the proposed lane closures from Parking Management Division (832-393-8690) at least ten business days before implementation of lane closures. In addition, temporary no parking signs shall be posted 24 hours prior to commencement of work.
21. Additional off duty officers/flaggers may be requested to direct traffic when lanes are blocked at the discretion of the City Project Manager even if they are not specifically identified on the project plans.
22. The Contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction.
23. In general, a solar powered flashing arrow board shall be required on all major thoroughfare lanes closures. Exceptions to flashing arrow boards and/or implementation on residential lane closures shall be approved by City Traffic Engineer.
24. Approved traffic control plan shall be in place before starting any excavation.

SPACING FOR CHANNELIZING DEVICES

A. Plastic drums on merging taper @ 30' c - c with chevron sign @ 60' c - c and warning lights for overnight closure.
B. Plastic drums on downstream taper @ 30' c - c (return taper and barricade are optional and divided roadway section)
C. Plastic drums on radii @ 30' c -c.
D. Plastic drums on tangent @ 30' c - c with vertical panel at 70' c - c and approved warning light @ 70' c - c (for overnight closure).
E. Plastic drums in front of construction zone @ 20' c - c with vertical panel at 40' c - c and approved warning light @ 40' c - c (for overnight closure).
F. Concrete Traffic Barrier (CTB) or Low Profile Concrete Traffic Barrier (LPCTB) with approved reflectors @ 10' c - c if pavement drop is greater than 1 foot.
G. Plastic drums w/Guard rail mounted.
H. Self- Righting vertical panel spacing.
   - 4 lanes to 2 lanes undivided roadway section @ 20' c - c.
   - 4 lanes divided roadway to one side two way roadway @ 20' c - c.
   - Left lane and right lane storage bays @ 15' c - c.

I. Spacing shown on traffic control shall supersede the above spacing.
J. Spacing may be adjusted to provide driveways, intersections and /or median openings.

CHANNELIZATION AND BARRICADES



TYPICAL SIGN SPACING, TAPER LENGTHS, AND SUGGESTED SPACING OF CHANNELIZATION DEVICES

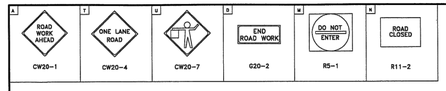
Posted Speed (mph)	Sign Spacing "X"	Min. Desirable Taper Length "L" 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing Of Device On a Taper	On a Tangent
30	120'	150'	165'	180'	30'	60' - 75'
35	160'	205'	225'	245'	35'	70' - 90'
40	240'	265'	295'	320'	40'	80' - 100'
45	320'	450'	495'	540'	45'	90' - 110'
50	400'	500'	550'	600'	50'	100' - 120'
55	500'	550'	605'	660'	55'	110' - 140'

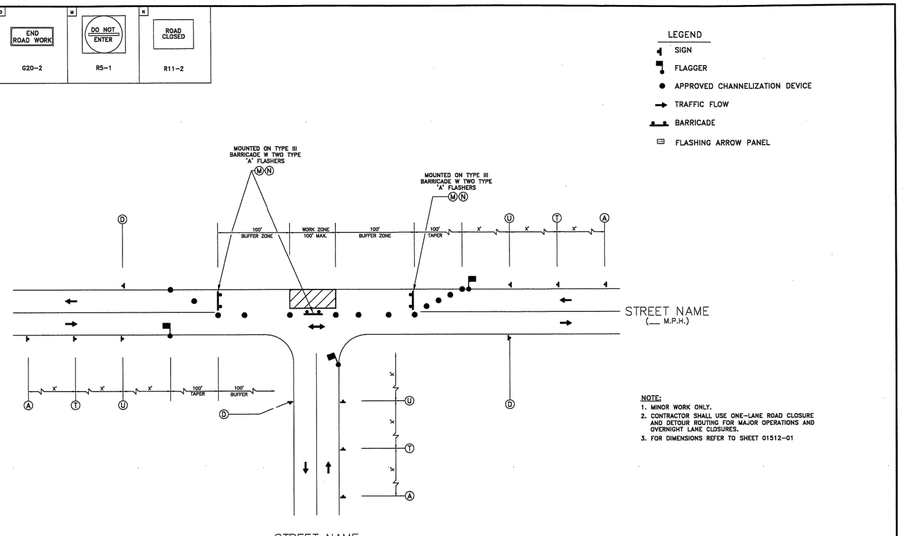
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TCP NOTES
CHANNELIZING DEVICES
AND BARRICADES
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL–01–2018 | DWG NO: 01512–01





PHASE 1 OF 3
TYPICAL CONSTRUCTION ZONE
AT A T–INTERSECTION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TCP TYPICAL 3–WAY INTERSECTION
PHASE 1 OF 3
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL–01–2018 | DWG NO: 01512–06

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P–6234

STATE OF TEXAS — MARK WOODWARD — 96072 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL DETAILS

SHEET 1 OF 3

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 10 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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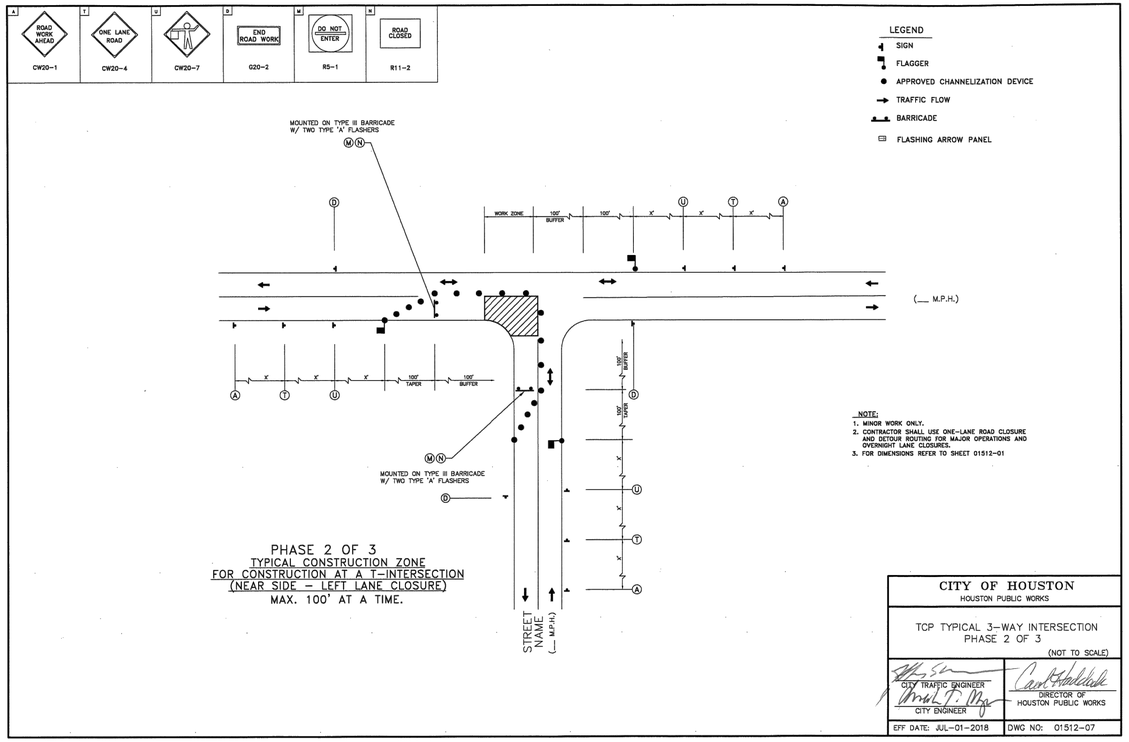


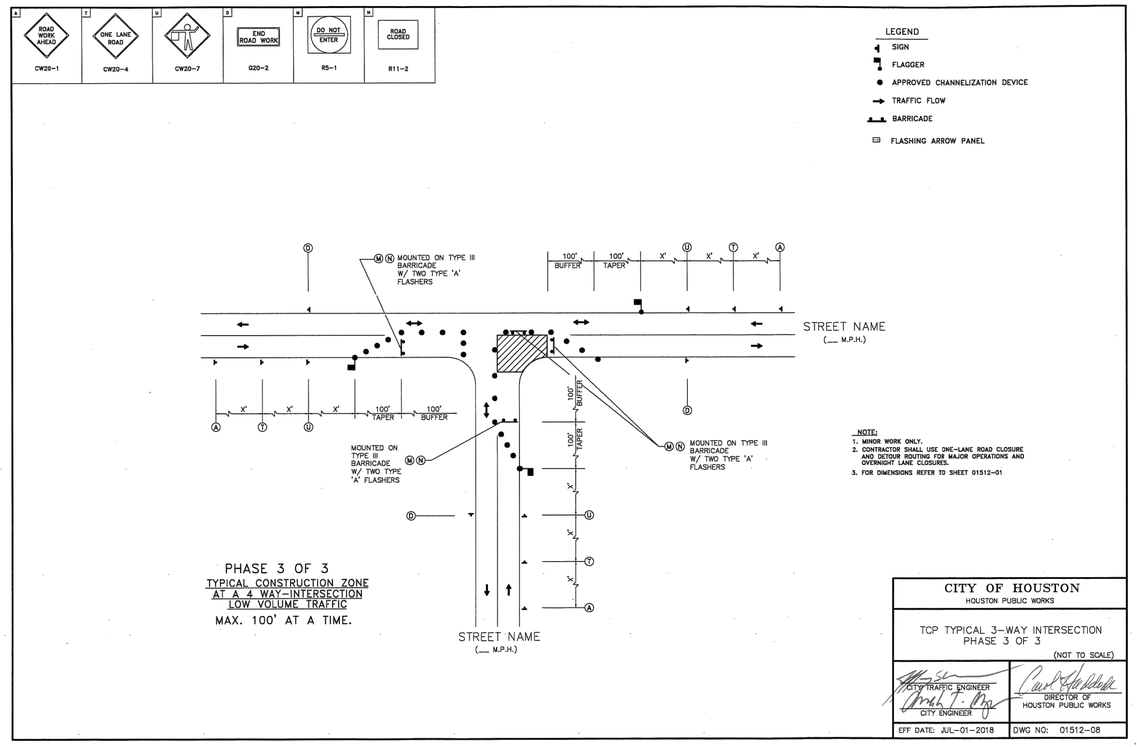
PHASE 2 OF 3
TYPICAL CONSTRUCTION ZONE
FOR CONSTRUCTION AT A T-INTERSECTION
(NEAR SIDE – LEFT LANE CLOSURE)
MAX. 100' AT A TIME.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TCP TYPICAL 3-WAY INTERSECTION
PHASE 2 OF 3
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01512-07



PHASE 3 OF 3
TYPICAL CONSTRUCTION ZONE
AT A 4 WAY-INTERSECTION
LOW VOLUME TRAFFIC
MAX. 100' AT A TIME.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TCP TYPICAL 3-WAY INTERSECTION
PHASE 3 OF 3
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01512-08

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL DETAILS

SHEET 2 OF 3

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 11 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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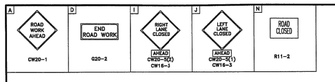

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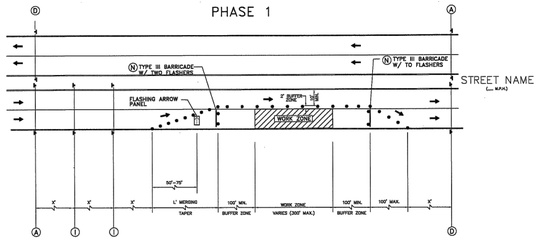
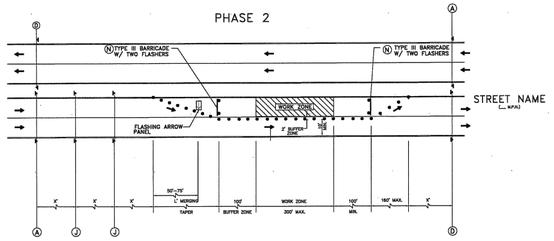


PHASE 2



LEGEND

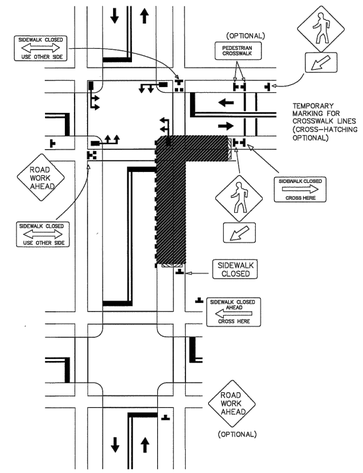
- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- TRAFFIC FLOW
- CONSTRUCTION AREA

NOTE:

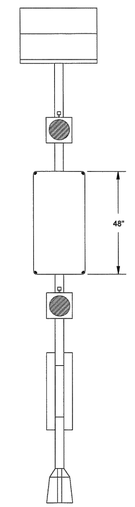
1. RETURN TAPERS AND DOWNSTREAM BARRICADES ARE OPTIONAL ON A DIVIDED ROADWAY SECTION.
2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS WITH MEDIANS.
3. FOR DIMENSIONS REFER TO SHEET 01512-01.

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP ONE LANE CLOSURE PHASE 1 & 2 (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF. DATE: JUL-01-2018	DWG NO: 01512-04

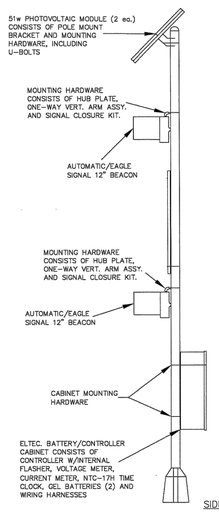
CROSSWALK CLOSURES AND PEDESTRIAN DETOURS



SOLAR SCHOOL ZONE FLASHING BEACON



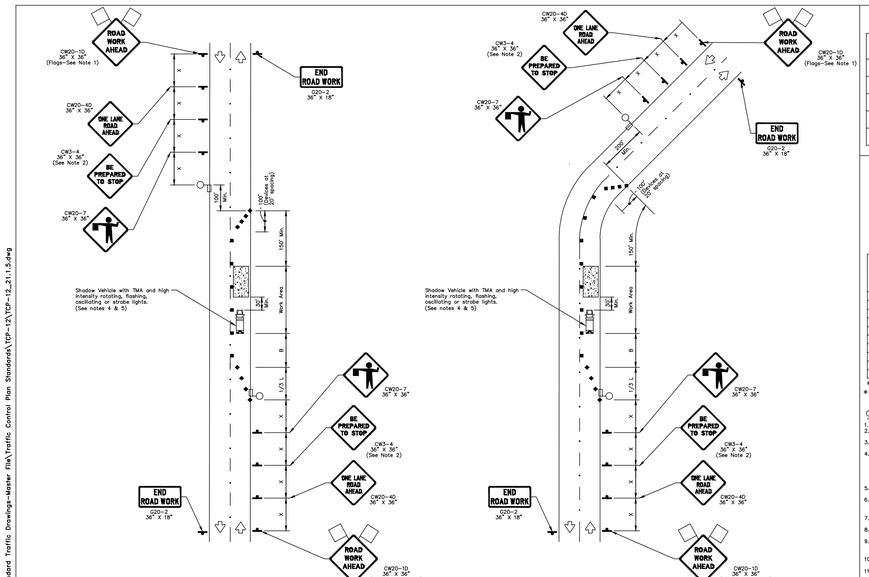
FRONT VIEW



SIDE VIEW

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
CROSSWALK CLOSURES AND PEDESTRIAN DETOURS, SOLAR SCHOOL ZONE FLASHING BEACON (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF. DATE: JUL-01-2018	DWG NO: 02893-18

No.	Date	Revisions	App.



ONE-LANE TWO-WAY SINGLE LANE CLOSURE CONTROL WITH FLAGGERS (ON STRAIGHT SECTION OF ROADWAY)

ONE-LANE TWO-WAY SINGLE LANE CLOSURE CONTROL WITH FLAGGERS (ON CURVED SECTION OF ROADWAY)

TRAFFIC CONTROL PLAN SECTION SHALL BE COMPLETED BY ENGINEER

ROADWAY	POSTED SPEED	TAPER LENGTH	SPACING CHANNELIZING DEVICES		SIGN SPACING	BUFFER SPACE
			TAPER	TANGENT		

LEGEND

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

Posted Speed *	Formula	Minimum Desirable Taper Lengths "L" ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing Distance	Suggested Longitudinal Buffer Space "B"
30	L= WS²/60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

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

GENERAL NOTES

1. Flags attached to signs where shown are OPTIONAL.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol are OPTIONAL.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. Shadow Vehicles with TMA should be positioned such that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle with TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. Contractor shall provide and install traffic control devices in conformance with part VI of Texas Manual on Uniform Traffic Control Devices (TMUTCD – Latest edition with revisions) during construction.
7. Flaggers should use two-way radios or other methods of communication to control traffic.
8. Length of work space should be based on the ability of flaggers to communicate.
9. If the work space is located near horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distances to the flagger and a queue of stopped vehicles (see table above).
10. Channelizing devices on the center-line may be omitted when a pilot car is used to lead traffic through the work zone.
11. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.
12. No lanes shall be blocked from 7am to 9am and 4pm to 6:30pm Monday thru Friday.
13. Use of police officers required to direct traffic when applicable.
14. If project is within 400 feet from a signalized intersection, the Contractor shall contact Harris County Engineering Department, Traffic Signal Maintenance at (713) 881-3210 five (5) days prior to the start of construction.

NO.	REVISIONS	DATE	NAME
1			
2			
3			
4			
5			

HARRIS COUNTY ENGINEERING DEPARTMENT

FOR INTERIM REVIEW ONLY

DOCUMENT INCOMPLETE; NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

ENGINEER: NAME
P.E. SERIAL No. NUMBER
DATE: / /

PROJECT TITLE:

SHEET DESCRIPTION: TRAFFIC CONTROL PLAN (ONE-LANE, TWO-WAY OPERATION)

TRAFFIC STANDARD: TCP-12

DRAWN BY: BSH | DATE: 1/5/21

CK'D BY: BSH | SCALE: NONE | SHEET NO.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL
ENGINEER
11/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL DETAILS

SHEET 3 OF 3

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. | HORZ: NTS | VERT: NTS

SHEET NO. 12 OF 111 | DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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PLOTTED: 7/19/2023 3:31 PM

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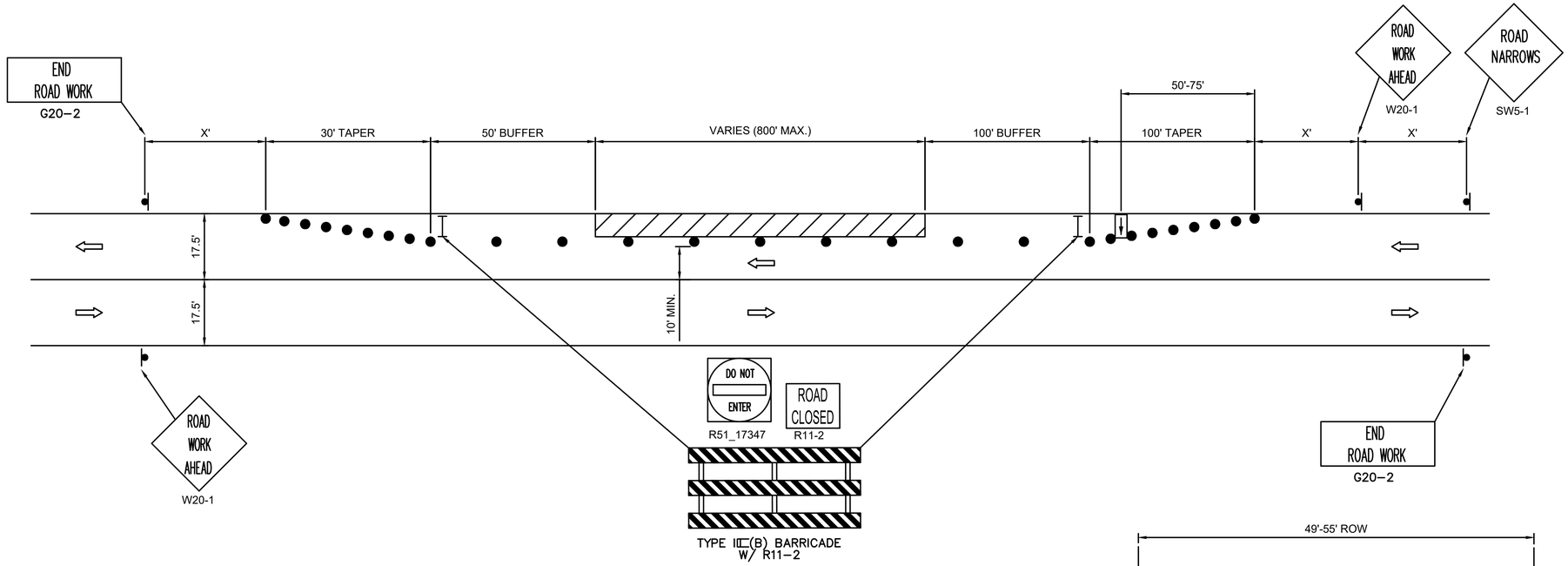

SOUTHBOUND LANE REDUCTION DETAIL

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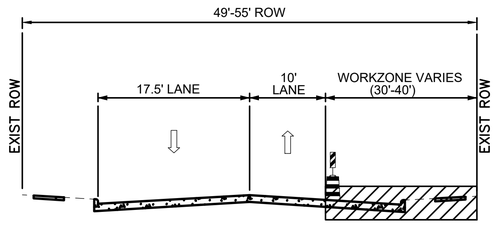

NORTHBOUND LANE REDUCTION SECTION

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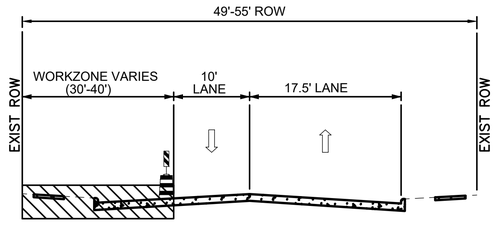

SOUTHBOUND LANE REDUCTION SECTION

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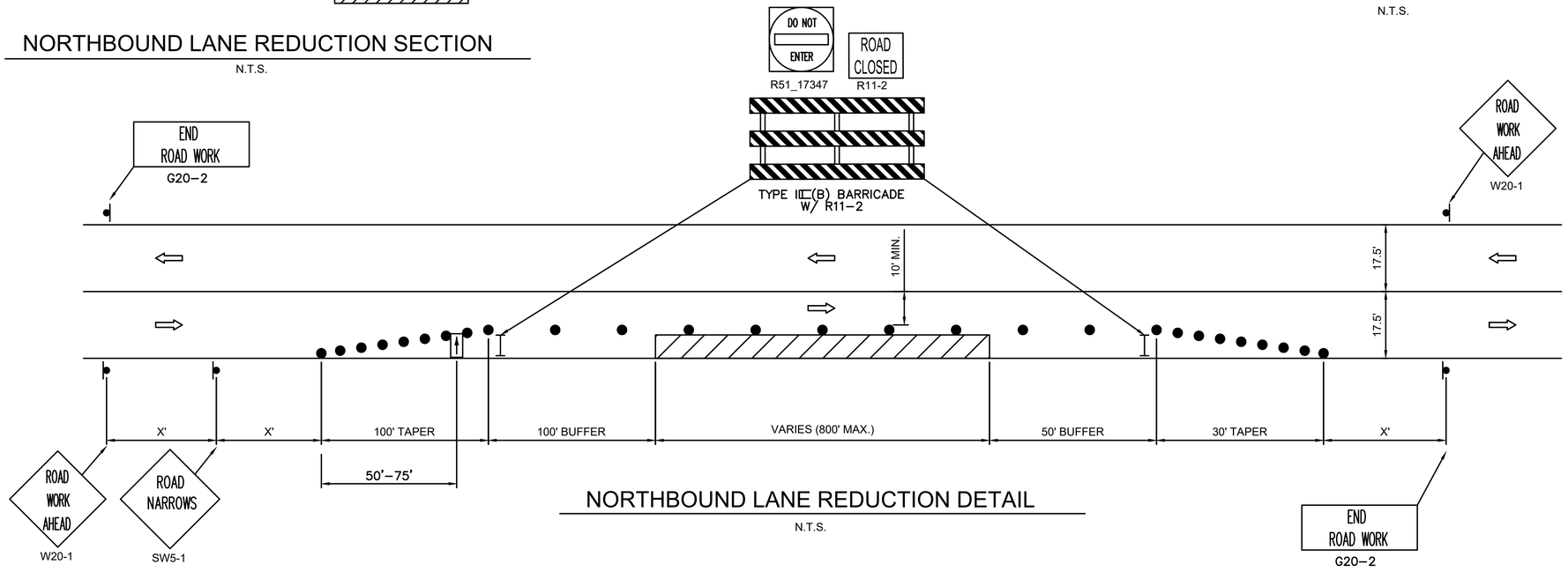

NORTHBOUND LANE REDUCTION DETAIL

N.T.S.

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- DRUMS
- VERTICAL PANEL
- TEMP GROUND MOUNTED SIGNS
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL

No.	Date	Revisions	App.

NOTES

1. MINOR WORK ONLY.
2. CONTRACTOR SHALL USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
3. FOR SIGN SPACING DIMENSIONS AND DRUM DETAILS REFER TO COH STD. DETAIL 01512-01.

0' 50' 100'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

STATE OF TEXAS
MARK WOOD WARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023

VOID

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN TYPICAL SECTIONS & LANE REDUCTION DETAIL PHASE I STEP I

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 13 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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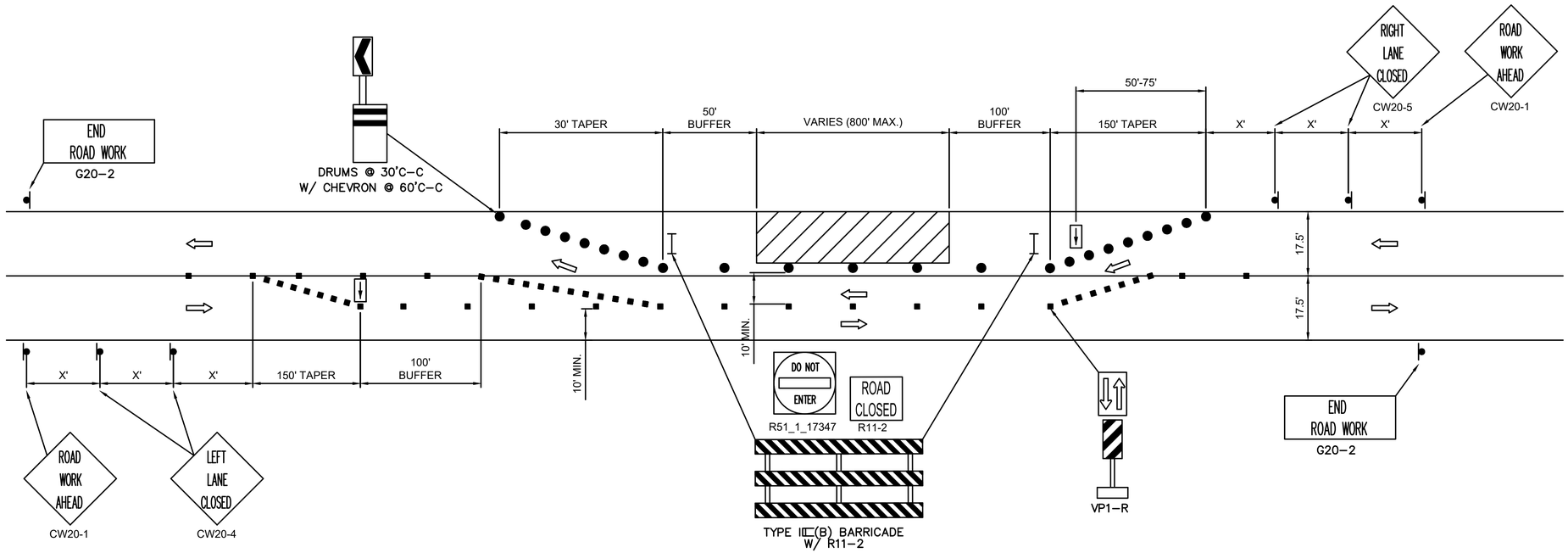

SOUTHBOUND LANE SHIFT DETAIL

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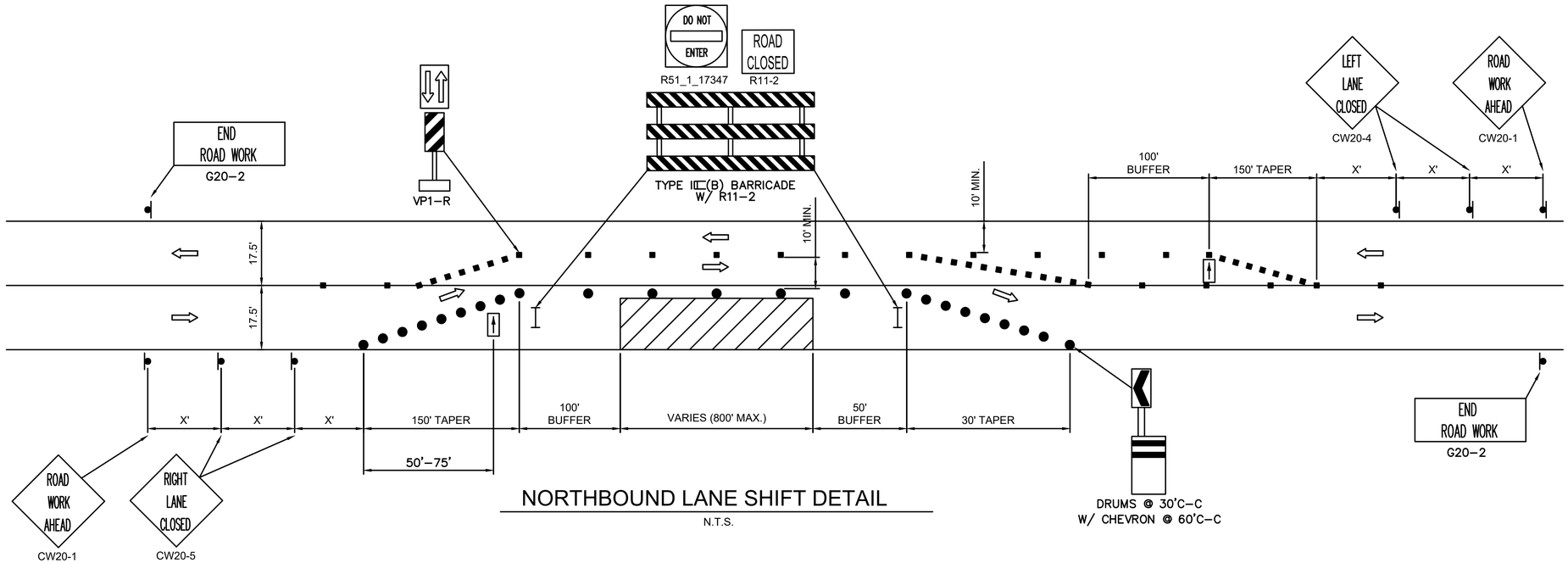

NORTHBOUND LANE SHIFT DETAIL

N.T.S.

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- DRUMS
- VERTICAL PANEL
- TEMP GROUND MOUNTED SIGNS
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL

NOTES

1. FOR SIGN SPACING DIMENSIONS AND DRUM DETAILS REFER TO COH STD. DETAIL 01512-01.

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN TYPICAL
LANE SHIFT DETAIL
PHASE I STEP I

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 14 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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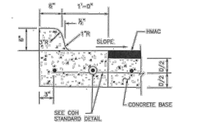
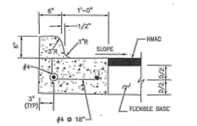
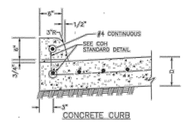
02771–01



ESPLANADE CURB CONNECTED TO CONCRETE BASE

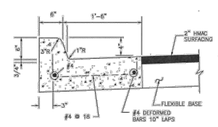


ESPLANADE CURB CONNECTED TO FLEXIBLE BASE

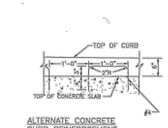


CONCRETE CURB

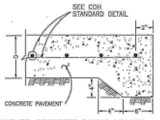
WHEN CONCRETE CURB IS TO BE PLACED EXISTING CONCRETE USE BASE #4 @ 18x10" LONG, DOWELED AND SET IN EPOXY GROUT. SET #4 DOWELS, 25" LONG AT 12" C-C WHEN PAVEMENT SECTION POURED.



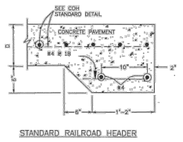
MONOLITHIC CURB AND GUTTER



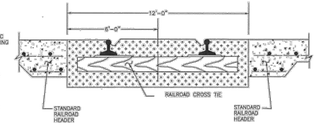
ALTERNATE CONCRETE CURB REINFORCEMENT



STANDARD CONCRETE PAVING HEADER



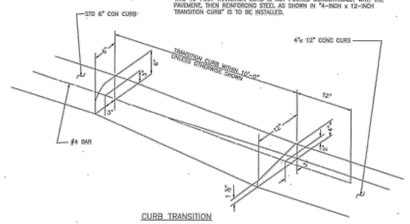
STANDARD RAILROAD HEADER



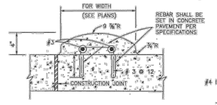
STANDARD RAILROAD CROSSING – SINGLE TRACK

4"x12" MONOLITHIC AND TRANSITION CURB NOTES:

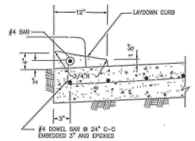
1. 6-INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL ESPLANADES, ISLANDS NON-RESIDENTIAL STREETS, AND RESIDENTIAL STREETS.
2. TRANSITIONS FROM 6- INCH CONCRETE CURB TO 4-INCH x 12-INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 10 FEET, UNLESS OTHERWISE SHOWN. IF THE 4-INCH x 12-INCH TRANSITION CURB IS NOT POURED MONOLITHICALLY WITH THE PAVEMENT, THEN REINFORCING STEEL AS SHOWN IN "4-INCH x 12-INCH TRANSITION CURB" IS TO BE INSTALLED.



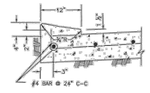
CURB TRANSITION



MOUNTABLE CURB



4–INCH x 12–INCH TRANSITION CURB



4–INCH x 12–INCH MONOLITHIC CURB

CURB, CURB AND GUTTER AND HEADER DETAILS
NTS

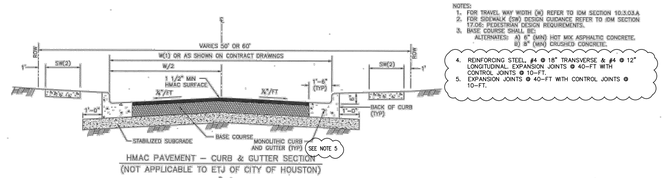
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02771–01

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY

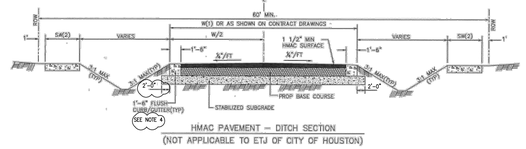
SHEET NO.

02741–01



HMAC PAVEMENT – CURB & GUTTER SECTION
(NOT APPLICABLE TO ETJ OF CITY OF HOUSTON)

NOTES:
1. FOR TRAVEL WAY WIDTH (W) REFER TO IDM SECTION 10.3.03.A
2. FOR SIDEWALK (SW) DESIGN GUIDANCE REFER TO IDM SECTION 17.06: PEDESTRIAN DESIGN REQUIREMENTS.
3. BASE COURSE SHALL BE:
   ALTERNATES: A) 6" (MIN) HOT MIX ASPHALTIC CONCRETE.
   B) 8" (MIN) CRUSHED CONCRETE.
4. REINFORCING STEEL, #4 @ 18" TRANSVERSE & #4 @ 12" LONGITUDINAL. EXPANSION JOINTS @ 40-FT WITH CONTROL JOINTS @ 10-FT.
5. EXPANSION JOINTS @ 40-FT WITH CONTROL JOINTS @ 10-FT.



HMAC PAVEMENT – DITCH SECTION
(NOT APPLICABLE TO ETJ OF CITY OF HOUSTON)

HOT–MIX ASPHALTIC CONCRETE PAVEMENT DETAILS
NTS

02741–04

PUBLIC USE ALLEY REMOVED
ANY PUBLIC USE ALLEY ROW SHOULD MEET CITY ROADWAY STANDARDS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02632–11 THROUGH 02741–04

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

NOTE:

1. DISREGARD BASE COURSE ALTERNATES PER COH DWG. NO. 02741–01. REFER TO PROPOSED TYPICAL SECTION FOR PAVEMENT STRUCTURE INFORMATION.

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P–6234

STATE OF TEXAS
MARK WOLDWARD
96972
LICENSED PROFESSIONAL ENGINEER
07/20/2023

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F–2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PAVEMENT DETAILS

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 15 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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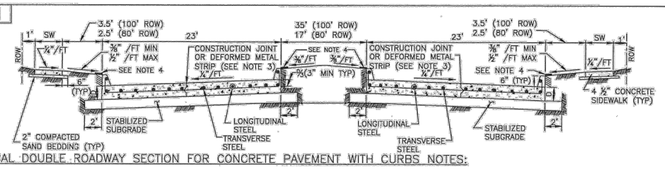
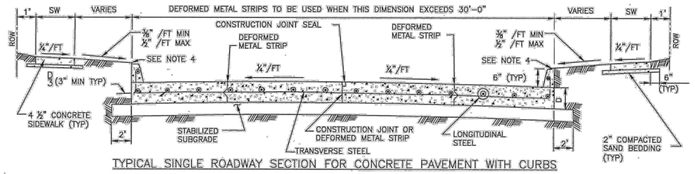
02751-01



TYPICAL DOUBLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH CURBS NOTES:

1. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 15'-0".
2. ALL EARTHEN AREAS ARE TO BE HYDROMULCHED UNLESS SHOWN OTHERWISE ON DRAWINGS.
3. CONTRACTOR MAY SAW CUT IN LIEU OF DEFORMED METAL STRIP.
4. USE STRIP OF SOD GRASS TO PREVENT EROSION UNTIL STAND OF GRASS IS ESTABLISHED.
5. AN EQUAL OR LARGER AREA OF WELDED REINFORCEMENT BAR CONFORMING TO ASTM A497, MAY BE SUBSTITUTED FOR REBARS LISTED IN TABLE 1.
6. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SW) ACCORDING TO IDM REQUIREMENTS, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.



TYPICAL SINGLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH CURBS

TABLE 1
REINFORCING STEEL BAR SIZES AND SPACINGS FOR VARIOUS PAVEMENT THICKNESSES (D) WITH:
MAXIMUM TRANSVERSE CONTROL JOINT SPACING = 20'-0"
MAXIMUM EXPANSION JOINT SPACING = 80'-0"
f'_c = 4,000 PSI/28 DAYS AND FY = 60,000 PSI

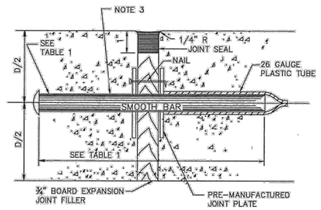
PAVEMENT THICKNESS D (IN)	PAVEMENT WIDTH (FT)	LONGITUDINAL STEEL # 4 BARS NUMBER OF BARS	# 4 BARS SPACING (IN)	# 4 BARS END BAR SPACING (IN)	# 5 BARS NUMBER OF BARS	# 5 BARS SPACING (IN)	# 5 BARS END BAR SPACING (IN)	# 6 BARS NUMBER OF BARS	# 6 BARS SPACING (IN)	# 6 BARS END BAR SPACING (IN)	TRANSVERSE STEEL # 4 BARS SPACING (IN)	# 5 BARS SPACING (IN)	# 6 BARS SPACING (IN)
6	28	17	20.50	4	–	–	–	–	–	–	36	–	–
7	25	17	18.25	4	–	–	–	–	–	–	36	–	–
7	35	24	18.00	3	–	–	–	–	–	–	36	–	–
7	36	25	17.75	3	–	–	–	–	–	–	36	–	–
7	37	25	18.25	3	–	–	–	–	–	–	36	–	–
7	41	28	18.00	3	–	–	–	–	–	–	36	–	–
7	45	31	17.75	3.75	–	–	–	–	–	–	36	–	–
8	25	20	15.50	2.75	13	24.50	3	–	–	–	36	36	–
8	34	27	15.50	2.50	17	25.00	4	–	–	–	36	36	–
8	35	27	16.00	2	18	24.25	4	–	–	–	36	36	–
8	36	28	15.75	3.25	18	25.00	3	–	–	–	30	36	–
8	44	24	15.75	4	22	24.75	4	–	–	–	30	36	–
8	45	35	15.75	2.25	23	24.25	3	–	–	–	30	36	–
9	25	22	14.00	3	14	22.50	4	–	–	–	36	36	–
9	34	31	13.50	2	19	22.25	3.50	–	–	–	30	36	–
9	35	31	13.75	3.75	20	21.75	3.50	–	–	–	30	36	–
9	36	32	13.75	3	21	21.25	3.50	–	–	–	30	36	–
9	44	39	13.75	2.75	25	21.75	3	–	–	–	24	36	–
9	45	39	14.00	4	26	21.25	4.50	–	–	–	24	36	–
10	25	24	12.75	3.5	17	18.25	4	–	–	–	36	36	36
10	34	33	12.50	4	21	20.00	4	–	–	–	30	36	36
10	35	34	12.50	3.75	23	18.75	4	–	–	–	30	36	36
10	36	35	12.50	3.5	24	18.50	3	–	–	–	30	36	36
10	44	44	12.00	4	29	18.50	4.50	–	–	–	24	36	36
10	45	44	12.50	3	29	19.00	3	–	–	–	24	36	36
11	25	27	11.25	3	17	18.25	4	12	26.75	3	36	36	36
11	34	36	11.50	2.75	24	17.50	2.5	17	25.00	4	24	36	36
11	35	37	11.50	3	24	18.00	3	17	25.75	4	24	36	36
11	36	40	11.00	2	25	17.75	3	17	26.50	4	24	36	36
11	44	48	11.125	2.5	30	18.00	3	21	26.00	4	24	36	36
11	45	49	11.125	3	31	17.75	4	22	25.50	3	24	36	36
12	25	–	–	–	19	16.25	4	13	24.50	3	36	36	36
12	34	–	–	–	26	16.00	4	18	23.50	4	24	36	36
12	35	–	–	–	26	16.50	4	19	23.00	3	24	36	36
12	36	–	–	–	27	16.25	4.5	20	22.25	4.5	24	36	36
12	44	–	–	–	33	16.25	4	24	22.50	5	24	30	36
12	45	–	–	–	35	15.75	3	25	22.25	3	24	30	36

USE →

MINIMUM LAP LENGTH (L):
A. # 4 BARS ; L = 22 INCHES
B. # 5 BARS ; L = 27 INCHES
C. # 6 BARS ; L = 32 INCHES

CONCRETE PAVEMENT DETAILS
NTS

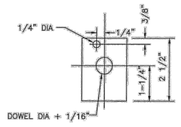
02752-01



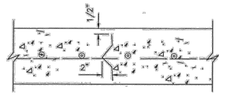
SECTION
DOWEL TYPE EXPANSION JOINT
N.T.S.



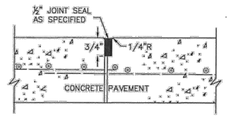
PLAN – JOINT PLATE



ELEVATION – JOINT PLATE
N.T.S.



SECTION
DEFORMED METAL STRIP
N.T.S.



SECTION
CONSTRUCTION JOINT SEAL
N.T.S.

NOTES:

1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS. UNITS TO BE SPACED ON 12" CENTRS.
2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS.
3. CENTER DOWEL HORIZONTALLY ON JOINT.
4. CENTER DOWEL VERTICALLY IN CONCRETE BASE. EXTEND THICKENED CONCRETE AS NEEDED TO MAINTAIN 3" MIN COVER.
5. CITY OF HOUSTON APPROVED PRODUCTS MAY BE USED AS JOINT PLATE ALTERNATIVE.

TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
6	3/4	18	12
7	1	18	12
8	1	18	12
9	1 1/4	18	12
10	1 1/4	18	12
11	1 1/4	18	12
12	1 1/4	18	12

USE →

PAVEMENT EXPANSION AND CONSTRUCTION JOINT DETAILS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02751-01 THROUGH 02752-01

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY: Carol Haddock	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFFECTIVE DATE: JUL-01-2020	
FOR CITY OF HOUSTON USE ONLY	
SHEET NO.	

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS · MARC WOLDWARD · 96072 · LICENSED PROFESSIONAL ENGINEER · 07/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PAVEMENT DETAILS

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 16 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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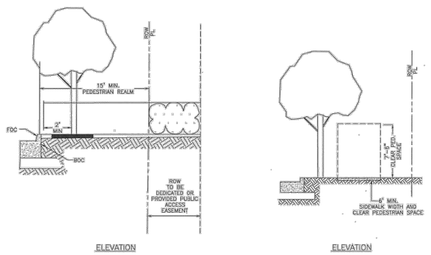
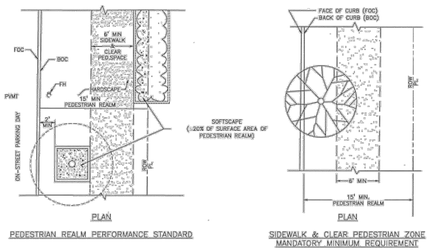
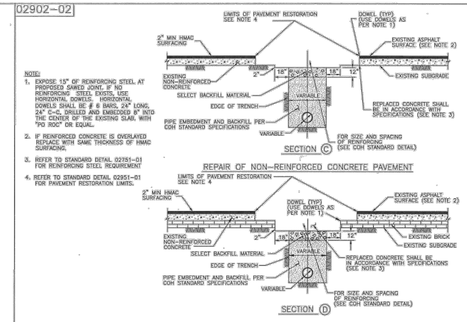




NOTES
1. REFER TO CHAPTER 42 OF THE CODE OF ORDINANCES, ARTICLE IV – TRANSIT CORRIDOR DEVELOPMENT.

SIDEWALKS AND CLEAR ZONE TRANSIT CORRIDOR STREET
NTS

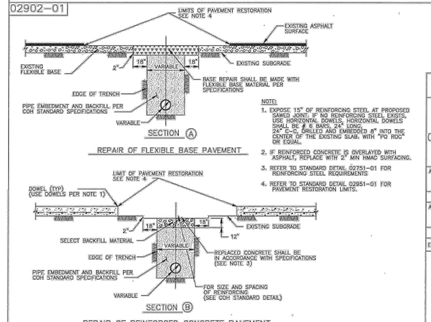
02902-02



NOTE:
1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWCUT JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C-C, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROCK" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED REPLACE WITH SAME THICKNESS OF HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02951-01 FOR REINFORCING STEEL REQUIREMENT
4. REFER TO STANDARD DETAIL 02951-01 FOR PAVEMENT RESTORATION LIMITS.

PAVEMENT REPAIR DETAILS FOR STREET CUTS – NON REINFORCED CONCRETE AND BRICK PAVEMENT
NTS

02902-01



NOTE:
1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWCUT JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C-C, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROCK" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED WITH ASPHALT, REPLACE WITH 2" MIN HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02951-01 FOR REINFORCING STEEL REQUIREMENTS
4. REFER TO STANDARD DETAIL 02951-01 FOR PAVEMENT RESTORATION LIMITS.

PAVEMENT REPAIR DETAILS FOR STREET CUTS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

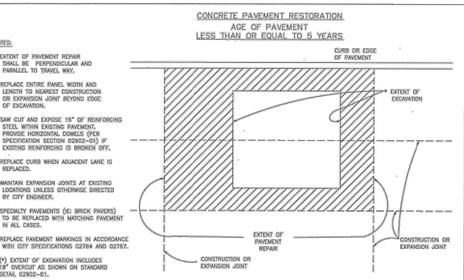
STREET PAVING AND SIDEWALK
02775-08 THROUGH 02902-02

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY
SHEET NO.

02951-01

CONCRETE PAVEMENT RESTORATION
AGE OF PAVEMENT
LESS THAN OR EQUAL TO 5 YEARS

NOTES:
1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. REPLACE ENTIRE PANEL WIDTH AND LENGTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL WITHIN EXISTING PAVEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02902-01) IF EXISTING REINFORCING IS BROKEN OFF.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
6. SPECIALTY PAVEMENTS (EG: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
7. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767.
8. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

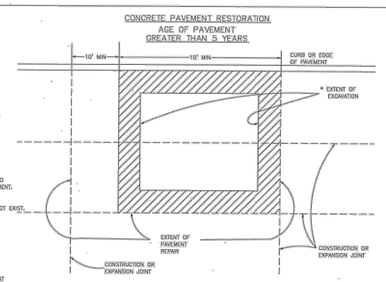


STREET CUT PAVEMENT REPLACEMENT – CONCRETE PAVEMENT LESS THAN 5 YEARS IN AGE
NTS

02951-02

CONCRETE PAVEMENT RESTORATION
AGE OF PAVEMENT
GREATER THAN 5 YEARS

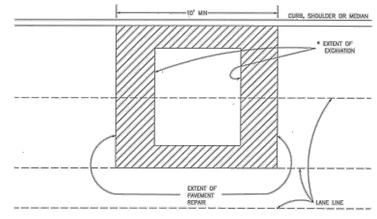
NOTES:
1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. WIDTH:
   REPLACE PANEL WIDTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. LENGTH:
   a. MINIMUM LENGTH OF PAVEMENT REPAIR ALONG TRAVEL WAY IS 10' FROM THE NEAREST JOINT.
   b. IF EDGE OF EXCAVATION IS LESS THAN 10' FROM EXISTING CONSTRUCTION OR EXPANSION JOINT, REPLACE PAVEMENT TO EXISTING JOINT.
4. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF PANEL REPLACEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02902-01) IF REINFORCING IS BROKEN OFF OR DOES NOT EXIST.
5. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
6. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
7. SPECIALTY PAVEMENTS (EG: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
8. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767
9. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.



STREET CUT PAVEMENT REPLACEMENT – CONCRETE PAVEMENT OVER THAN 5 YEARS IN AGE
NTS

02951-03

ASPHALT PAVEMENT RESTORATION
PAVEMENT OF ALL AGES



NOTES:
1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. FLEXIBLE BASE:
   REPLACE BASE TO SAME THICKNESS PLUS TWO INCHES (2") FOR EXTENT OF EXCAVATION. USE APPROVED BASE MATERIAL TYPE.*
3. SURFACE COURSE:
   A. WIDTH:
      SURFACE MILL AND OVERLAY FULL WIDTH OF LANE(S) TO NEAREST LANE DIVIDER BEYOND EDGE OF EXCAVATION.
   B. LENGTH:
      MINIMUM LENGTH OF SURFACE MILL ALONG TRAVEL WAY IS 10'.
   C. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATION 02764 & 02767.
4. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

ADDITIONAL REQUIREMENTS FOR ASPHALT OVERLAY ON CONCRETE PAVEMENT:
1. REPLACE CONCRETE FOR EXTENT OF EXCAVATION. REPLACE TO SAME THICKNESS PLUS TWO INCHES (2").
2. WIDTH:
   IF EXCAVATION EXTENDS MORE THAN HALF OF A LANE, REPLACE ENTIRE LANE OF CONCRETE. OTHERWISE USE STANDARD DETAIL 02902-01.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF CONCRETE REPLACEMENT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER SPECIFICATIONS SECTION 02902.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN CONCRETE EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

STREET CUT PAVEMENT REPLACEMENT – ASPHALT PAVEMENT FOR PAVEMENT OF ALL AGES
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02951-01 THROUGH 02951-03

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY
SHEET NO.

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY: KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS – MARK WOODWARD – 96072 – LICENSED PROFESSIONAL ENGINEER – 7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PAVEMENT REPAIR DETAILS

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 17 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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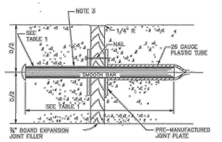
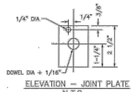
02752-02



SECTION
DOWEL TYPE EXPANSION JOINT
N.T.S



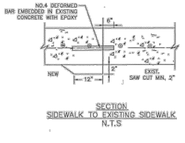
PLAN – JOINT PLATE
N.T.S.



ELEVATION – JOINT PLATE
N.T.S.

NOTES:

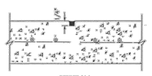
1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE AGENCY DOWEL BARS.
2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 3 FEET MAXIMUM SPACING FOR CONTROL JOINTS SHALL BE 5 FEET.
3. CENTER DOWEL HORIZONTALLY ON JOINT.
4. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN A 2 INCH MINIMUM COVER.



SECTION
SIDEWALK TO EXISTING SIDEWALK
N.T.S



SECTION
SIDEWALK TO EXISTING DRIVEWAY
N.T.S.



SECTION
CONTROL JOINT
N.T.S.

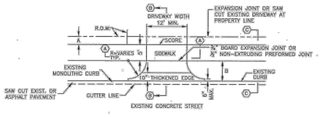
TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACING			
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)	
4 1/2	1/2	18	12	
5	1/2	18	12	
6	3/4	18	12	
7	1	18	12	

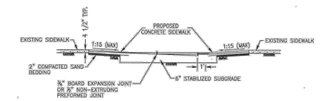
USE

SIDEWALK EXPANSION AND CONSTRUCTION JOINT DETAILS
NTS

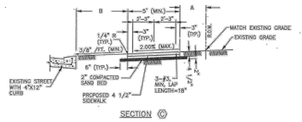
02754-01A



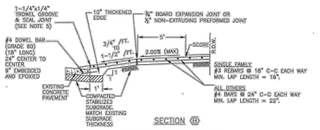
PLAN VIEW – DRIVEWAY



SECTION Ⓐ
PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE GRADES
N.T.S.



SECTION Ⓒ
TYPICAL SIDEWALKS SECTION
N.T.S.



SECTION Ⓑ
TYPICAL DRIVEWAY SECTION
N.T.S.

DRIVEWAY / LOCAL RESIDENTIAL STREETS
NTS

NOTES:

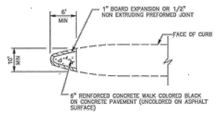
1. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SW) ACCORDING TO ADA REQUIREMENT, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.
2. DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY.
3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE HAVING A MIN. OF SIX SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
4. THE OUTER DOWEL BARS ARE TO BE LOCATED 12" FROM END OF PROPOSED EDGE OF DRIVEWAY PROPOSED CURB RETURN. ALL BENDING BAR PROPOSED CURB RETURN. ALL BENDING BAR TO EXTEND TO RADIUS RETURN BOTH SIDES.
5. TROWEL GROOVE SEALANT SHALL BE LOW MODULUS SILICONE OR POLYURETHANE SEALANT.
6. EXPANSION & CONSTRUCTION JOINTS ALONG SIDEWALK SHALL BE ACCORDING TO DRAWING No. 02752-02.
7. REFER CHAPTER 17 DESIGN REQUIREMENTS FOR A AND B.
8. CEMENT STABILIZED SAND 1.5 SACKS OF CEMENT PER TON OF DRY SAND.
9. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
10. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON
11. CONTRACTOR TO PROVIDE LONGITUDINAL AND TRANSVERSE EXPANSION JOINTS ON DRIVEWAYS SPACED 12-FT (MAX.) SPACING SHALL BE CALCULATED BETWEEN ROADWAY AND SIDEWALK.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

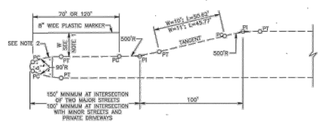
STREET PAVING AND SIDEWALK
02752-02 THROUGH 02754-01A

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY
SHEET NO.

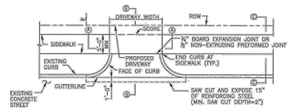
02772-01



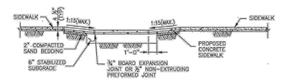
ESPLANADE NOSE


70' OR 120'
8" WIDE PLASTIC MARKER
SEE NOTE 2
50'TR
W=10'
R=500'
Δ = 5°42'28.14"
L = 49.83'
T=24.94'
W=11'
R=350'
Δ = 8°16'39.22"
L = 54.76'
T=27.42'
TANGENT
50'TR
PI
PI
PI

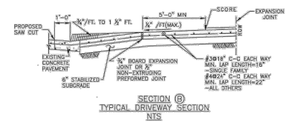
02754-01B



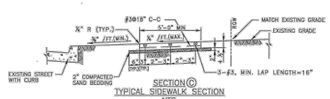
PLAN VIEW – DRIVEWAY
NTS



SECTION (A)
PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE ELEVATION DIFFERENCE WITH EXISTING SIDEWALK
NTS



SECTION (B)
TYPICAL DRIVEWAY SECTION
NTS



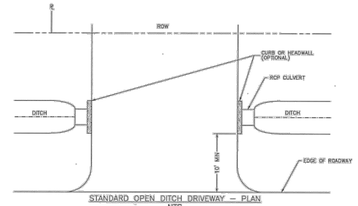
SECTION (C)
TYPICAL SIDEWALK SECTION
NTS

NOTES

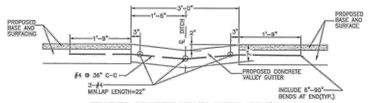
1. ALL JOINTS SHALL CONFORM TO CITY OF HOUSTON (COH) STANDARD SPECIFICATION.
2. DRIVEWAYS SHALL BE MINIMUM 6" THICK FOR SINGLE FAMILY USE AND MINIMUM 7" THICK FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)
3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5-1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
4. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
5. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

DRIVEWAY DETAIL WITH 6" CURBED STREETS
NTS

02754-02



STANDARD OPEN DITCH DRIVEWAY – PLAN
NTS



STANDARD CONCRETE VALLEY GUTTER SECTION
NTS

NOTES:

1. REINFORCED CONCRETE PIPE (RCP) CULVERTS AND CONCRETE VALLEY GUTTER GRADES SHALL BE SET BY CITY ENGINEER. PROFILE SHOWING THE PROPOSED AND EXISTING DITCH FLOWLINE WILL BE REQUIRED WHERE CONCRETE VALLEY GUTTERS ARE TO BE CONSTRUCTED IN LIEU OF CULVERTS.
2. CULVERT SIZE WILL BE APPROVED BY CITY ENGINEER WITH 24" DIAMETER MINIMUM.
3. SPACING OF TYPE "D" OR "D-1" INLETS SHALL BE DETERMINED BY CITY ENGINEER. SEE DRAWING NO. 02632-07 FOR TYPE "D" OR DRAWING NO. 02632-08 FOR TYPE "D-1".
4. DRIVEWAY MAY BE CONCRETE, ASPHALT OR ANY OTHER MATERIAL WHICH WILL NOT PERMIT WIND OR WATERBORNE EROSION.
5. A 3-FOOT CONCRETE VALLEY GUTTER SECTION SHALL BE CONSTRUCTED THROUGH THE PROPOSED DRIVEWAY WHERE THE CITY ENGINEER DETERMINES THAT CONCENTRATION OF DITCH FLOWS WOULD BE CRITICAL DUE TO INSUFFICIENT DEPTH OF DITCH. CONCRETE VALLEY GUTTERS SHALL BE CONSTRUCTED OF 5-1/2 SACK CEMENT PER CUBIC YARD OF CONCRETE.

DRIVEWAYS WITH CULVERTS OR VALLEY GUTTERS ON OPEN DITCH TYPE STREETS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02754-01B THROUGH 02754-02

APPROVED BY: CITY ENGINEER — APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
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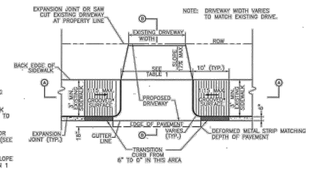
SHEET NO.

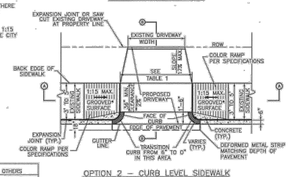
02754-03



OPTION 1 – CURB LEVEL SIDEWALK
PLAN VIEW – DRIVEWAY

NOTES:

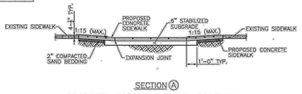
1. DRIVEWAY WIDTH VARIES TO MATCH EXISTING DRIVE.
2. DRIVEWAY DETAIL TO PROVIDE FOR SIDEWALK TRANSITION FROM EXISTING BACK OF CURB TO PROPOSED DRIVEWAY EDGE.
3. RAMPS WITH GROOVES AND CONTRAST COLOR REQUIRED ON SLOPES GREATER THAN 5%. (SEE OPTION 1 AND OPTION 2 PLANS)
4. DRIVEWAY WITH WIDTH >5' @ 2% CROSS SLOPE QUALIFIES AS PASSING SPACE. (SEE OPTION 1 AND OPTION 2 PLANS)
5. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
6. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.



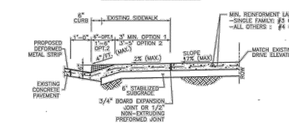
OPTION 2 – CURB LEVEL SIDEWALK
PLAN VIEW – DRIVEWAY

TABLE 1

DRIVEWAY WIDTH	RESIDENTIAL	ALL OTHERS
ONE-WAY	12' MIN.–20' MAX.	15' MIN.–20' MAX.
TWO-WAY	12' MIN.–24' MAX.	24' MIN.–30' MAX.



SECTION (A)
PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE ELEVATION DIFFERENCE WITH EXISTING SIDEWALK

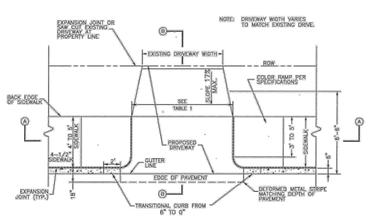


NOTE:
1. DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY USE AND 7" FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)

SECTION (B)
TYPICAL DRIVEWAY SECTION

PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE ELEVATION DIFFERENCE
NTS

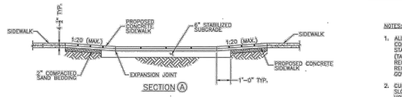
02754-04



PLAN VIEW – DRIVEWAY
NTS

TABLE 1

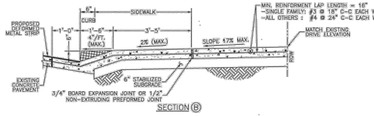
DRIVEWAY WIDTH	RESIDENTIAL	ALL OTHERS
ONE-WAY	12' MIN.–20' MAX.	15' MIN.–20' MAX.
TWO-WAY	12' MIN.–24' MAX.	24' MIN.–30' MAX.



SECTION (A)
PROPOSED SIDEWALK THROUGH DRIVEWAY WITH MINIMAL ELEVATION DIFFERENCE WITH EXISTING SIDEWALK
NTS

NOTES:

1. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
2. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.



SECTION (B)
TYPICAL DRIVEWAY SECTION
NTS

NOTE:
1. DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY USE AND 7" FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)

EXISTING/PROPOSED CURB LEVEL SIDEWALK CONDITIONS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02754-03 THROUGH 02754-04

APPROVED BY: CITY ENGINEER — APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

STATE OF TEXAS — MARK WOODWARD — 96672 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023 — VOID

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

CONCRETE SIDEWALK AND DRIVEWAY DETAILS

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 19 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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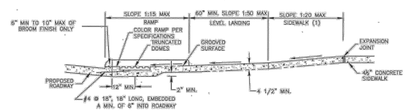
02775-02



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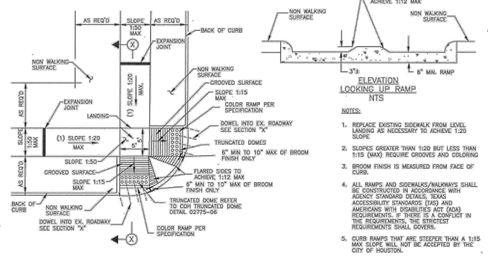
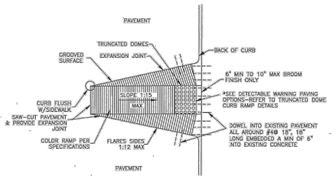


STREETS WITH NON- WALKING SURFACE BEHIND CURB
NTS

ELEVATION
LOOKING UP RAMP
NTS

NOTES:

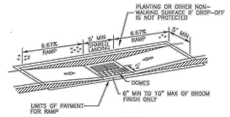
1. REPLACE EXISTING SIDEWALK FROM LEVEL LANDING AS NECESSARY TO ACHIEVE 1:20 SLOPE.
2. SLOPES GREATER THAN 1:20 BUT LESS THAN 1:15 (MAX) REQUIRE GROOVES AND COLORING
3. BROOM FINISH IS MEASURED FROM FACE OF CURB.
4. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
5. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.



RAMP CONSTRUCTION FOR EXISTING PAVEMENT

WHEEL CHAIR RAMP DETAILS
NTS

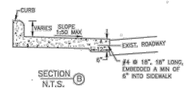
02775-03



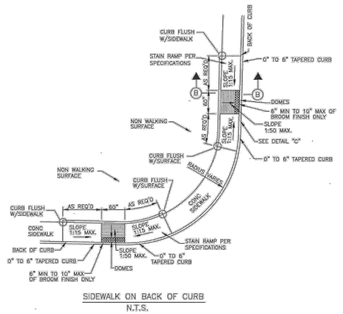
DETAIL "C"

NOTES:

1. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
2. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.



SECTION (B)
N.T.S.



SIDEWALK ON BACK OF CURB
N.T.S.

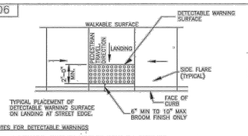
PARALLEL CURB RAMP
NTS

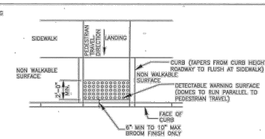
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

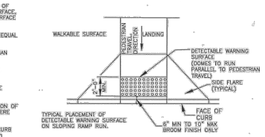
STREET PAVING AND SIDEWALK
02775-02 THROUGH 02775-03

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY
SHEET NO.

02775-06





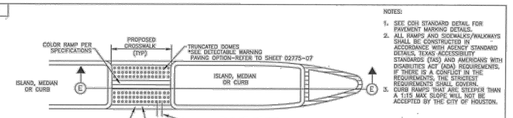


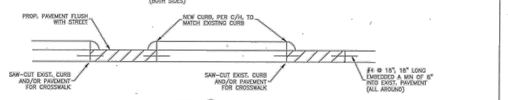
GENERAL NOTES FOR DETECTABLE WARNINGS

1. DETECTABLE WARNING SURFACES MUST BE FULLY ADA COMPLIANT.
2. ALL NEW CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES. THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACE, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
3. DETECTABLE WARNING SURFACES MUST MAINTAIN A SLIP RESISTANCE WITH FX-VALUE OF EQUAL TO OR GREATER THAN 0.8.
4. DETECTABLE WARNING SURFACES MUST MAINTAIN A WATER ABSORPTION RATE OF LESS THAN 1%. DETECTABLE WARNING SHALL NOT ALLOW WATER TO ACCUMULATE.
5. DETECTABLE WARNINGS INSTALLED INTO FRESH CONCRETE SHALL BE WITHOUT VOIDS AND UTILIZING AN ACCEPTABLE ANCHORING SYSTEM.
6. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
7. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
8. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" MIN TO 10" MAX FROM THE DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
9. REFERENCE CURB RAMP DETAILS FOR RAMP GROOVED SURFACE.
10. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
11. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

DETECTABLE WARNING CURB RAMP DETAILS
NTS

02775-04





SECTION (E)

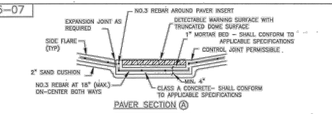
FOR ISLAND, MEDIAN, OR CURB MODIFICATIONS FOR CROSSWALKS

NOTES:

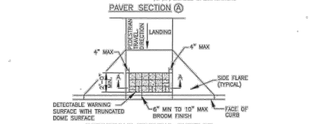
1. SEE CDH STANDARD DETAIL FOR PAVEMENT MARKING DETAILS.
2. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
3. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

CURB MODIFICATIONS FOR WHEEL CHAIR RAMPS & CROSSWALKS
NTS

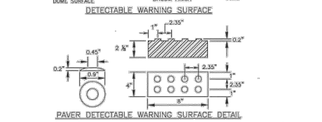
02775-07



PAVER SECTION (A)



DETECTABLE WARNING SURFACE



PAVER DETECTABLE WARNING SURFACE DETAIL

NOTES

GENERAL NOTES

1. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
2. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

PAVERS

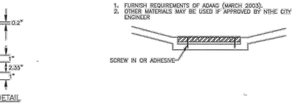
1. FURNISH DETECTABLE WARNING SURFACE UNITS MEETING ALL REQUIREMENTS OF ASTM C-936, C-33, LAY IN A TWO BY TWO UNIT BASKET WEAVE PATTERN OR AS DIRECTED.
2. LAY FULL-SIZE UNITS FIRST FOLLOWED BY CLOSURE UNITS CONSISTING OF AT LEAST 25 PERCENT OF A FULL UNIT. CUT DETECTABLE WARNING PAVER UNITS USING A POWER SAW.

POLYMER CONCRETE

1. DETECTABLE WARNING TILES SHALL BE MADE OF POLYMER CONCRETE MATERIALS.
2. DETECTABLE WARNING TILES SHALL BE INSTALLED INTO FRESH CONCRETE (CAST-IN-PLACE) UTILIZING AN ANCHORING SYSTEM.
3. DETECTABLE WARNING TILES SHALL BE OF TERRACOTTA (BRICK-RED) COLOR AND COLORED THROUGHOUT TO GUARANTEE THAT SURFACE COLOR CANNOT WEAR.
4. DETECTABLE WARNING TILES SHALL MEET OR EXCEED THE FOLLOWING ASTM-BASED "STANDARD" FOR CONCRETE MATERIALS
   A. COMPRESSION STRENGTH > 12,500 PSI PER ASTM C 39-04
   B. WATER ABSORPTION < 0.25% PER ASTM C 97-09

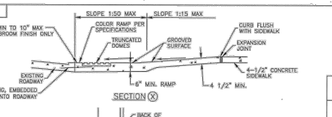
PADS

1. FURNISH REQUIREMENTS OF ADAAG (MARCH 2003).
2. OTHER MATERIALS MAY BE USED IF APPROVED BY NTHE CITY ENGINEER



DETECTABLE WARNING SURFACE (OPTIONS)
NTS

02775-05



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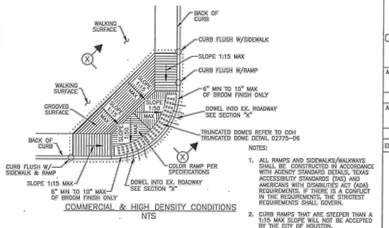

COMMERCIAL & HIGH DENSITY CONDITIONS
NTS

NOTES:

1. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
2. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

COMMERCIAL CURB RAMP DETAILS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02775-04 THROUGH 02775-07

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY
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No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96672
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2814

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

WHEEL CHAIR RAMP DETAILS

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S.
	VERT: N.T.S.
SHEET NO. 20 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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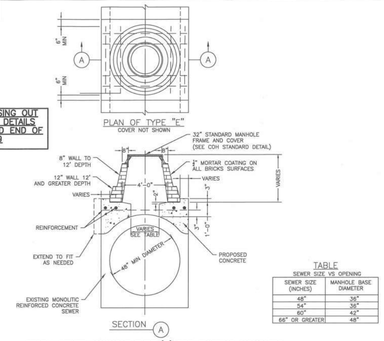
02081–05

COH IS PHASING OUT BRICK. NEW DETAILS TO BE POSTED END OF 2019

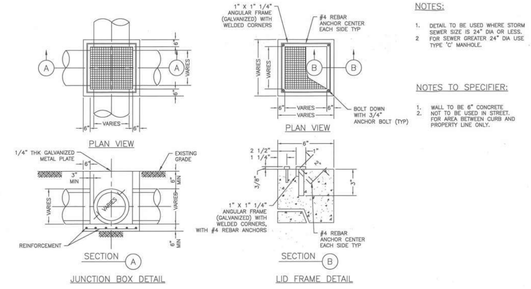


TABLE

SEWER SIZE VS OPENING	
SEWER SIZE (INCHES)	MANHOLE BASE DIAMETER
48"	36"
54"	36"
60"	42"
66" OR GREATER	48"

STORM SEWER MANHOLE TYPE 'E' FOR EXISTING MONOLITIC REINFORCED CONCRETE 48" DIAMETER AND GREATER
NTS

02081–06



NOTES:

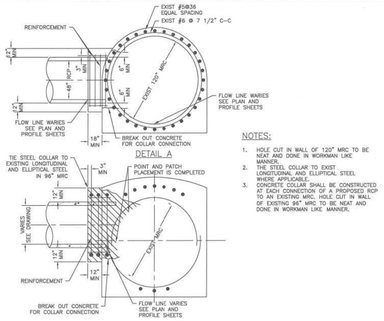
1. DETAIL TO BE USED WHERE STORM SEWER SIZE IS 24" DIA OR LESS.
2. FOR SEWER GREATER 24" DIA USE TYPE "C" MANHOLE.

NOTES TO SPECIFIER:

1. WALL TO BE 6" CONCRETE.
2. NOT TO BE USED IN STREET. FOR AREA BETWEEN CURB AND PROPERTY LINE ONLY.

STORM SEWER
JUNCTION BOX WITH LID OR GRATE TOP
FOR MAXIMUM OF 24" DIAMETER STORM SEWE4R5
NTS

02081–07

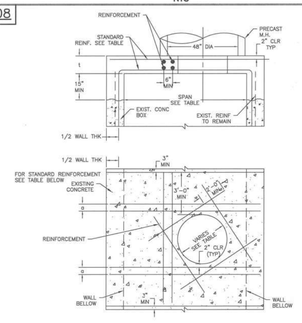


NOTES:

1. HOLE CUT IN WALL OF 120" MRC TO BE NEAT AND DONE IN WORKMAN LIKE MANNER.
2. TIE STEEL COLLAR TO EXIST LONGITUDINAL AND ELLIPTICAL STEEL WHERE APPLICABLE.
3. CONCRETE COLLAR SHALL BE CONSTRUCTED AT EACH CONNECTION OF A PROPOSED RCP TO EXISTING MONOLITHIC. CUT IN WALL OF EXISTING 96" MRC TO BE NEAT AND DONE IN WORKMAN LIKE MANNER.

LATERAL CONNECTION TO EXISTING
MONOLITHIC REINFORCED CONCRETE STORM SEWER
NTS

02081–08



PROPOSED MANHOLE ON
EXISTING BOX STORM SEWER
NTS

FIRM INFORMATION | ENGINEER'S SEAL

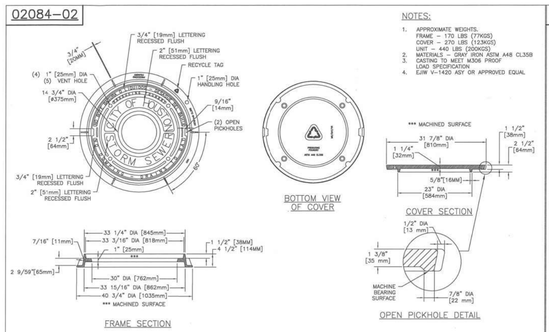
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02081–05 THROUGH 08

APPROVED BY: CITY ENGINEER | APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

02084–02

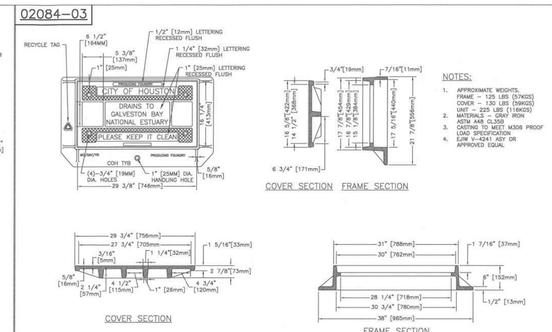


NOTES:

1. APPROXIMATE WEIGHTS.
   FRAME – 176 LBS (77KGS)
   COVER – 270 LBS (123KGS)
   UNIT – 446 LBS (200KGS)
2. MATERIALS – GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V–1420 ASY OR APPROVED EQUAL

STORM SEWER MANHOLE FRAME AND COVER
NTS

02084–03

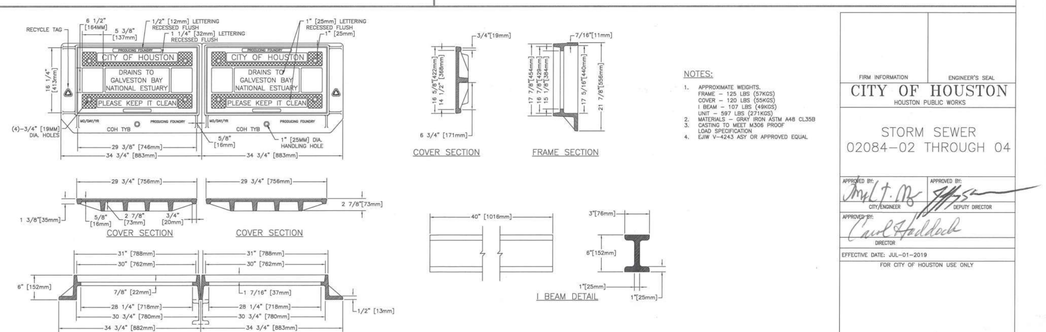


NOTES:

1. APPROXIMATE WEIGHTS.
   FRAME – 125 LBS (57KGS)
   COVER – 130 LBS (59KGS)
   UNIT – 225 LBS (116KGS)
2. MATERIALS – GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V–6241 ASY OR APPROVED EQUAL

STORM SEWER TYPE "B" INLET ASSEMBLY
NTS

02084–04



NOTES:

1. APPROXIMATE WEIGHTS.
   FRAME – 125 LBS (57KGS)
   COVER – 120 LBS (55KGS)
   I BEAM – 107 LBS (49KGS)
   UNIT – 597 LBS (271KGS)
2. MATERIALS – GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V–4243 ASY OR APPROVED EQUAL

STORM SEWER TYPE "BB" INLET DOUBLE ASSEMBLY
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02084–02 THROUGH 04

APPROVED BY: CITY ENGINEER | APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
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Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P–6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2814

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

STORM SEWER DETAILS

SHEET 1 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
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SHEET NO. 21 OF 111	DRAWING SCALE

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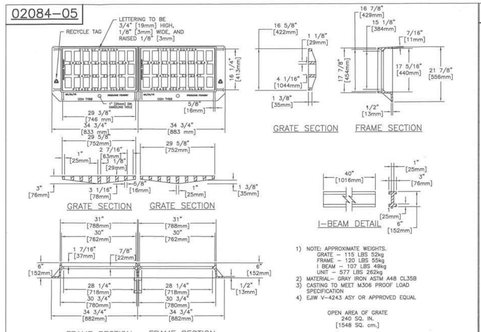
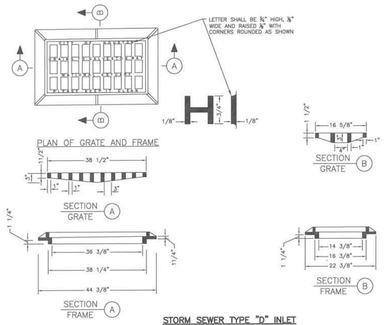
02084–05



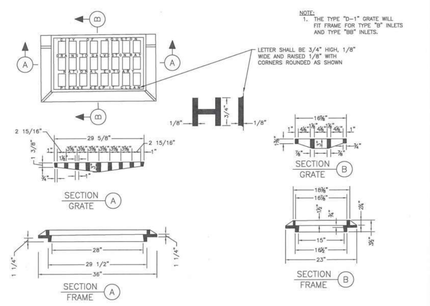
STORM SEWER FRAME AND GRATE
FOR TYPE B–B INLET DOUBLE ASSEMBLY
NTS

02084–06



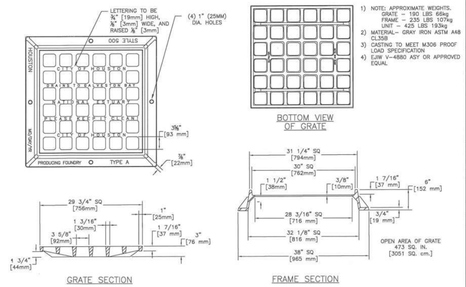
STORM SEWER TYPE "D" INLET
GRATE AND FRAME
NTS

02084–07



STORM SEWER TYPE "D–1" INLET
GRATE AND FRAME
NTS

02084–08



STORM SEWER TYPE "A"
INLET GRATE AND FRAME
NTS

FIRM INFORMATION	ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02084–05 THROUGH 08

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY: DIRECTOR	

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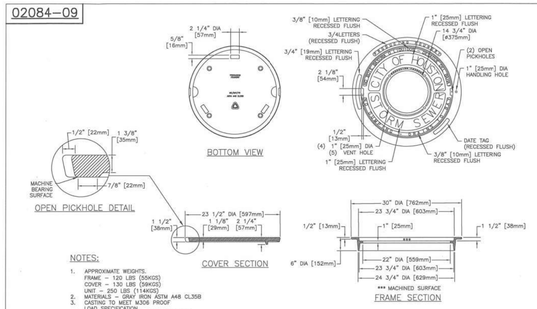
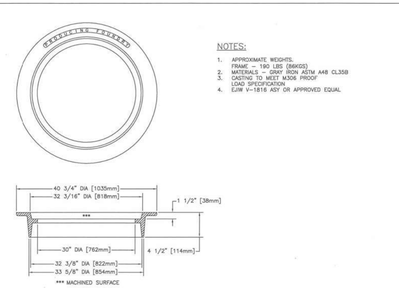
SHEET NO.

02084–09



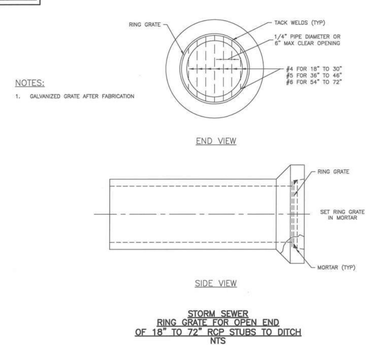
STORM SEWER TYPE "C–1, C–2, C–2A"
AND "H–2" INLET FRAME AND COVER
NTS

02084–10



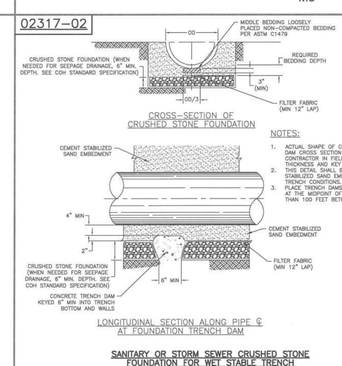
32" INVERTED MANHOLE FRAME
NTS

02084–11



STORM SEWER
RING GRATE FOR OPEN END
OF 18" TO 72" RCP STUBS TO DITCH
NTS

02317–02



SANITARY OR STORM SEWER CRUSHED STONE
FOUNDATION FOR WET STABLE TRENCH
NTS

FIRM INFORMATION	ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02084–09 THROUGH 11
AND 02317–02

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CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY: DIRECTOR	

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MOSLEY RD STREET REHABILITATION

STORM SEWER DETAILS

SHEET 2 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 22 OF 111	DRAWING SCALE

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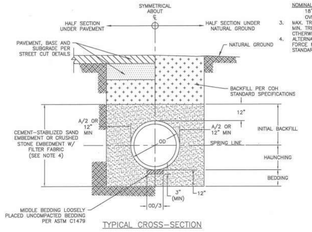
02317-03



TYPICAL CROSS-SECTION

NOTES:

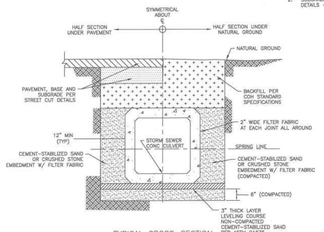
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS AS SHOWN. STANDARD, SEE COH STANDARD SPECIFICATION FOR REQUIREMENTS IN OTHER CONDITIONS.
2. MIN. TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
12" TO 24"	24"
OVER 30"	36"

3. MAX. TRENCH WIDTH SHALL BE NOT GREATER THAN MIN. TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. CEMENT-STABILIZED EMBEDMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED. SEE COH STANDARD SPECIFICATIONS.

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317-05



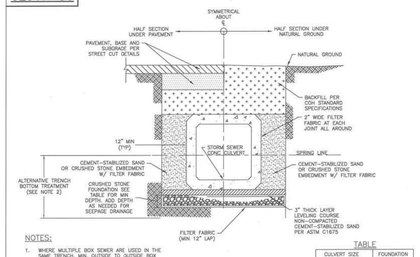
TYPICAL CROSS-SECTION

NOTES:

1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN. OUTSIDE TO OUTSIDE BOX SEWER SEPERATION SHALL BE 6".
2. SUBGRADE AND PAVEMENT FOR STREET CUT DETAILS – 02851.

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317-06



NOTES:

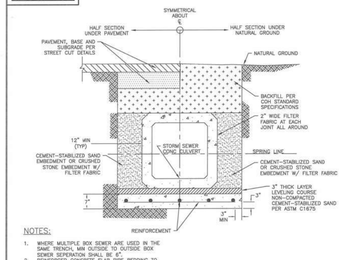
1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN. OUTSIDE TO OUTSIDE BOX SEWER SEPERATION SHALL BE 6".
2. ALTERNATIVE TRENCH BOTTOM TREATMENT MAY BE USED AS APPROVED BY THE CITY OF ENGINEERS AND AS PAID FOR IN THE PROPOSAL.

TABLE

CULVERT SIZE (T)	FOUNDATION DEPTH(INCHES)
3' X 2' TO 8' X 8'	12
8' X 8' AND LARGER	18

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR WET STABLE TRENCH
NTS

02317-07



NOTES:

1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEWER SEPERATION SHALL BE 6".
2. PRECAST CONCRETE BOX SHALL BE BEDDING TO BE PLACED IN DRY TRENCH ONLY.
3. CONCRETE IN SLAB TO REACH MIN COMPRESSIVE STRENGTH OF 3500 PSI BASED ON WAX DESIGN REQUIREMENTS.
4. PRECAST SEAL SLAB MAYBE USED AS APPROVED BY CITY ENGINEER.

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL WITH SEAL SLAB
NTS

FIRM INFORMATION	ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02317-03 THROUGH 07

APPROVED BY: CITY ENGINEER	APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR	

EFFECTIVE DATE: JUL-01-2019
FOR CITY OF HOUSTON USE ONLY

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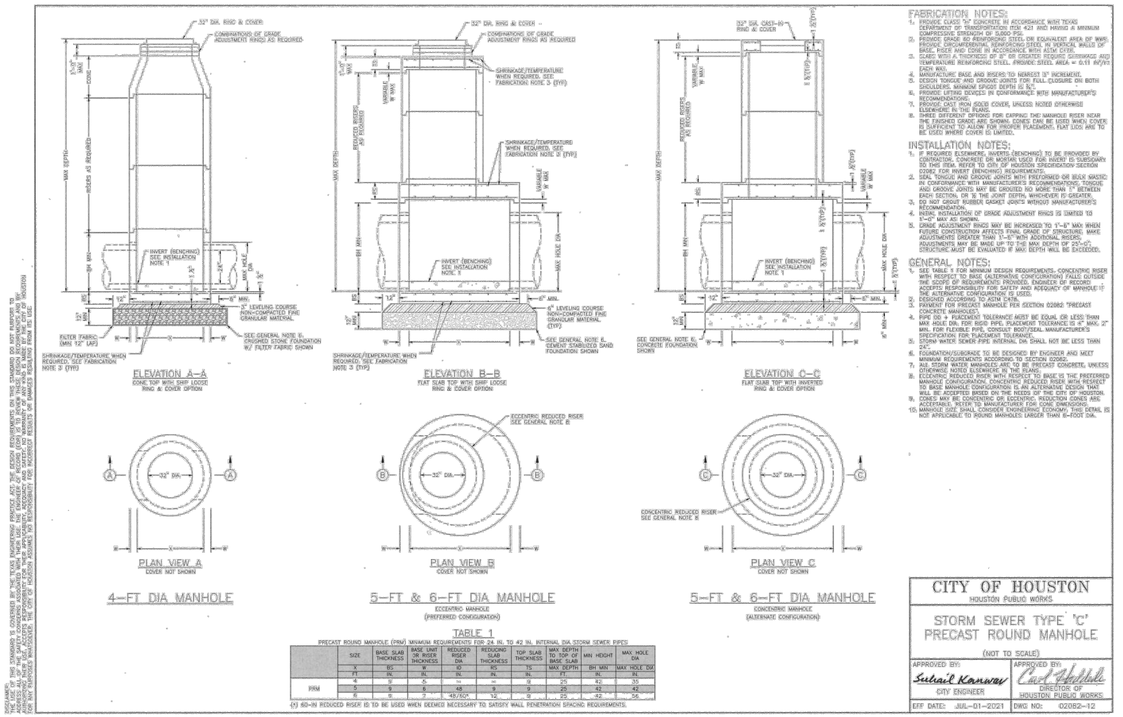

4-FT DIA MANHOLE

5-FT & 6-FT DIA MANHOLE
ECCENTRIC MANHOLE
(PREFERRED CONFIGURATION)

5-FT & 6-FT DIA MANHOLE
CONCENTRIC MANHOLE
(ALTERNATE CONFIGURATION)

TABLE 1
PRECAST ROUND MANHOLE (PRM) MINIMUM REQUIREMENTS FOR 24 IN. TO 42 IN. INTERNAL DIA STORM SEWER PIPES

	SIZE	BASE SLAB THICKNESS	BASE UNIT OR RISER THICKNESS	REDUCED RISER DIA.	REDUCING SLAB THICKNESS	TOP SLAB THICKNESS	TOP SLAB TO TOP OF MAX. SEWER	MAX DEPTH TO TOP OF MAN HOLE	MIN HEIGHT	MAX. HOLE DIA
	X	B5	M	R	M	T5	MAX DEPTH		BH MIN	MAX HOLE DIA
	F1	9¼	8¼	32	8¼	9¼	8¼		8¼	8¼
	4	9	5	--	--	8	25	42	33	
PRM	5	9	6	48	9	9	25	42	42	
	6	9	7	48/60*	12	9	25	42	54	

(*) 60-IN REDUCED RISER ID TO BE USED WHEN DEEMED NECESSARY TO SATISFY WALL PENETRATION SPACING REQUIREMENTS.

FABRICATION NOTES:

1. PROVIDE CLASS "H" CONCRETE IN ACCORDANCE WITH TEXAS DEPARTMENT OF TRANSPORTATION ITEM 420 AND HAVING A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
2. REINFORCEMENT SHALL PROVIDE EQUAL OR EQUIVALENT AREA OF WWR: PROVIDE CIRCUMFERENTIAL REINFORCING STEEL IN VERTICAL WALLS OF BARE, RISER AND CONE IN ACCORDANCE WITH ASTM C478.
3. CLOSED WITH A THICKNESS OF 5" OR GREATER PROVIDE SUITABLE AND TEMPERATURE REINFORCING STEEL. PROVIDE STEEL AREA = 0.11 IN²/FT EACH WAY.
4. MANUFACTURE BASE AND RISERS TO NEAREST 3" INCREMENT.
5. DESIGN JOINTS, TONGUE AND GROOVE JOINTS FOR FULL CLOSURE ON BOTH SIDES WITH MINIMUM SPIGOT DEPTH OF 6".
6. PRODUCE LISTED PRODUCTS IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. PROVIDE CAST IRON SOLID COVER, UNLESS NOTED OTHERWISE ELSEWHERE IN THE PLANS.
8. THREE DIFFERENT OPTIONS FOR SIZING THE REDUCED RISER NEAR THE TOP OF THE MANHOLE. STORM ZONES CAN BE USED WHEN COVER IS SUFFICIENT TO ALLOW FOR PROPER PLACEMENT. FLAT LIDS ARE TO BE USED WHERE COVER IS LIMITED.

INSTALLATION NOTES:

1. IF REQUIRED ELSEWHERE, INVERTS (BENCHING) TO BE PROVIDED BY CONTRACTOR. CONCRETE OR MORTAR USED FOR INVERT IS SUBSIDIARY TO THIS ITEM. REFER TO COH ZIP MORTAR SPECIFICATION SECTION 02930 FOR MORTAR REQUIREMENTS.
2. SEAL TONGUE AND GROOVE JOINTS WITH PREFORMED OR BULK MASTIC IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS. TONGUE AND GROOVE JOINTS MAY BE GROUTED NO MORE THAN ½" BETWEEN EACH SECTION, OR ½ THE JOINT DEPTH, WHICHEVER IS GREATER.
3. DO NOT GROUT RUBBER GASKET JOINTS WITHOUT MANUFACTURER'S RECOMMENDATION.
4. INSTALL INSTALLATION OF GRADE ADJUSTMENT RINGS IS LIMITED TO 12" MAX PER LIFT.
5. GRADE ADJUSTMENT RINGS MAY BE INCREASED TO 1'-8" MAX WHEN FUTURE CONSTRUCTION AFFECTS FINAL GRADE OF STRUCTURE. MAKE ADJUSTMENTS GREATER THAN 1'-8" WITH ADDITIONAL RISERS. ADJUSTMENTS MAY BE MADE UP TO THE MAX DEPTH OF 25'-00". STRUCTURE MUST BE EVALUATED IF MAX DEPTH WILL BE EXCEEDED.

GENERAL NOTES:

1. SEE TABLE 1 FOR MINIMUM DESIGN REQUIREMENTS. CONCENTRIC RISER MAY BE USED WHERE SPACE IS LIMITED. MANHOLES THAT FALL OUTSIDE THE SCOPE OF REQUIREMENTS PROVIDED, ENGINEER OF RECORD ACCEPTS RESPONSIBILITY FOR SAFETY AND ADEQUACY OF MANHOLE IF THE ALTERNATIVE CONFIGURATION IS USED.
2. DESIGNED ACCORDING TO ASTM C478.
3. PAYMENT FOR PRECAST MANHOLE PER SECTION 02080 "PRECAST CONCRETE".
4. MANUFACTURER'S TOLERANCE MUST BE EQUAL OR LESS THAN MAX HOLE DIA. FOR RIGID PIPE, PLACEMENT TOLERANCE IS 4" MAX. 2" MIN. FOR FLEXIBLE PIPE, CONSULT MANUFACTURER'S SPECIFICATION FOR PLACEMENT TOLERANCE.
5. STORM WATER SEWER PIPE INTERNAL DIA SHALL NOT BE LESS THAN 24".
6. FOUNDATION/SUBGRADE TO BE DESIGNED BY ENGINEER AND MEET MINIMUM REQUIREMENTS ACCORDING TO SECTION 02080.
7. ALL STORM WATER MANHOLES ARE TO BE PRECAST CONCRETE, UNLESS OTHERWISE NOTED ELSEWHERE IN THE PLANS.
8. ECCENTRIC REDUCED RISER WITH INTERFACE TO BASE IS THE PREFERRED MANHOLE CONFIGURATION. CONCENTRIC REDUCED RISER WITH INTERFACE TO BASE MAY BE USED WHERE SPACE IS LIMITED. DESIGN STRUCTURE WILL BE ACCEPTED BASED ON THE NEEDS OF THE CITY OF HOUSTON. CONES MAY BE CONCENTRIC OR ECCENTRIC. REDUCTION CONES ARE ACCEPTABLE. REFER TO MANUFACTURER FOR CONE DIMENSIONS.
9. MANHOLE SIZE SHALL CONSIDER ENGINEERING ECONOMY. THIS DETAIL IS NOT APPLICABLE TO ROUND MANHOLES LARGER THAN 8'-0"OUT DIA.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER TYPE 'C'
PRECAST ROUND MANHOLE

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2021 | DWG NO: 02082-12

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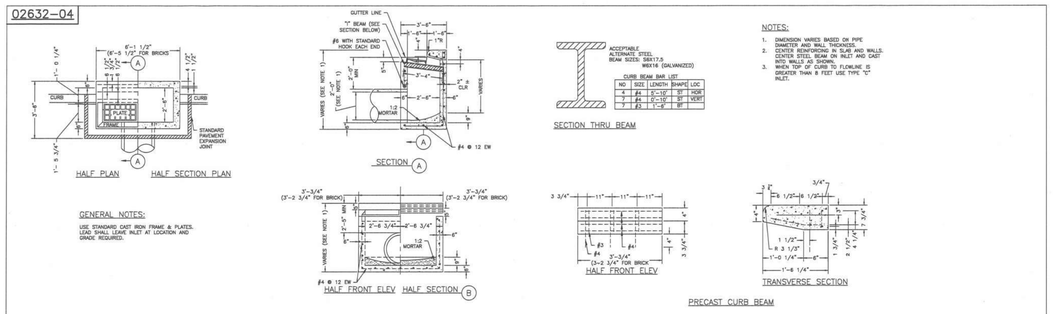
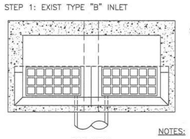
02632-04



STORM SEWER TYPE "B-B" INLET
NTS

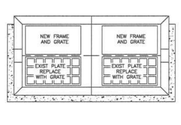
02632-05

STEP 1: EXIST TYPE "B" INLET



TOP VIEW

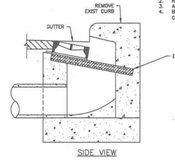
STEP 2:



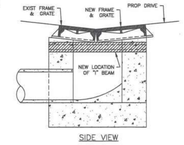
TOP VIEW

NOTES:

1. AFTER REMOVING EXIST CURB, RAISE EXIST FRAME TO GUTTER GRADE.
2. REPLACE EXIST PLATE WITH A GRATE.
3. ADD NEW FRAME AND GRATE NEXT TO EXIST FRAME.
4. BACKFILL INLET TO A POINT ONE FOOT BEHIND THE CURB WITH 1 SACK/TON CEMENT STABILIZED SAND.

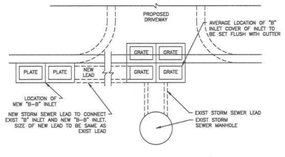


SIDE VIEW



SIDE VIEW

STEP 3: CONSTRUCT NEW TYPE "B-B" INLET ON CURB RETURN OF PROPOSED DRIVEWAY



STORM SEWER TYPE "B" INLET RELOCATION
NTS

FIRM INFORMATION	ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02632-04 THROUGH 05

APPROVED BY: CITY ENGINEER	APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR	

EFFECTIVE DATE: JUL-01-2019
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SHEET NO.

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-62,34

STATE OF TEXAS
MARC W. OLDWARD
98672
LICENSED PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

STORM SEWER DETAILS

SHEET 3 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 23 OF 111	DRAWING SCALE

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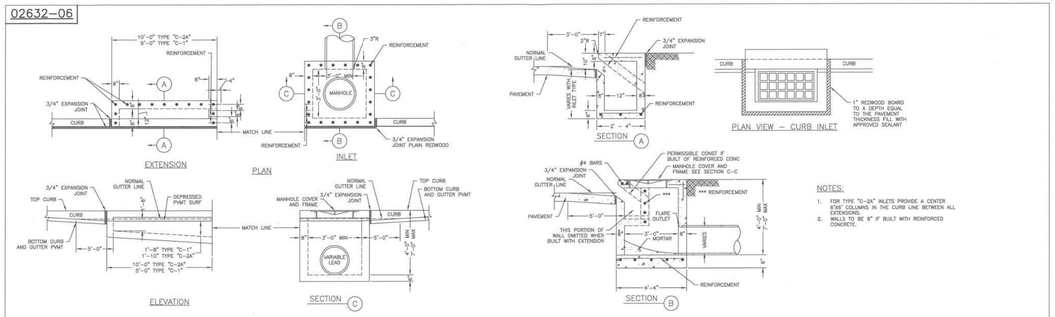
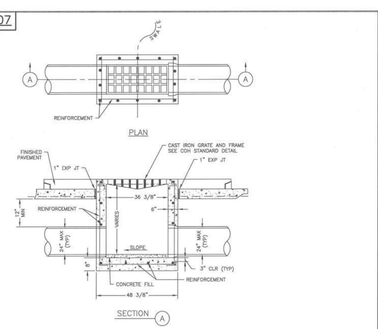


NOTES:
1. FOR TYPE "C-2A" INLETS PROVIDE A CENTER 6"X6" COLUMN IN THE CURB LINE BETWEEN ALL EXTENSIONS.
2. WALLS TO BE 8" F' BUILT WITH REINFORCED CONCRETE.

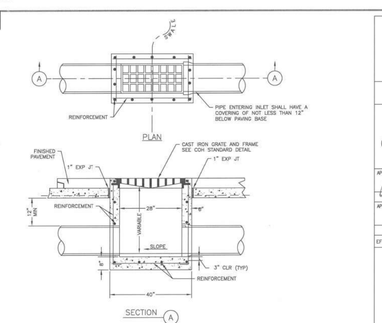
STORM SEWER TYPE "C-1", "C-2" AND "C-2A" INLET
NTS

02632-07



STORM SEWER TYPE "D" INLET
NTS

02632-08



STORM SEWER TYPE "D-1" INLET
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02632-06 THROUGH 08

APPROVED BY: CITY ENGINEER | APPROVED BY: DEPUTY DIRECTOR
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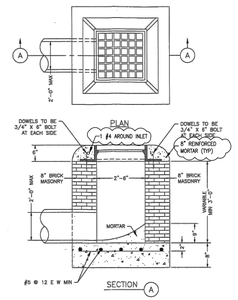
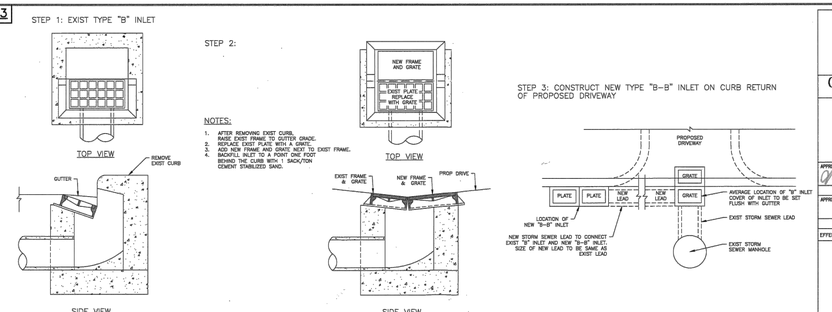
COH IS PHASING OUT BRICK. NEW DETAILS TO BE POSTED END OF 2019



STORM SEWER TYPE "A" GRATE INLET
NTS

02632-03



NOTES:
1. AFTER REMOVING EXIST CURB, RAISE EXIST FRAME TO GUTTER GRADE.
2. REPLACE EXIST PLATE WITH A GRATE.
3. ADD NEW FRAME AND GRATE NEXT TO EXIST FRAME.
4. BACKFILL INLET TO A POINT ONE FOOT BEHIND THE CURB WITH 1 SACK/TON CEMENT STABILIZED SAND.

STORM SEWER TYPE "B" INLET RELOCATION
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02632-01 AND 03

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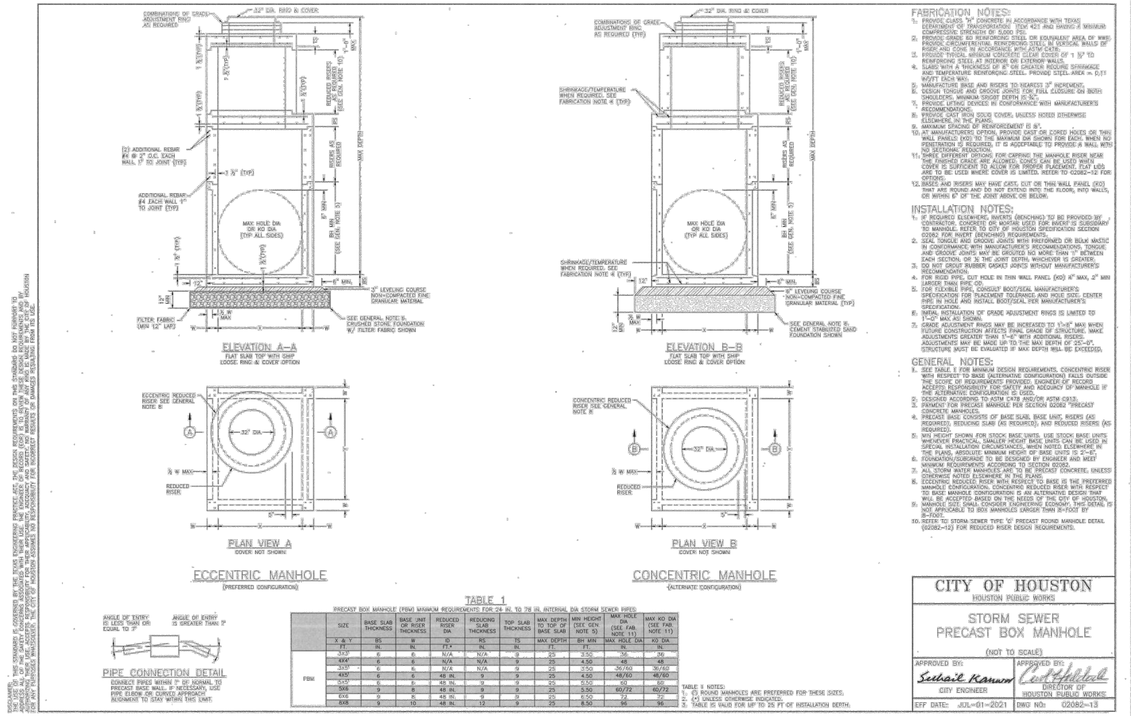

ECCENTRIC MANHOLE
(PREFERRED CONFIGURATION)

CONCENTRIC MANHOLE
(ALTERNATE CONFIGURATION)

PIPE CONNECTION DETAIL

TABLE 1
PRECAST BOX MANHOLE (PBM) MINIMUM REQUIREMENTS FOR 24 IN. TO 78 IN. INTERNAL DIA STORM SEWER PIPES

	SIZE	BASE SLAB THICKNESS	BASE UNIT WALL THICKNESS	REDUCED RISER DIA.	REDUCING SLAB THICKNESS	TOP SLAB THICKNESS	MAX DEPTH OF BASE SLAB	MIN HEIGHT OF RISER (NOTE 5)	MAX HEIGHT OF RISER	MAX MANHOLE DIA (SEE FAB. NOTE 11)	MAX KO DIA (SEE FAB. NOTE 11)
	X & Y	B5	W	D	R5	T5	MAX. DEPTH	BH MIN	MAX. HOLE DIA	KO DIA	
	FT.	IN.	IN.	FT-IN.	IN.	IN.	FT.	FT.	IN.	IN.	
PBM	2X2	6	6	N/A	N/A	9	25	3.50	36	36	
	4X4	6	6	N/A	N/A	9	25	4.50	48	48	
	3X5	6	6	N/A	N/A	9	25	3.50	36/60	36/60	
	4X5	6	6	48 IN.	9	9	25	4.50	48/60	48/60	
	5X5	9	8	48 IN.	9	9	25	5.00	60	60	
	5X6	9	8	48 IN.	9	9	25	5.50	60/72	60/72	
	6X6	9	8	48 IN.	9	9	25	6.50	72	72	
	8X8	9	10	48 IN.	12	9	25	8.50	96	96	

TABLE 1 NOTES:
1. (*) ROUND MANHOLES ARE PREFERRED FOR THESE SIZES.
2. (+) UNLESS OTHERWISE INDICATED.
3. TABLE IS VALID FOR UP TO 25 FT-OF INSTALLATION DEPTH.

FABRICATION NOTES:
1. PROVIDE CLASS "H" CONCRETE IN ACCORDANCE WITH TEXAS DEPARTMENT OF TRANSPORTATION ITEM 421 AND HAVING A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
2. PROVIDE #4 BARS AT 12" MAX SPACING OR AN EQUIVALENT AREA OF WWF/ PROVIDE CIRCUMFERENTIAL REINFORCING STEEL IN VERTICAL WALLS OF RISER AND CONE IN ACCORDANCE WITH ASTM C478.
3. PROVIDE TYPICAL MINIMUM CONCRETE CLEAR COVER OF 1 1/2" TO REINFORCING STEEL AT INTERIOR OR EXTERIOR WALLS.
4. SLABS WITH A THICKNESS OF 8" OR GREATER REQUIRE SHRINKAGE AND TEMPERATURE REINFORCING STEEL. PROVIDE STEEL AREA = 0.11 SQ. IN. PER FT.
5. MANUFACTURE BASE AND RISERS TO NEAREST 3" INCREMENT.
6. DESIGN TONGUE AND GROOVE JOINTS FOR FULL CLOSURE ON BUSH-SHOULDERS. MINIMUM STRAIGHT DEPTH OF 3/4".
7. PROVIDE LIFTING DEVICES IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE CAST IRON SOLID COVER, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS.
9. MAXIMUM SPACING OF REINFORCEMENT IS 6".
10. AT MANUFACTURER'S OPTION, PROVIDE CAST OR CORED HOLES OR THIN WALL PANELS (KO) TO THE MAXIMUM DIA SHOWN FOR EACH. WHEN NO PENETRATION IS REQUIRED, IT IS ACCEPTABLE TO PROVIDE A WALL WITH NO HOLE OR KO.
11. THREE DIFFERENT OPTIONS EXIST FOR CAPPING THE MANHOLE RISER WHERE THE FINISHED GRADE ARE ALLOWED. CONES CAN BE USED WHERE COVER IS SUFFICIENT TO ALLOW FOR PROPER PLACEMENT. FLAT LIDS ARE TO BE USED WHERE COVER IS LIMITED. REFER TO 02082-12 FOR DETAILS.
12. BASES AND RISERS MAY HAVE CAST, CUT OR THIN WALL PANEL (KO) THAT ARE ROUND AND DO NOT EXTEND INTO THE FLOORS INTO WALLS, OR WITHIN 6" OF THE JOINT AROUND OR BELOW.

INSTALLATION NOTES:
1. IF REQUIRED ELSEWHERE, INVERTS (BENCHING) TO BE PROVIDED BY CONTRACTOR. CONCRETE OR MORTAR USED FOR INVERT IS SUBSEQUENT TO MANHOLE. REFER TO CITY OF HOUSTON SPECIFICATION SECTION 02561 FOR INVERT (BENCHING) REQUIREMENTS.
2. SEAL TONGUE AND GROOVE JOINTS WITH PREFORMED OR BULK MASTIC JOINT SEALANT. SEAL ALL JOINTS WITH MASTIC SEALANT. TONGUE AND GROOVE JOINTS MAY BE GROUTED NO MORE THAN 1" BETWEEN EACH SECTION, OR 3/4 THE JOINT DEPTH, WHICHEVER IS GREATER.
3. DO NOT GROUT RUBBER GASKET JOINTS WITHOUT MANUFACTURER'S RECOMMENDATION.
4. FOR RISER PIPE, CUT HOLE IN THIN WALL PANEL (KO) 4" MAX, 2" MIN LARGER THAN PIPE OD.
5. FOR RISER PIPE, CONSULT BOOT/SEAL MANUFACTURER'S SPECIFICATION FOR PLACEMENT TOLERANCE AND HOLE SIZE. CENTER PIPE IN HOLE AND INSTALL BOOT/SEAL PER MANUFACTURER'S SPECIFICATION.
6. INITIAL INSTALLATION OF GRADE ADJUSTMENT RINGS IS LIMITED TO 1'-0" MAX AS SHOWN.
7. GRADE ADJUSTMENT RINGS MAY BE INCREASED TO 1'-6" MAX WHEN SPECIFICALLY DESIGNED FOR THE PURPOSE. TO ACCOMPLISH, MAKE ADJUSTMENTS GREATER THAN 1'-0" WITH ADDITIONAL RISERS. ADJUSTMENTS MAY BE MADE UP TO THE MAX DEPTH OF 25'-0". STRUCTURE MUST BE EVALUATED IF MAX DEPTH WILL BE EXCEEDED.

GENERAL NOTES:
1. SEE TABLE 1 FOR MINIMUM DESIGN REQUIREMENTS. CONCENTRIC RISER WITH RESPECT TO BASE (ALTERNATIVE CONFIGURATION) FALLS OUTSIDE THE SCOPE OF REQUIREMENTS PROVIDED. ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR THE ADEQUACY OF MANHOLE IF THE ALTERNATIVE CONFIGURATION IS USED.
2. DESIGNED ACCORDING TO ASTM C478 AND/OR ASTM C913.
3. PAYMENT FOR PRECAST MANHOLE PER SECTION 02082 "PRECAST CONCRETE MANHOLES.
4. PRECAST BASE CONSISTS OF BASE SLAB, BASE UNIT, RISERS (AS REQUIRED), REDUCING SLAB (AS REQUIRED), AND REDUCED RISERS (AS REQUIRED).
5. BH MIN HEIGHT SHOWN FOR STOCK BASE UNITS. USE STOCK BASE UNITS WHENEVER PRACTICAL. SMALLER HEIGHT BASE UNITS CAN BE USED IN SPECIAL INSTALLATION CIRCUMSTANCES, WHEN NOTED ELSEWHERE IN THE PLANS. ABSOLUTE MINIMUM HEIGHT OF BASE UNITS IS 2'-6".
6. FOUNDATION/SUBGRADE TO BE DESIGNED BY ENGINEER AND MEET MINIMUM REQUIREMENTS ACCORDING TO SECTION 02082.
7. ALL EXPOSED CONCRETE SURFACES TO BE CLASS "H" CONCRETE, UNLESS OTHERWISE NOTED ELSEWHERE IN THE PLANS.
8. ECCENTRIC REDUCED RISER WITH RESPECT TO BASE IS THE PREFERRED MANHOLE CONFIGURATION. CONCENTRIC REDUCED RISER WITH RESPECT TO BASE MANHOLE CONFIGURATION IS AN ALTERNATIVE DESIGN THAT MAY BE USED WHERE THE ECCENTRIC RISER DESIGN IS NOT FEASIBLE.
9. MANHOLE SIZE SHALL CONSIDER UTILITY CONFLICTS. THIS DETAIL IS NOT APPLICABLE TO BOX MANHOLES LARGER THAN 8'-FOOT BY 8'-FOOT.
10. REFER TO STORM SEWER TYPE 'C' PRECAST ROUND MANHOLE DETAIL (02082-12) FOR REDUCED RISER DESIGN REQUIREMENTS.

DISCLAIMER:
THE ENGINEER IS ENGAGED BY THE OWNER TO PERFORM SERVICES AS PER OWNER REQUIREMENTS ON THE PROJECTS IN THE SCOPE OF WORK. ALL OTHER SERVICES PERFORMED BY OTHERS WITH THEIR OWN CONTRACTS WITH OWNER ARE INDEPENDENT OF AND DISCONNECTED FROM THE ENGINEER'S SERVICES. THE ENGINEER'S SERVICES ARE PERFORMED WITH THE REASONABLE SKILL AND CARE EXERCISED BY REPUTABLE ENGINEERS PERFORMING SIMILAR SERVICES IN THE SAME LOCALITY AT THE SAME TIME. NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
PRECAST BOX MANHOLE

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2021 | DWG NO: 02082-13

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
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FB NO. P-6234

STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER
07/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

STORM SEWER DETAILS

SHEET 4 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 24 OF 111	DRAWING SCALE

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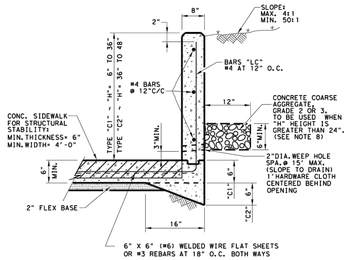

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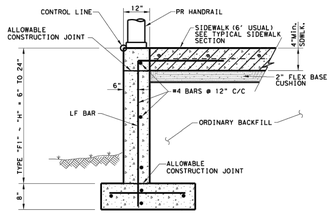
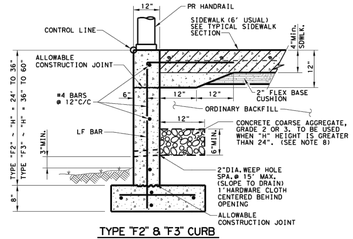


TYPE "F1" CURB



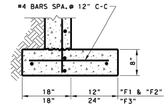
BAR "LC"



TYPE "F2" & "F3" CURB



BAR "LF"



FOOTING DETAIL

CLASS C CONCRETE PAID UNDER ITEM 531, SIDEWALK. (NOTE, ADDITIONAL CONCRETE TO MEET THE THICKENED SECTIONS REQUIRED BY THESE DETAILS IS SUBSIDIARY TO ITEM 531, CURB.)

GENERAL NOTES:

1. CONCRETE FOR CURB TYPE F AND C SHOWN SHALL MEET THE MINIMUM SPECIFICATION REQUIREMENTS OF CLASS "C" CONCRETE PER ITEM 421
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. WHERE CONCRETE CURB I SPLACED ON EXISTING CONCRETE PAVEMENT, THE PAVEMENT SHALL BE DRILLED AND THE REINFORCING BARS GROUTED IN PLACE.
4. EXPANSION AND CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH PAVEMENT JOINTS IN ALL CURBS AND CURB AND GUTTER ADJACENT TO JOINTED CONCRETE PAVEMENT. WHERE PLACEMENT OF CURB OR CURB AND GUTTER IS NOT ADJACENT TO CONCRETE PAVEMENT, EXPANSION JOINTS SHALL BE PROVIDED AT STRUCTURES, CURB RETURNS AT STREETS, AND AT LOCATIONS DIRECTED BY THE ENGINEER.
5. VERTICAL AND HORIZONTAL DOWEL BARS AND TRANSVERSE REINFORCING BARS SHALL BE PLACED AT 4 FEET C-C, UNLESS OTHERWISE SHOWN.
6. ONE-HALF INCH EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB OR CURB AND GUTTER IS ADJACENT TO SIDEWALK OR RIPRAP. THIS IS SUBSIDIARY TO THE CURB, ITEM 529.
7. UNTIL THE SIDEWALK IS COMPLETE, LATERAL SUPPORT FOR THE "F" CURBS WILL BE REQUIRED.
8. IF AGGREGATE IS REQUIRED PER THE DETAIL, IT IS PAID AS SUBSIDIARY TO THE CURB, ITEM 529.

DESIGN SOIL PARAMETERS:
Soil Unit Wt.= 120 pcf
Phi = 30 Degrees
Cohesion = 50 psf
Min. PI = 15
Max. PI = 30
SURCHARGE:
TYPE F CURB q = 2' Adjacent to sidewalk
Max. slope behind TYPE C Curb = 4:1
Min. Factor of Safety against sliding is 1.5.
Designed in accordance with current AASHTO Standards and Interim Specifications.

© 2020

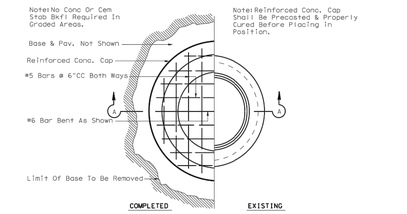
Texas Department of Transportation
San Antonio District

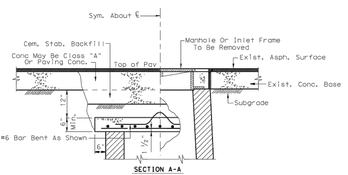
MISCELLANEOUS CURB AND SIDEWALK DETAILS

San Antonio District Standard
Sheet (2 of 2)

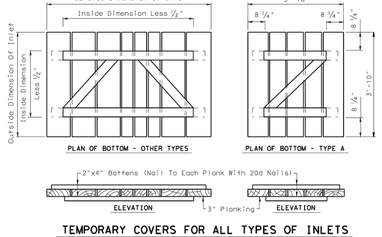
FILE: T:\Engdata\Standards\MISCurbDet11.dgn				PREPARED BY AND FOR USE OF TxDoT.			
ORIGINAL DRAWING DATE:		DATE REVISED		FEDERAL AID PROJECT #			SHEET
09-01-00	REVISIONS		G				
07-18-13 widen/h width equals 6" wher		DISTRICT	FED.RDS.	PROJECT NO.			
07-22-20 5' curb + curb w/ conc pvmt det.		HOU	6				
		COUNTY		CONTROL	SECT	JOB	HIGHWAY

No.	Date	Revisions	App.

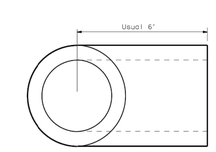




DETAIL SHOWING METHOD OF CAPPING ABANDONED MANHOLES OR INLETS (GRADED OR PAVED AREAS)

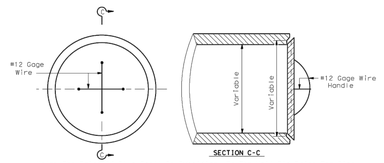


TEMPORARY COVERS FOR ALL TYPES OF INLETS



Note: Jointing Material Shall Conform To Requirements Of Item "Reinforced Concrete Pipe." Material For Tees Shall Conform To Requirements Of Item "Reinforced Concrete Pipe." Payment For Tee To Be In Accordance With Item "Reinforced Concrete Pipe."

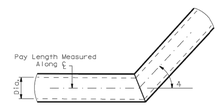
PRECAST STORM SEWER TEE



Note: The Price Of Plug Shall Be Subsidiary To The Unit Bid Price For Pipe Sewer Or RCP. Mortar Joints To Be Used As Directed By The Engineer. Removal Of The Existing Plugs For Storm Sewer Or RCP Conns. Shall Be Considered Incidental To Item "Excavation And Backfill For Structures."

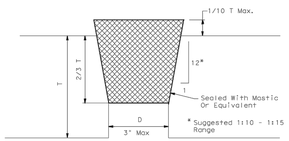
Concrete Plug For End Of Pipe Culvert Or Sewer

CONCRETE PLUG FOR PIPE



BENDING DETAIL

Note: Bending Of Proposed Pipe Sewer Or RCP In A Vertical & /Or Horizontal Plane Shall Be Accomplished By The Use Of A "Pipe Collar" Or A "Precast Elbow", As Approved By The Engineer. Price Of "Pipe Collar" Or, "Precast Elbow" Shall Be Subsidiary To The Unit Prices Bid For Item Reinforced Concrete Pipe. Pay Length Measurement To Be Along Horizontal ℄ & Horizontal Plane Of Pipes.

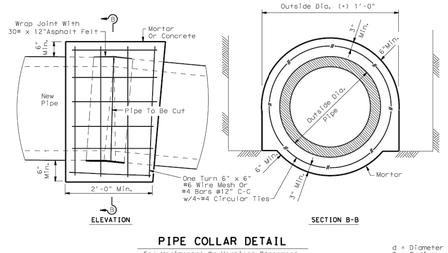


T = Wall Thickness On Top Of Box Or Pipe
D = Diameter Of Lifting Hole

Minimum Length Of Plug Is 2/3 T +/-
Minimum Diameter At Bottom Of Plug = D - ½"
Maximum 1/10 T Of Plug Not Seated In Lifting Hole

Note: The Plug Shall Be Cast With The Same Taper As The Lifting Hole.

DETAIL OF PLUG FOR LIFTING HOLES IN RCB AND RCP



PIPE COLLAR DETAIL
For Horizontal Or Vertical Placement

d = Diameter
R = Radius

Texas Department of Transportation
Houston District (Bridge)

MISCELLANEOUS SEWER DETAILS

MSD

FILE: STDDTL.DGN	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK:
© TxDOT Mar 2004	DISTRICT	FED.RDS.	PROJECT NO.	SHEET
REVISIONS	HOU	6		
3/2013 2014 Specs	COUNTY		CONTROL	SECT	JOB	HIGHWAY

STDDTL.DGN

Lockwood, Andrews & Newnam, Inc.
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2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-62,34

STATE OF TEXAS
MARC WOLDEMAR
96672
LICENSED
PROFESSIONAL ENGINEER
07/20/2023

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TXDOT DETAILS

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 25 OF 111	DRAWING SCALE

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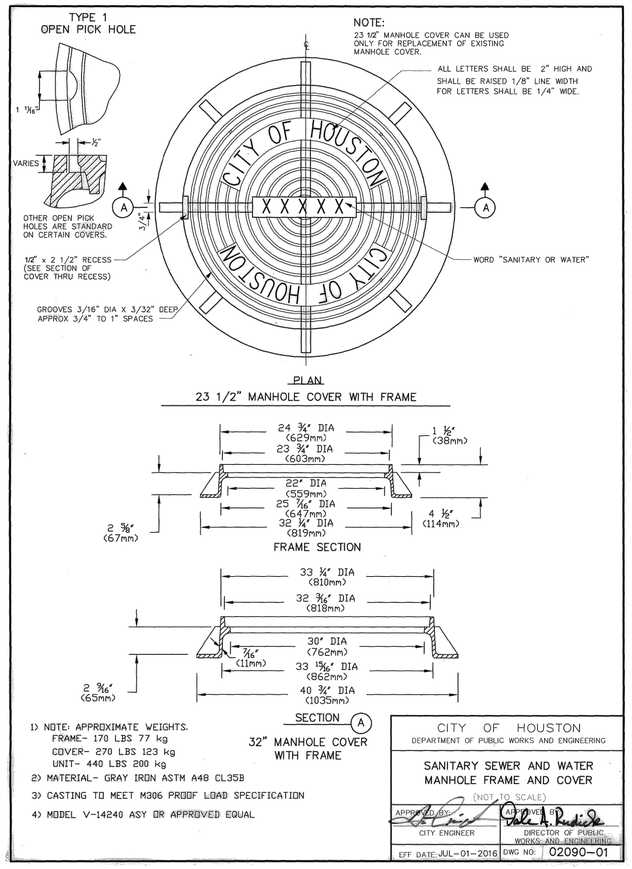


1) NOTE: APPROXIMATE WEIGHTS.
FRAME- 170 LBS 77 kg
COVER- 270 LBS 123 kg
UNIT- 440 LBS 200 kg

2) MATERIAL- GRAY IRON ASTM A48 CL35B

3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION

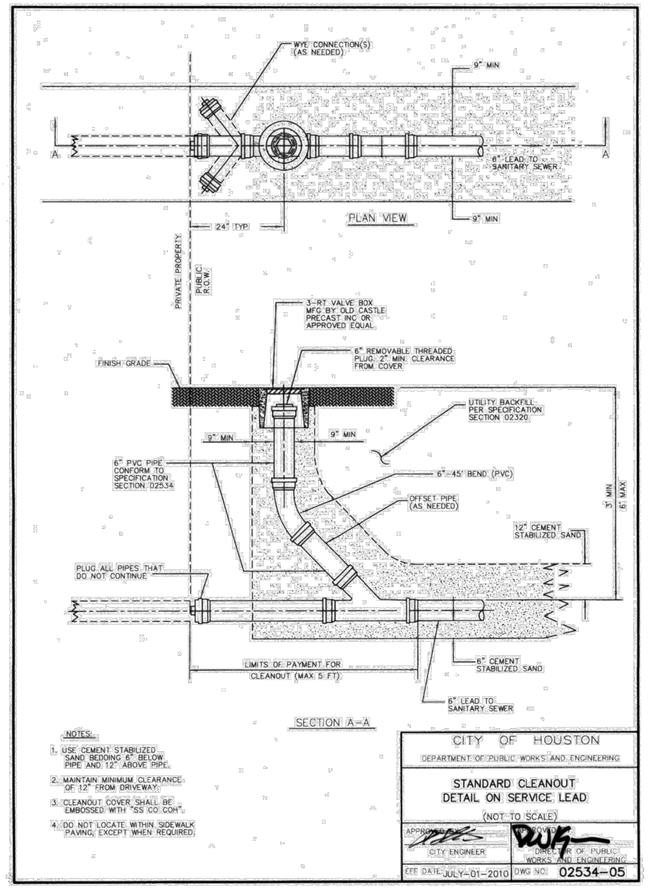
4) MODEL V-14240 ASY OR APPROVED EQUAL

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER AND WATER MANHOLE FRAME AND COVER

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02090-01



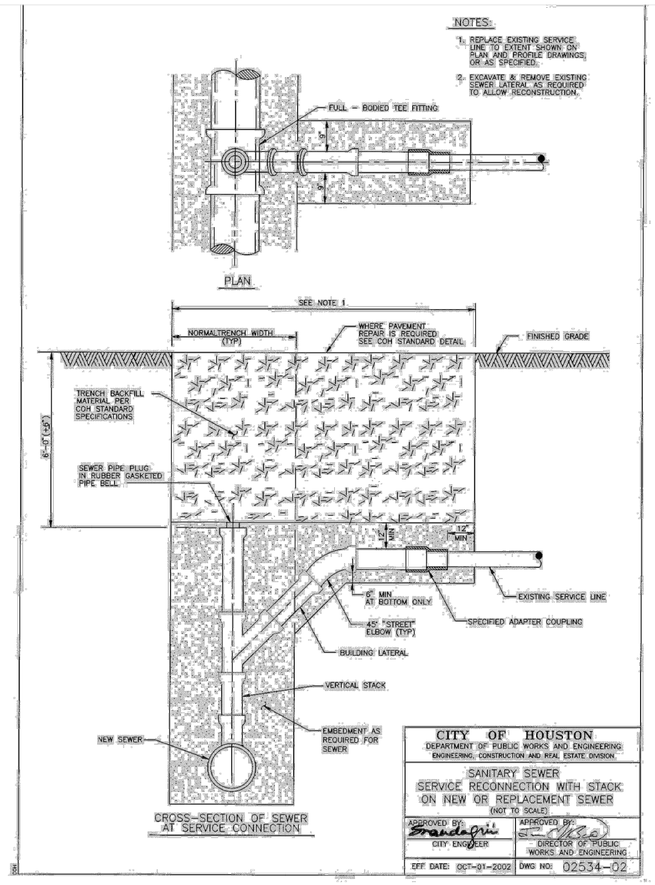
NOTES:
1. USE CEMENT STABILIZED SAND BEDDING 6" BELOW PIPE AND 12" ABOVE PIPE.
2. MAINTAIN MINIMUM CLEARANCE OF 12" FROM DRIVEWAY.
3. CLEANOUT COVER SHALL BE EMBOSSED WITH "SS CO COH".
4. DO NOT LOCATE WITHIN SIDEWALK PAVING, EXCEPT WHEN REQUIRED.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD CLEANOUT DETAIL ON SERVICE LEAD

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 02534-05



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER SERVICE RECONNECTION WITH STACK ON NEW OR REPLACEMENT SEWER

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02534-02

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
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KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SANITARY SEWER DETAILS

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 26 OF 111	DRAWING SCALE

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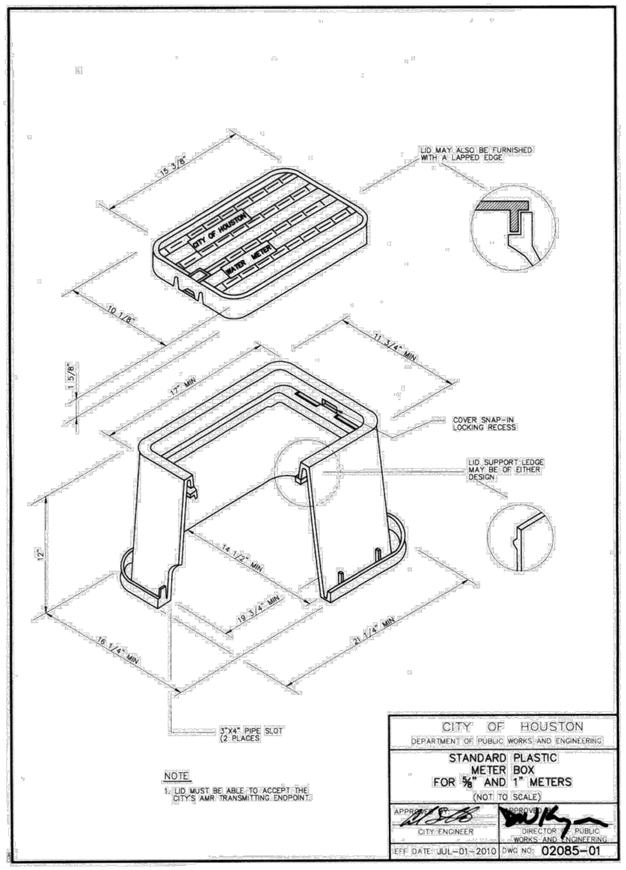


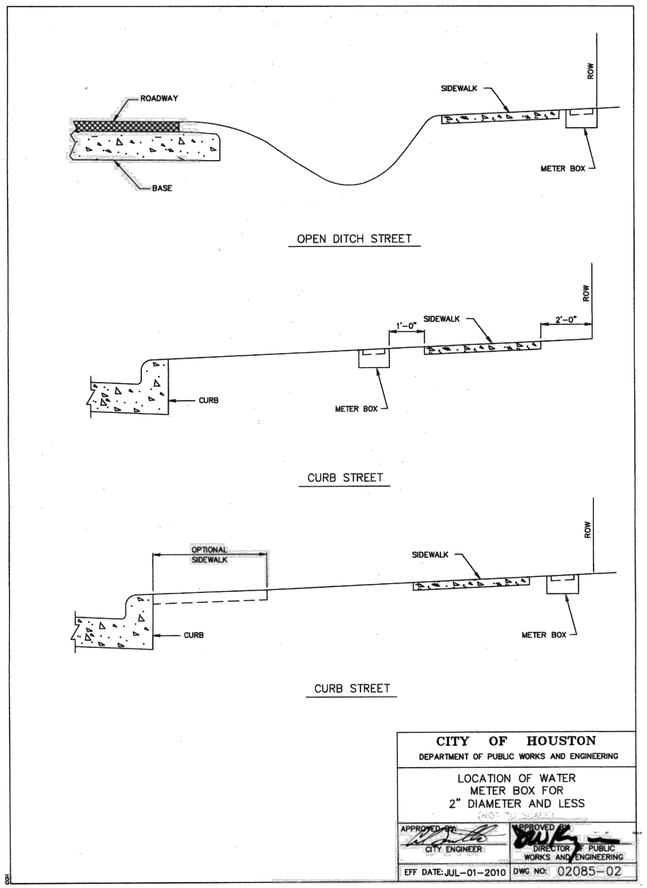
NOTE

1. LID MUST BE ABLE TO ACCEPT THE CITY'S AMR TRANSMITTING ENDPOINT.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD PLASTIC METER BOX FOR ¾" AND 1" METERS
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010 | DWG NO: 02085-01



OPEN DITCH STREET

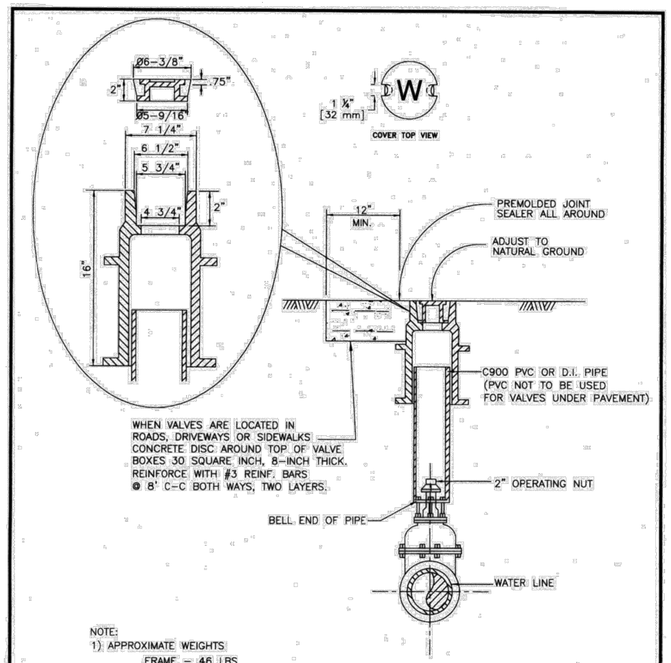
CURB STREET

CURB STREET

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

LOCATION OF WATER METER BOX FOR 2" DIAMETER AND LESS
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010 | DWG NO: 02085-02



WHEN VALVES ARE LOCATED IN ROADS, DRIVEWAYS OR SIDEWALKS CONCRETE DISC AROUND TOP OF VALVE BOXES 30 SQUARE INCH, 8-INCH THICK, REINFORCE WITH #3 REINF. BARS @ 8' C-C BOTH WAYS, TWO LAYERS.

NOTE:
1) APPROXIMATE WEIGHTS
FRAME - 46 LBS
COVER - 10 LBS
2) MATERIAL - GRAY IRON ASTM A48 CL35B

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

VALVE BOX DETAIL
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: JULY 01, 2010 | DWG. NO: 02085-03

No.	Date	Revisions	App.

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SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS — MARK WOODWARD — 96072 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

WATER LINE DETAILS

SHEET 1 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
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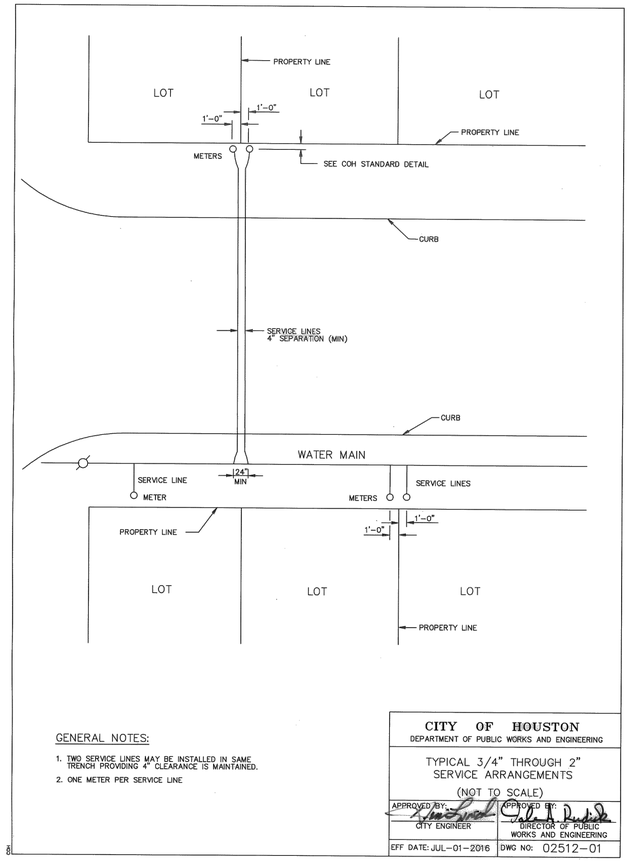


GENERAL NOTES:

1. TWO SERVICE LINES MAY BE INSTALLED IN SAME TRENCH PROVIDING 4" CLEARANCE IS MAINTAINED.
2. ONE METER PER SERVICE LINE

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

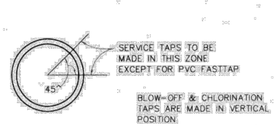
TYPICAL 3/4" THROUGH 2" SERVICE ARRANGEMENTS
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02512-01

PIPE TAPPING SCHEDULE

WATER MAIN TYPE AND DIAMETER	SERVICE SIZE 3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
4" ASBESTOS (EXISTING) CEMENT	WBSS	WBSS	DSS, WBSS	DSS, WBSS
4" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
16" AND UP CAST IRON OR DUCTILE IRON	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP ASBESTOS (EXISTING) CEMENT	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP PVC (AWWA C900)	DWBSS	DWBSS	DWBSS	DWBSS

DSS = DUAL STRAP SADDLES
WBSS = WIDE BAND STRAP SADDLES
DWBSS = DUAL WIDE BAND STRAP SADDLES



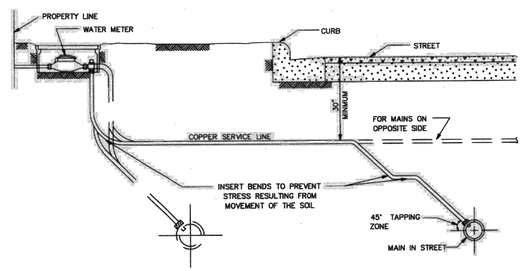


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

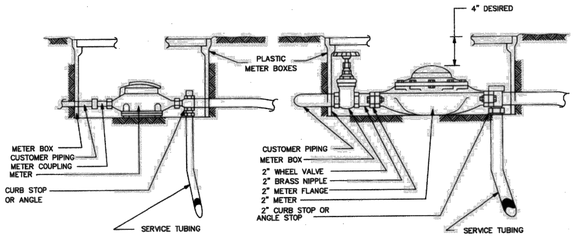
SERVICE TAPS
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010	DWG NO: 02512-02

NOTES:
1 1/2" METER SET IS SAME AS 2" EXCEPT WHEEL VALVE IS NOT REQUIRED.



TYPICAL SECTION SERVICE LINE



5/8", 3/4" AND 1" METER SET

2" METER SET

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TYPICAL METER SETTINGS
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 02526-01

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96012
LICENSED
PROFESSIONAL ENGINEER
07/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

WATER LINE DETAILS

SHEET 2 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 28 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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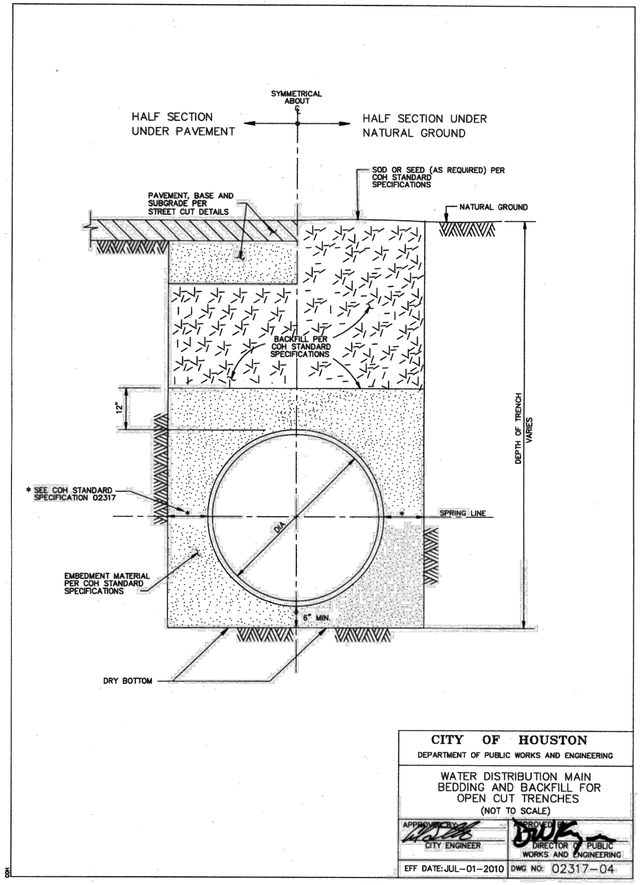
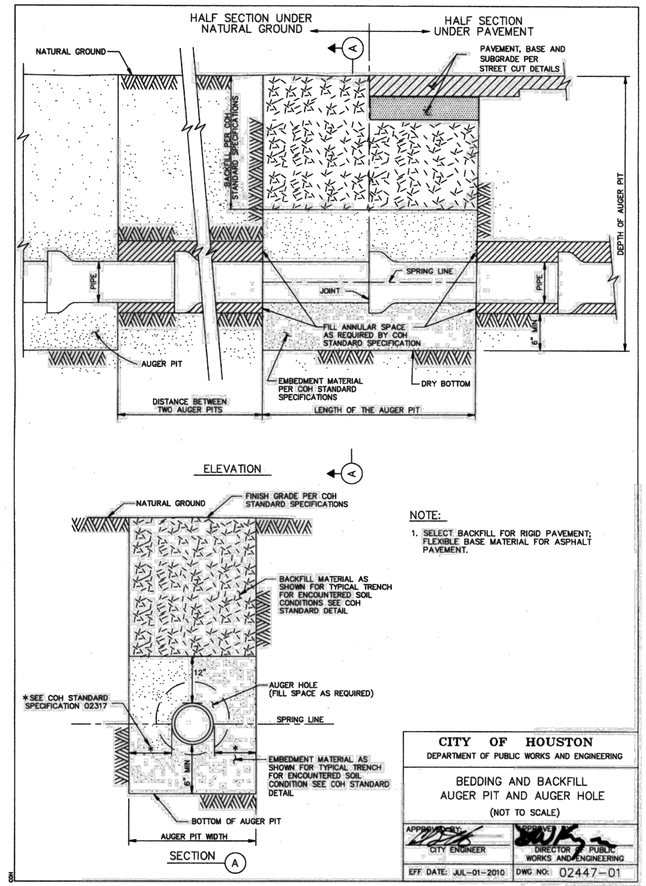


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER DISTRIBUTION MAIN
BEDDING AND BACKFILL FOR
OPEN CUT TRENCHES
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER
APPROVED: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2010 DWG NO: 02317-04



NOTE:
1. SELECT BACKFILL FOR RIGID PAVEMENT; FLEXIBLE BASE MATERIAL FOR ASPHALT PAVEMENT.

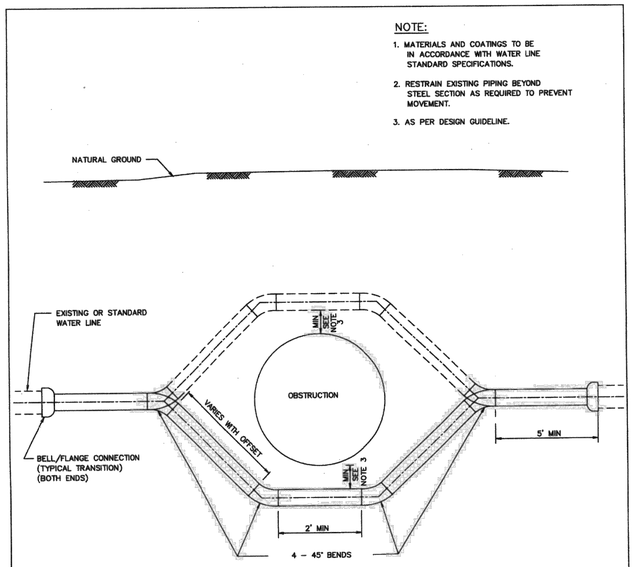
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

BEDDING AND BACKFILL
AUGER PIT AND AUGER HOLE
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER
APPROVED: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2010 DWG NO: 02447-01

NOTE:
1. MATERIALS AND COATINGS TO BE IN ACCORDANCE WITH WATER LINE STANDARD SPECIFICATIONS.
2. RESTRAIN EXISTING PIPING BEYOND STEEL SECTION AS REQUIRED TO PREVENT MOVEMENT.
3. AS PER DESIGN GUIDELINE.



PIPE OFFSET ALTERNATES

1. DUCTILE IRON PIPE PRESSURE 250 PSI WITH APPROVED RESTRAINED JOINTS.
2. PVC PIPE WITH INTEGRAL RESTRAINED JOINT SYSTEM, OR DUCTILE – IRON RESTRIINED JOINT FITTINGS, EPOXY LINED AND COATED. USE 250 PSI AWWA C900 DR 14 FOR PVC RESTRAINED JOINTS.
3. PVC NOT ALLOWED FOR GREATER THAN 20 FT OF COVER OR FOR DIAMETER LARGER THAN 20 IN.
4. USE ONLY DUCTILE IRON AND PVC PRODUCTS LISTED ON OCE DIVISION APPROVED PRODUCTS LIST AND IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TYPICAL STEEL PIPE OFFSET
SECTION FOR WATER LINES
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER
APPROVED: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 02511-01

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
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FB NO. P-62,34

STATE OF TEXAS
MARC WOODWARD
96012
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

WATER LINE DETAILS

SHEET 3 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 29 OF 111	DRAWING SCALE

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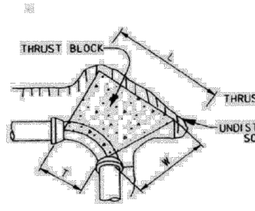
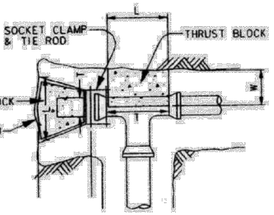
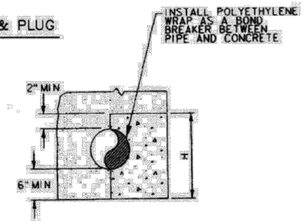


90° BEND

(45° BENDS SIMILAR)



TEE & PLUG



PIPE
CROSS SECTION

MINIMUM BLOCKING DIMENSION IN INCHES												
PIPE SIZE	90° BEND				45° BEND				TEE/PLUG			
	W	H	L	T	W	H	L	T	W	H	L	T
4"	6	12	14	10	6	8	11	8	6	10	12	12
6"	8	14	26	12	8	14	14	12	8	14	19	19
8"	10	16	40	16	10	18	20	16	10	18	26	26
10"	12	24	42	18	12	22	25	18	12	24	30	30
12"	14	36	40	30	14	26	30	22	14	26	40	40

CORRECTION FACTORS		
SOIL TYPE	SOIL BEARING STRENGTH S_b (lb/ft²)	MULTIPLY "L" AND "H" BY
SOFT CLAY	1000	1.73
SILT	1500	1.41
SANDY SILT	3000	1.00
SAND	4000	0.87
SANDY CLAY	6000	0.71
HARD CLAY	9000	0.58

NOTES:

1. DEPTH "W" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE.
2. BLOCKING MUST BE PLACED AGAINST UNDISTURBED EARTH. WHERE THIS IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY.
3. PROVIDE CONCRETE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 03315 – CONCRETE FOR UTILITY CONSTRUCTION.
4. BLOCKING DIMENSIONS SHOWN ARE BASED ON 3000 PSF SOIL BEARING STRENGTH AND 125 PSI INTERNAL WATER PRESSURE. FOR OTHER SOIL CONDITIONS, MULTIPLY DIMENSIONS "L" AND "H" BY THE APPROPRIATE CORRECTION FACTOR.

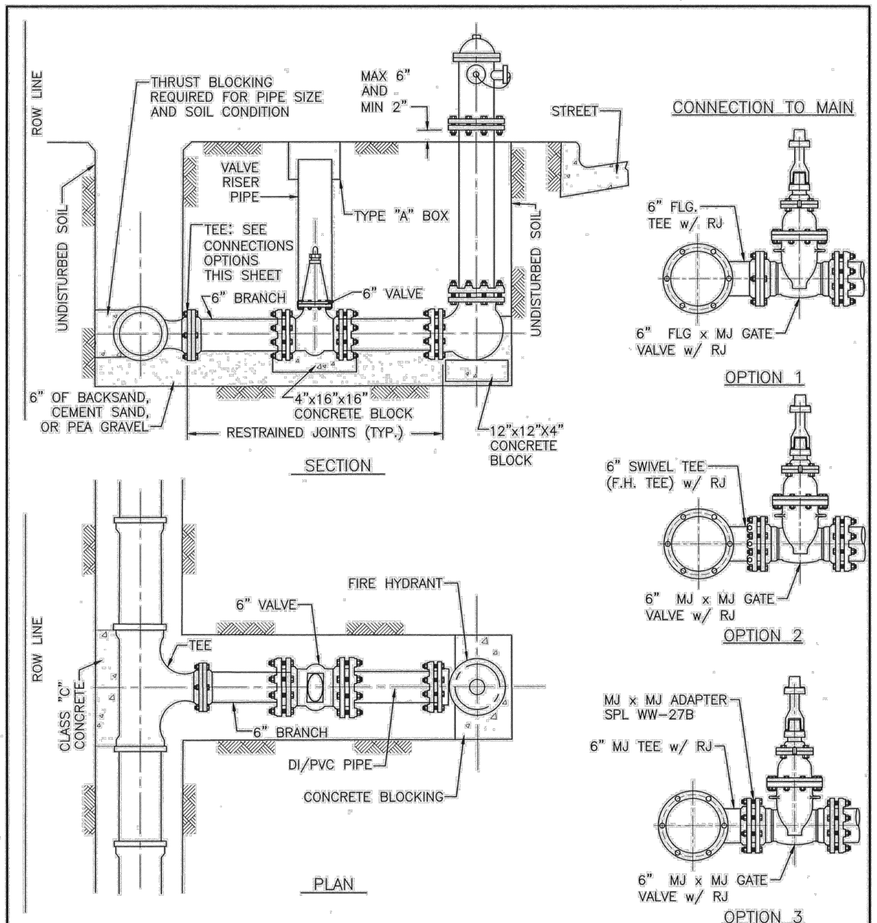
CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

THRUST BLOCK DETAIL FOR WATER LINES (4-INCH TO 12 INCH)

(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 02511-02



NOTES:

1. LOCATE FIRE HYDRANTS AT POINT OF CURVATURE (PC) OR POINT OF TANGENCY (PT) OF THE INTERSECTION CURB RADIUS, 3 FEET BEHIND CURB OR PROJECTED FUTURE CURB.
2. ON OPEN-DITCH ROADWAYS, SET THE FIRE HYDRANTS WITH IN 5 FEET OF RIGHT-OF-WAY LINES.
3. FIRE HYDRANT STEAMER NOZZLE SHALL FACE THE STREET.
4. LOCATE HYDRANT VALVE IMMEDIATELY ADJACENT TO WATER LINE.
5. ALL PIPING TO BE RESTRAINED JOINTS.

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

STANDARD FIRE HYDRANT DETAIL

(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
Suhail Kanwar	
CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2021	DWG NO: 02520-01

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77002

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOOD WARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

WATER LINE DETAILS

SHEET 4 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 30 OF 111	DRAWING SCALE

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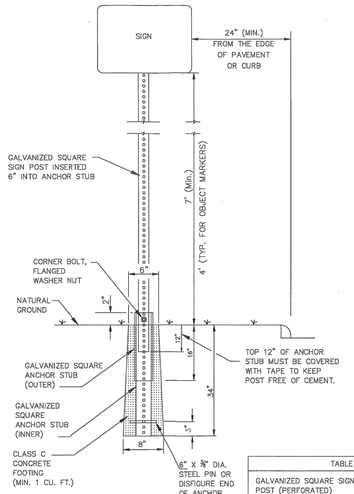
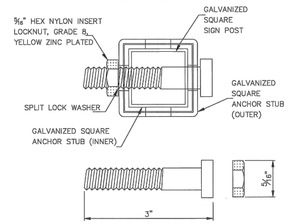
GENERAL NOTES

1. THE EXISTING SIGNS LOCATED ON PUBLIC CONSTRUCTION SITE ARE THE PROPERTY OF THE CITY OF HOUSTON. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO THE TRAFFIC OPERATIONS CENTER (2200 PATTERSON). THE GENERAL TRAFFIC SUPERINTENDENT (832-395-6728/6756) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.
2. AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS DIVISION OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENT (832-395-6728/6756) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER ONLY CITY SIGNS AND POSTS IDENTIFIED BY TRAFFIC OPERATIONS DIVISION TO 2200 PATTERSON.
3. PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE CITY INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
4. ALL GROUND MOUNTED STOP SIGNS, WARNING SIGNS, AND OTHER REGULATORY SIGNS SHALL USE AT A MINIMUM HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING.
5. ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.
6. ALL OTHER SIGNS SHALL USE SUPER ENGINEER GRADE SHEETING.
7. ALL BLANKS TO BE INSTALLED SHALL BE OF THE 3000, 5000 OR 6000 SERIES ALUMINUM WITH A YEILD STRENGTH OF 3003-H14 ALLOY.
8. "T" DENOTES THICKNESS OF SIGN BLANKS.
9. ALL HOLES SHALL BE ⅜" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND / OR ROUGH EDGES.
10. SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL ON SHEET 01509-03.
11. ALL SIGN BLANK ARE TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.
12. ALL DETAILS ARE NOT TO SCALE.
13. ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND STANDARD HIGHWAY SIGNS LATEST EDITION.
14. REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED PER PLANS, SHALL BE AT THE CONTRACTOR'S EXPENSE.

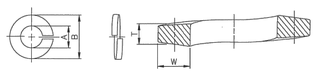
TYPICAL GROUND SIGN INSTALLATION PERFORATED SQUARE METAL TUBING



CORNER BOLT



5/16" SPLIT LOCK WASHER, HIGH ALLOY MECHANICAL DEPOSITED YELLOW SINK



NOMINAL WASHER SIZE	A INSIDE DIAMETER MAX	A INSIDE DIAMETER MIN	B OUTSIDE DIAMETER MAX	T MEAN SECTION (Thickness)	W SECTION WIDTH
⅜"	0.322"	0.314"	0.583"	0.078"	0.125"

DIMENSIONS: ASME B18.21.1
MATERIAL: ALLOY STEEL PER ASME B18.211
FINISH: MECHANICAL ZINC PER ASME B695, CLASS 5, TYPE 2 (YELLOW)

TABLE A	
GALVANIZED SQUARE SIGN POST (PERFORATED)	1-3/4" x 1-3/4" (14 GAUGE)
GALVANIZED SQUARE ANCHOR STUB (PERFORATED) (INNER)	2" x 2" x 36" (14 GAUGE)
GALVANIZED SQUARE ANCHOR STUB (PERFORATED) (OUTER)	2¼" x 2¼" x 18" (14 GAUGE)

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

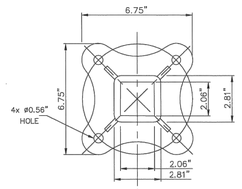
GENERAL NOTES AND GROUND MOUNTING SIGN
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

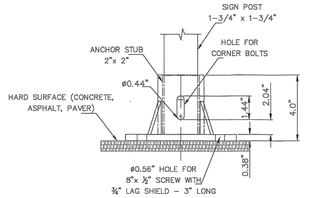
EFF DATE: JUL-29-2019 | DWG NO: 01509-01

TYPICAL HARD SURFACE INSTALLATION GALVANIZED SIGN BASE

TOP VIEW

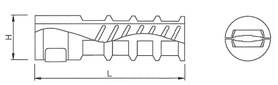


SIDE VIEW



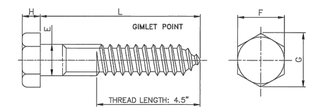
NOTES:
1. MATERIAL: ASTM A-536 GRADE 65-45-12 DUCTILE IRON
2. HOT DIP GALVANIZE PER ASTM A-153
3. ALL DIMENSIONS ARE IN INCHES

ANCHOR LAG SHIELD - ZINC ALLOY



TH LAG THREAD SIZE	L LENGTH NOMINAL		H DRILLED HOLE SIZE
½"	2"	3"	3/4"

8" HEX LAG SCREWS, HOT DIPPED GALVANIZED



DIAMETER	E BODY DIAMETER MAX.	E BODY DIAMETER MIN.	F WIDTH ACROSS FLATS MAX.	F WIDTH ACROSS FLATS MIN.	G WIDTH ACROSS CORNERS MAX.	G WIDTH ACROSS CORNERS MIN.	H HEIGHT MAX.	H HEIGHT MIN.	L LENGTH
½"	0.515"	0.482"	0.750"	0.725"	0.866"	0.826"	0.364"	0.302"	8"

MATERIAL: PER A307 GRADE A
COATING: HOT DIP ZINC PER ASTM F2329 OR IN ACCORDANCE WITH CLASS C OF ASTM A153 AND CLASS D FOR ⅜" DIAMETER AND LESS

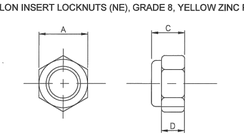
1/2" FLAT WASHERS, LOW CARBON, SAE, ZINC PLATED



SAE FLAT WASHERS									
	ID			OD			THICKNESS-TH		
SIZE	BASIC	TOLERANCE PLUS	TOLERANCE MINUS	BASIC	TOLERANCE PLUS	TOLERANCE MINUS	BASIC	PLUS	MINUS
½"	0.515"	0.015"	0.005"	1.062"	0.030"	0.007"	0.095"	0.121"	0.074"

DIMENSIONS: ASME B18.21.1, TYPE A PLAIN WASHERS
MATERIAL: CARBON STEEL
FINISH: Fe/Zn 3AT PER ASTM F1941

HEX NYLON INSERT LOCKNUTS (NE), GRADE 8, YELLOW ZINC PLATED



SIZE	C THICKNESS MAX	C THICKNESS MIN	A WIDTH ACROSS FLATS MAX	A WIDTH ACROSS FLATS MIN	D HEX HEGHT MIN
⅝"	0.359"	0.329"	0.502"	0.489"	0.250"

DIMENSIONS: ASME B18.16.6
MATERIAL: CARBON STEEL, GRADE 8 PER ASME B18.16.6, NYLON ⅝
THREAD REQUIREMENTS: ASME B1.1 UNC& UNF CLASS 2B

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

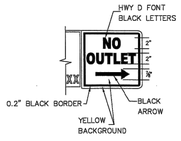
SIGN BASE MOUNTING DETAILS
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER I
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JULY-29-2019 | DWG NO: 01509-01A

POST MOUNTED STREET NAME SIGN W/ NO OUTLET SIGN

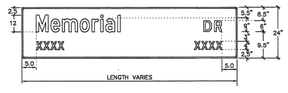




D3 - POST MOUNTED STREET NAME SIGN



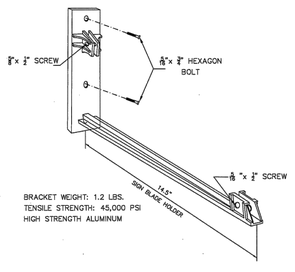
OVERHEAD STREET NAME SIGN DETAIL



D3 - STREET NAME SIGN

	POST-MOUNTED SIGN	OVERHEAD SIGN
HEIGHT	9"	24"
LENGTH	30" MIN. 48" MAX. 6" INCREMENTS OF LENGTH	10' MAX. 2' INCREMENT OF LENGTH
THICKNESS	0.125"	0.080"
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209)	
SIGN FACE MATERIALS	GREEN FILM OVER DIAMOND GRADE VIP SHEETING	
LEGENDS AND SYMBOLS	HIGHWAY GOTHIC SERIES D (USUAL) HIGHWAY GOTHIC SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK	
COLOR	LETTERS-WHITE REFLECTIVE BORDER-WHITE REFLECTIVE BACKGROUND-GREEN REFLECTIVE	

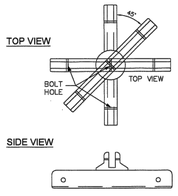
SIGNAL POLE MOUNTING DETAIL



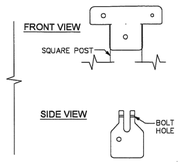
NOTES:

- TYPICAL SIGN PLATE SHOULD BE 30" MAX.
- LONGER SIGN PLATE MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER.

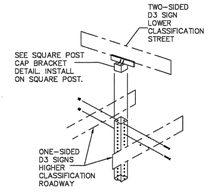
45°/90° CROSS PIECE SIGN BRACKET



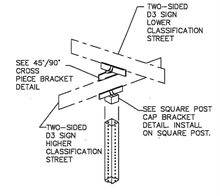
SQUARE POST CAP BRACKET DETAILS



D3 SIGNS GREATER THAN 42" PLATES IN LENGTH



D3 SIGNS LESS THAN OR EQUAL TO 42" PLATES IN LENGTH



CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET NAME SIGN AND SIGN MOUNTING
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER D
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-02

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SIGNING AND PAVEMENT MARKING DETAILS

SHEET 1 OF 5

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 31 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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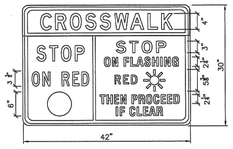
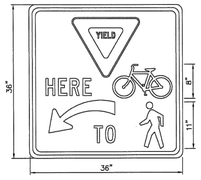
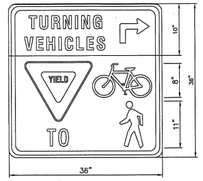
USE OF CUSTOM SIGNS MUST BE PRE-APPROVED BY THE CITY TRAFFIC ENGINEER



R10 - 23 (CoH)



R1-5PB



R10 - 15PB



R9-8 (CoH)



W11 - 2 (HAWK)
FLUORESCENT YELLOW/GREEN

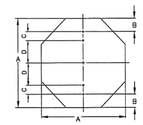
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

CUSTOM SIGNS

(NOT TO SCALE)

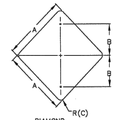
CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-02A



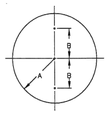
OCTAGONAL

A	B	C	D	T
24	3	3	12	0.080
36	3	3	24	0.080



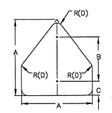
DIAMOND

A	B	C	T
24	12	1½	0.080
30	15	1½	0.080
36	18	1½	0.080



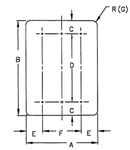
CIRCLE

A	B	T
15	15	0.080
18	12	0.080



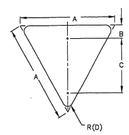
PENTAGON (SCHOOL)

A	B	C	D	T
36	24	3	1½	0.080



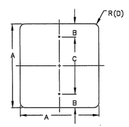
VERTICAL RECTANGLE

A	B	B	D	E	F	G	T
36	48	6	36	6	24	1½	0.080
48	60	6	48	9	30	1½	0.080
18	30	3	24			1½	0.080



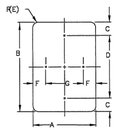
EQUILATERAL TRIANGLE

A	T	C	D	T
36	3	21	1¼	0.080



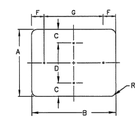
SQUARE (A)

A	B	C	D	T
18	3	12	1½	0.080
24	3	18	1½	0.080
30	3	24	1½	0.080



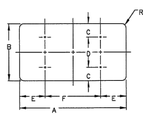
VERTICAL/HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T
12	18	1½	15	1½	1½	9	0.080
12	36	3	30	1½	1½	9	0.080
18	24	3	18	1½	1½	15	0.080
24	30	3	24	1½	3	18	0.080
24	36	3	30	1½	3	18	0.080
24	48	3	36	1½	3	18	0.080
30	36	3	30	1½	3	24	0.080



HORIZONTAL/VERTICAL RECTANGLE

A	B	C	D	E	F	G	T
12	6			1½	1	4	0.080
18	6			1½	1	4	0.080
12	9	1	10	1½			0.080
24	12	1½	9	1½	2	8	0.080
24	18	3	12	1½	2	14	0.080
30	24	3	18	1½	3	18	0.080
36	12	1½	9	1½	2	8	0.080



HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T
36	24	3	18	6	24	1½	0.080
48	24	3	18	9	30	1½	0.080
48	36	6	24	9	30	1½	0.080
60	24	3	18	12	36	1½	0.080
60	36	6	24	12	36	1½	0.080



NOTE:

1. A 30" LONG OR GREATER PLATE SHALL BE USED WHEN A "NO OUTLET" SUPPLEMENT IS REQUIRED.
2. THE CITY OF HOUSTON "STOP" AND "YIELD" SIGNS SHALL BE A MINIMUM 36". SPECIAL PERMISSION FROM THE CITY TRAFFIC ENGINEER IS REQUIRED FOR LESS THAN 36" SIGNS.
3. ALL PUNCHED HOLES ARE 3/8"x 1/2" OVAL.
4. ALL CORNER RADII ARE 1 1/2".

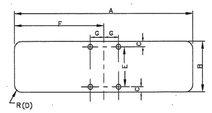


TABLE - D3 SIGNS (BRACKETS)

A	B	C	D	E	F	G	T
30	9	9/16	1½	8½	15	1½	0.125
36	9	9/16	1½	8½	18	1½	0.125
42	9	9/16	1½	8½	21	1½	0.125
48	9	9/16	1½	8½	24	1½	0.125

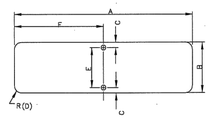


TABLE - D3 SIGNS

A	B	C	D	E	F	T
30	9	1½	1½	6	15	0.125
36	9	1½	1½	6	18	0.125
42	9	1½	1½	6	21	0.125
48	9	1½	1½	6	24	0.125

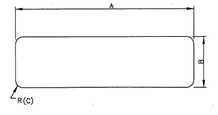


TABLE - D1 SIGNS

A	B	C	T
60	24	1½	0.080
72	24	1½	0.080
84	24	1½	0.080
96	24	1½	0.080

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

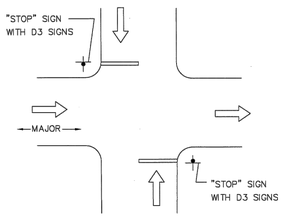
GROUND MOUNTED
SIGN SIZES

(NOT TO SCALE)

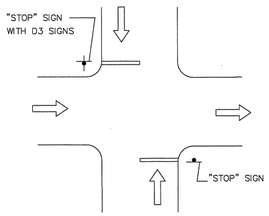
CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-03

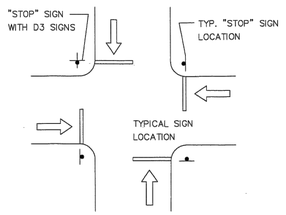
TYPICAL SIGN PLACEMENT



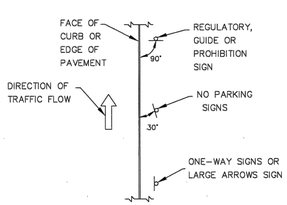
TWO-WAY STOP
AND ONE-WAY OPERATION
ON MAJOR/LOCAL INTERSECTION



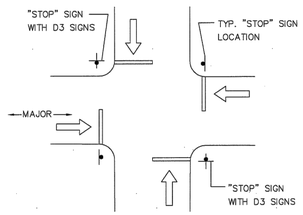
TWO-WAY STOP
AND ONE-WAY OPERATION
ON LOCAL/LOCAL INTERSECTION



FOUR-WAY STOP CONTROL
ON LOCAL/LOCAL INTERSECTION



MAST ARM INSTALLATION
REFER TO TRAFFIC SIGNAL DETAILS
FOR ADDITIONAL INFORMATION.



FOUR-WAY STOP CONTROL
ON MAJOR/LOCAL INTERSECTION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TYPICAL SIGN
PLACEMENT

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-04

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2814

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SIGNING AND PAVEMENT MARKING DETAILS

SHEET 2 OF 5

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 32 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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REGULATORY SIGNS		
Stop	R1-1	36x36
Yield	R1-2	36x36x36
All Way Plaque	R1-3P	18x6
Yield Here to Pedestrians	R1-5a	36x48
Except Right Turn (Plaque)	R1-10P(1)	24x18
Except Buses (Plaque)	R1-10P(2)	24x18
Speed Limit	R2-1	30x36
Minimum Speed Limit (Plaque)	R2-4P	24x30
No Right Turns	R3-1	36x36
No Left Turns	R3-2	36x36
No U-Turns	R3-4	36x36
Left/Right Turn Only	R3-5	30x36
Thru Only	R3-5a	30x36
Left Turn/Thru	R3-6	30x36
Left/Right Lane Must Turn Left/Right	R3-7	36x36
Advance Intersection lane Control (Varies)	R3-8	Varies x 30
Two-Way Left Turn Only (Overhead)	R3-9a	30x36
Two-Way Left Turn Lane (Post Mounted)	R3-9b	24x36
BEGIN	R3-9cP	30x12
END	R3-9dP	30x12
Reversible Lane Control (Symbol)	R3-9e	108x48
Reversible Lane Control (Post Mounted)	R3-9f	36x54
Advance Reversible Lane Control Transition	R3-9g,9h	108x36
End Reversible Lane	R3-9i	108x48
Bike Lane	R3-17	24x18
Slower Traffic Keep Right	R4-3	24x30
Begin right Turn Lane Yield to Bikes	R4-4	36x30
Keep Right	R4-7	24x30
Keep Left	R4-8	24x30
Do Not Drive on Shoulder	R4-17	24x30
Do Not Pass on Shoulder	R4-18	24x30
Do Not Enter	R5-1	30x36
Wrong Way	R5-1a	42x30
No Trucks (Symbol)	R5-2(1)	24x24
No Thru Trucks (Text)	R5-2(2)	24x30
One Way (Long)	R6-1	54x18
One Way	R6-2	30x36
Roundabout Directional (2 Chevrons)	R6-4	30x24
Roundabout Circulation (Plaque)	R6-5P	30x30
Begin One Way	R6-6	30x36
End One Way	R6-7	30x36
Parking Restriction (Arrow)	R7-2 (1)	12x18
Parking Restriction (To Corner)	R7-2 (2)	12x18
Parking Restriction (Bus Zone)	R7-2 (3)	12x18

REGULATORY SIGNS		
Parking Restriction (Valet Zone)	R7-2 (4)	12x18
Parking Restriction (Peak Period)	R7-2 (5)	12x18
Parking Restriction (Emergency Veh. Only)	R7-2 (6)	12x18
Parking Restriction (Taxi Zone)	R7-2 (7)	12x18
Parking Restriction (No Stopping or Standing)	R7-2 (8)	12x18
Parking Restriction (Jitney Stop)	R7-2 (9)	12x18
Parking Restriction (Ped-Cab Zone)	R7-2 (10)	12x18
Parking Restriction (Limo Zone)	R7-2 (11)	12x18
Parking Restriction (Commercial Veh. Zone)	R7-2 (12)	12x18
Parking Restriction (Fed./City Authorized Veh.Only)	R7-2 (13)	12x18
Parking Restriction (U.S. Marshal Parking Only)	R7-2 (14)	12x18
Parking Restriction (Emergency)	R7-2 (15)	12x18
Parking Time Limit (Varies)	R7-108	12x18
Handicapped Parking	R7-8T	12x18
Tow Away Zone (Plaque)	R7-201P	12x6
Parking Meter (COH)	R7-110	12x18
On Tracks (Plaque)	R8-3P	24x18
Cross Only At Crosswalks (Symbol)	R9-2	12x18
No Pedestrian Crossing (Symbol)	R9-3	18x18
No Pedestrian Crossing	R9-3a	12x18
Pedestrian Crossing	R9-8	36x18
Sidewalk Closed	R9-9	24x12
Sidewalk Closed-Use Other Side	R9-10	24x12
Sidewalk Closed Cross Here	R9-11a	24x12
Push Button For Pedestrian Crossing	R10-3e	9x15
Left on Green Arrow Only	R10-5	30x36
Stop Here on Red	R10-6	24x36
Do Not Block Intersection	R10-7	24x30
Left/Right Turn Signal	R10-10	30x36
No Turn on Red (Text)	R10-11a	36x48
Left Turn Yield on Green	R10-12	30x36
Crosswalk, Stop on Red	R10-23	24x30
Keep Off Median	R11-1	24x30
Road Closed	R11-2	48x30
Road Closed Local Traffic Only	R11-3a	60x30
Bridge Out Local Traffic Only	R11-3b	60x30
Road Closed to Thru Traffic	R11-4	60x30
Weight Limit xx Tons	R12-1	24x30
Axle Weight Limit xx Tons/Lbs	R12-2	24x30
No Trucks Over xx Tons/Lbs Empty Weight	R12-3	24x36
Weight Limit xx Tons per Axle xxTons Gross	R12-4	36x24
Load Zoned Bridge	R12aT	Varies x 36
Truck Route	R14-1	24x18
Grade Crossing (Crossbuck)	R15-1	48x9
Number of Tracks (Plaque)	R15-2P	27x18

CONSTRUCTION WORK SIGNS		
Right Angle Turn	CW1-1	36x36
Horizontal Curve	CW1-2	36x36
Reverse Right Angle Turns	CW1-3	36x36
Reverse Horizontal Curves	CW1-4	36x36
Reverse Curve (2 Lanes)	CW1-4b	36x36
Reverse Curve (More Than 2 Lanes)	CW1-4c	36x36
One-Direction Large Arrow	CW1-6	48x24
Upward Sloping Arrow	CW1-6aT	36x36
Chevron	CW1-8	18x24
Stop Ahead	CW2-1	36x36
Signal Ahead	CW2-3	36x36
Be Prepared to Stop	CW2-4	36x36
Road Narrows	CW5-1	36x36
Narrow Bridge	CW5-2	36x36
Two-Way Traffic Flow	CW6-3	36x36
Two-Way Traffic	CW6-4	12x18
Bump	CW8-1	36x36
Dip	CW8-2	36x36
Soft Shoulder	CW8-4	36x36
Truck Crossing	CW8-6	36x36
Rough Road	CW8-8	36x36
Uneven Lanes	CW8-11	36x36
Left Lane Ends	CW9-1(1)	36x36
Right Lane Ends	CW9-1(2)	36x36
Double Arrow	CW12-1	30x30
Advisory Speed (plaque)	CW13-1P	24x24
XX Feet (plaque)	CW16-2P	24x18
Ahead (Plaque)	CW16-3	24x12
Road Work Ahead	CW20-1	36x36
Detour Ahead	CW20-2	36x36
Road Closed Ahead	CW20-3	36x36
One Lane Road	CW20-4	36x36
Left Lane Closed	CW20-5(1)	36x36
Right Lane Closed	CW20-5(2)	36x36
Flagger (Symbol)	CW20-7	36x36
Narrow Lanes Ahead	CW20-8T	36x36
Shoulder Work Ahead	CW21-5	36x36
Utility Work Ahead	CW21-7	36x36
Double Reverse Curve (1 Lane)	CW24-1	36x36
Double Reverse Curve (2 Lanes)	CW24-1a	36x36
Double Reverse Curve (3 Lanes)	CW24-1b	36x36
End Road Work	G20-2	36x18
Detour With Arrows	M4-9	30x24
End Detour	M4-8a	24x18
Pedestrian Detour	M4-9b	30x24
Detour	M4-10	48x18

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TYPICAL CITY OF HOUSTON SIGNS

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-05

GENERAL PAVEMENT MARKING NOTES:

1. PRIOR TO START OF CONSTRUCTION, ALL EXISTING PAVEMENT MARKINGS WITHIN THE AREA OF CONSTRUCTION SHALL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE CITY INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING ALL EXISTING PAVEMENT MARKINGS AND LANE CONFIGURATIONS WILL BE DUPLICATED AGAIN. THIS REVIEW CAN BE DONE IN CONJUNCTION WITH SIGN INVENTORY. THE CONTRACTOR IS HELD ACCOUNTABLE FOR EXISTING AND TEMPORARY CONSTRUCTION PAVEMENT MARKINGS THROUGHOUT THE PROJECT AND AT THE PROJECT'S COMPLETION.
2. ALL PAVEMENT MARKINGS SHALL CONFORM TO CITY OF HOUSTON STANDARDS AND SPECIFICATIONS AND GENERAL GUIDELINES OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
3. THE PERMANENT PAVEMENT MARKINGS MAY BE MODIFIED AS DIRECTED BY THE CITY TRAFFIC ENGINEER.
4. THE DESIGN SPEED FOR THE ROAD IS: ____. THE POSTED SPEED LIMIT IS: ____.
5. ALL LANE DIMENSIONS ARE FROM CENTER OF LANE LINE, CENTER OF DOUBLE LANE LINE, FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. THE PAVEMENT MARKING DRAWINGS ARE SCHEMATIC ONLY. THE CONTRACTOR SHALL FOLLOW ALL DIMENSIONS, DETAILS, AND STANDARDS WHEN INSTALLING PAVEMENT MARKINGS AND SYMBOLS.
7. THE FINAL LONGITUDINAL STRIPINGS SHALL BE 60 MIL (0.060") THICK HOT-SPRAYED THERMOPLASTIC PLACED OVER THE TEMPORARY STRIPING WITHIN 14 TO 30 CALENDAR DAYS AFTER COMPLETION OF THE FINAL PAVEMENT SURFACE, OR AS DIRECTED BY THE CITY TRAFFIC ENGINEER. ALL OTHER PAVEMENT MARKINGS SHALL BE APPLIED AT THE SAME TIME. TEMPORARY STRIPING SHALL BE WATER BASED PAINT.
8. ALL FINAL TRANSVERSE MARKINGS SHALL BE 90 MIL (0.090") HOT-SPRAYED THERMOPLASTIC. ALL PAVEMENT ARROWS AND LEGENDS SHALL ALSO BE 90 MIL (0.090") HOT-SPRAYED THERMOPLASTIC. PREFORMED THERMOPLASTIC APPLICATIONS MAY BE USED IF ONLY APPROVED BY THE CITY TRAFFIC ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT AND INSTALLATION OF PAVEMENT MARKINGS OF FINAL SURFACE COURSE FOLLOWING CONTROL POINTS THAT HAVE BEEN SET NO MORE THAN 50 FEET APART ALONG THE LINES TO BE IMPLEMENTED. IN TANGENT SECTIONS OF A ROAD WHERE THE PAVEMENT MARKING PATTERN DOES NOT CHANGE, CONTROL POINTS CAN BE SET AT 200 FEET SPACING. THE LAYOUT AND INSPECTION OF ALL PAVEMENT MARKINGS SHALL BE APPROVED BY CITY OF HOUSTON REPRESENTATIVE PRIOR TO THE APPLICATION OF MATERIALS.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE FINAL SURFACE COURSE IS PLACED SO THAT THE STRIPING IS OFFSET NO MORE THAN ONE FOOT CLEAR OF THE CONSTRUCTION JOINT, UNLESS OTHERWISE DIRECTED BY THE CITY TRAFFIC ENGINEER.
11. ALL RAISED PAVEMENT MARKERS (RPMS) SHALL BE INSTALLED SO THAT THE REFLECTIVE FACE OF EACH MARKER IS FACING THE DIRECTION OF TRAFFIC AND IS PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW. TYPE C PAVEMENT MARKERS SHALL BE INSTALLED SO THAT THE CLEAR FACE OF EACH MARKER IS FACING THE APPROACHING TRAFFIC FLOW AND PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW.
12. ALL REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED IN ACCORDANCE TO CITY OF HOUSTON STANDARD SPECIFICATION 02762. APPLYING OVER EXISTING PAVEMENT MARKINGS DOES NOT CONSTITUTE AS APPROVED OBLITERATION METHOD.
13. THE ENGINEER OF RECORD SHALL BE REQUIRED TO PRODUCE AS-BUILT OF PAVEMENT MARKING PLANS WITHIN 30 DAYS AFTER COMPLETION OF PAVEMENT MARKING IMPLEMENTATION.
14. BLUE RPMS MAY BE PLACED ADJACENT TO FIRE HYDRANTS WITH THE APPROVAL OF THE CITY TRAFFIC ENGINEER.
15. FOR ALL CONSTRUCTION, ALL PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED AND SHALL BE PAID BY THE PROJECT OWNER/DEVELOPER.
16. FINAL INSPECTION AND ACCEPTANCE OF PAVEMENT MARKINGS SHALL BE PERFORMED BY TRANSPORTATION & DRAINAGE OPERATION REPRESENTATIVE (713-803-3054).

Description and Application of Pavement Marking Lines

Line Series	Color	Description	Width Inches	Typical Applications
WB	White	Broken (10' stripe w/ 30' gap)	4"	- Lane lines between travel lanes in the same direction where changing of lanes is permitted.
WS	White	Solid	4"	- Edge lines to delineate the right edge of the roadway.
			6"	- Left edge of bicycle lane and lane lines between travel lanes in the same direction where changing of lanes is discouraged.
			12"	- Perpendicular crosswalk lines.
			24"	- Stop bars at intersections (signalized and unsignalized). - Hatching at high visibility crosswalks.
			12", 24"	- Diagonal hatching used in gores between same direction of travel lanes.
WG	White	Guide (2' stripe w/6' gap)	6"	- Guide lines through intersections. - Taper lines for turn lanes. - Guide lines for bicycle lanes.
YS	Yellow	Solid	4"	- Edge lines to delineate the left edge of a divided roadway, a one-way road, or ramp.
			12", 24"	- Diagonal hatching used in gores between opposing direction of travel lanes.
YDS	Yellow	Double Solid	4" - (4") - 4" (gap)	- Centerline that separates opposing travel lanes and delineation of median islands.
YDB	Yellow	Double Broken	4" - (4") - 4" (gap)	- Defines the edges of center reversible lanes that are used as TWLTLs during intermittent periods.
YB	Yellow	Broken (10' stripe w/ 30' gap)	4"	- Separates travel lanes in opposite directions where passing is permitted in both directions of travel.
YB (BIKE)	Yellow	Broken (3' stripe w/ 9' gap)	4"	- Separates bicycle travel lanes in opposite directions where passing is permitted in both directions of travel.
YSB	Yellow	Solid & Broken Broken (10' stripe w/ 30' gap)	4" - (4") - 4" (gap)	- Separates travel lanes in opposite directions where passing is permitted in one direction and prohibited in the opposite direction. - Used for edge of two-way left-turn lanes (TWLTL).
BICYCLE GREEN	Green	Solid Colored Pavement	Varies	- Ped/Bike crossing - Vehicle / Bike/ Conflict Area
YIELD LINE	White	Triangle	16" x 24"	- Mid-Block crossing.

Description and Application of Reflective Raised Pavement Markers (RPM)

RRPM Types	Color	COH Spec. Sec. 02764 Equivalent	Description
C	Clear	Type I-C	- Approach face that reflects white light, and the other side does not reflect.
R	Clear & Red	Type II-C-R	- Approach face that reflects white light, and the other side reflects red light.
A	Amber & Amber	Type II-A-A	- Approach face and the other side both reflect amber light.

Line Style Designation : YSB4 - A40/A40

- Color
- Pattern
- Width of stripe
- RPM spacing
- RPM type
- RPM spacing
- RPM Type

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

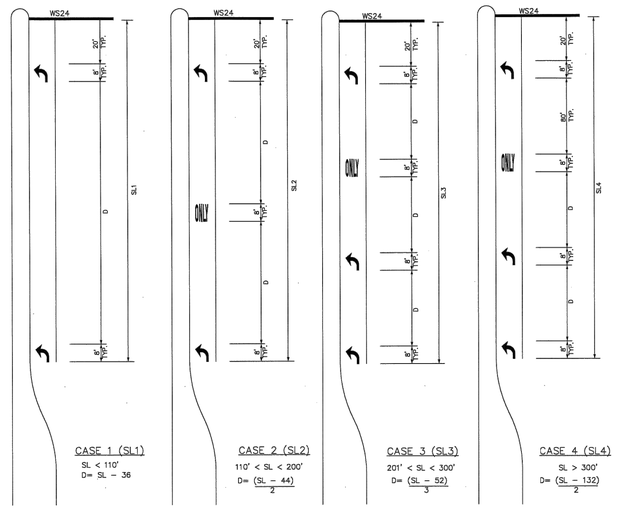
GENERAL NOTES AND LEGENDS

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-01



KEY (FOR TURN LANES ONLY):

SL = STORAGE LENGTH (FEET)

D = DISTANCE BETWEEN ARROWS AND/OR WORDS (FEET)

GENERAL NOTES:

1. ALL CASES AND DETAILS ALSO APPLY TO RIGHT-TURN LANES.
2. FOR DUAL-TURN LANES, DIMENSIONS SHALL BE THE SAME FOR EACH LANE.
3. SL DIMENSION IS FROM BACK OF STOP LINE TO END OF TURN LANE. NOTE: DO NOT INCLUDE TAPER LENGTH.
4. PAVEMENT ARROWS AND "ONLY" LEGEND MARKINGS ARE TYPICALLY USED AT ALL SIGNALIZED INTERSECTIONS AND AT ALL UNSIGNALIZED INTERSECTIONS THAT HAVE TURN LANES.
5. MINIMUM SL= 100'. SL MAY BE LESS THAN 100 FEET ONLY BY APPROVAL OF THE CITY TRAFFIC ENGINEER.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

LEFT/RIGHT-TURN "ONLY" AND ARROW SPACING

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-02

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SIGNING AND PAVEMENT MARKING DETAILS

SHEET 3 OF 5

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 33 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

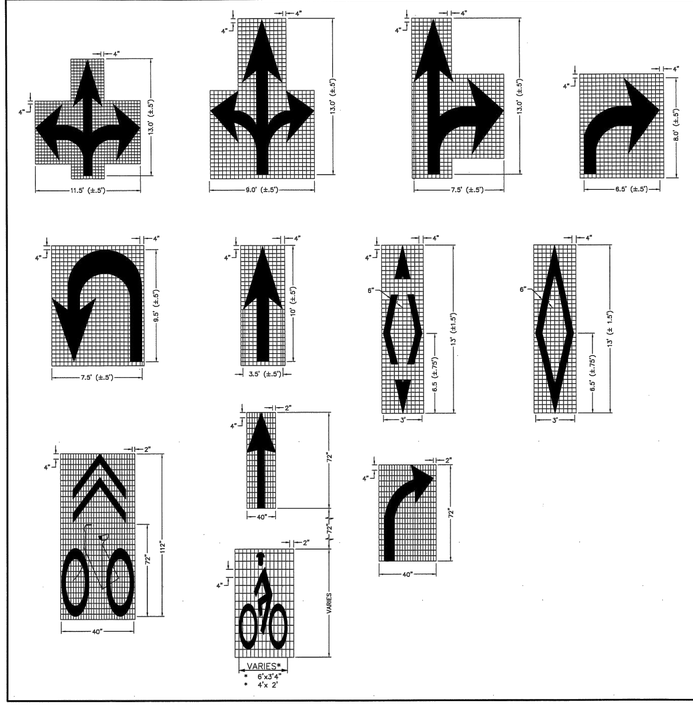
STANDARD PAVEMENT MARKING – (WORDS)

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-03



NOTES FOR PAVEMENT MARKINGS "SYMBOLS" AND "ARROWS":

1. MINIMUM 8 FOOT WHITE MARKINGS SHALL BE USED, UNLESS OTHERWISE NOTED. IF MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD BE PLACED WITH FIRST WORD NEAREST THE DRIVER.
2. THESE DETAILS ARE STANDARD SIZE FOR NORMAL INSTALLATION; SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD DEPENDING ON CONDITIONS. SPECIAL PERMISSION NEEDED BY CITY TRAFFIC ENGINEER FOR REDUCTION BELOW ONE-THIRD OF STANDARD SIZES.
3. THE LONGITUDINAL SPACE BETWEEN MARKINGS SHOULD BE 30 FEET, OR AS INDICATED ON THE PLANS.
4. MARKINGS CONSIDERED APPROPRIATE FOR USE WHEN WARRANTED INCLUDE THE FOLLOWING:
   - A. REGULATORY
     STOP
     RIGHT (LEFT) TURN ONLY, SYMBOL ARROWS.
   - B. WARNING
     STOP AHEAD
     SIGNAL AHEAD
     SCHOOL
     SCHOOL X-ING
     PED X-ING
     R X R (SEE SHEET 01510-08 DETAILS)
     OTHER WORDS OR SYMBOLS MAY BE NECESSARY UNDER CERTAIN CONDITIONS. SPECIAL PERMISSION NEEDED BY CITY TRAFFIC ENGINEER FOR SPECIAL CONDITIONS.
5. UNCONTROLLED USE OF PAVEMENT MARKINGS CAN RESULT IN DRIVER CONFUSION. WORD AND SYMBOL MARKINGS SHOULD BE NO MORE THAN THREE LINES.
6. THE WORD "STOP" SHALL NOT BE USED ON THE PAVEMENT UNLESS ACCOMPANIED BY A STOP LINE AND STOP SIGN. THE WORD "STOP" SHALL NOT BE PLACED ON THE PAVEMENT IN ADVANCE TO A STOP LINE, UNLESS EVERY VEHICLE IS REQUIRED TO STOP AT ALL TIMES (ALL-WAY STOP).
7. PAVEMENT MARKINGS SHOULD GENERALLY BE NO MORE THAN ONE LANE IN WIDTH, WITH SCHOOL MESSAGES BEING THE EXCEPTION. FOR DETAILS OF SCHOOL AND SCHOOL CROSSING PAVEMENT MARKINGS, REFER TO PART VII OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
8. SPACING BETWEEN STANDARD SIZE LETTERS SHOULD BE 4 INCHES (MIN). THE WIDTH OF NON-STANDARD SIZE LETTERS MAY VARY DEPENDING ON THE WIDTH OF THE TRAVEL LANES. APPROVAL BY CITY TRAFFIC ENGINEER. SPECIAL PERMISSION NEEDED FOR NON-STANDARD SIZE "LETTER" AND/OR "ARROWS".
9. LANE-USE ARROW MARKINGS MAY BE USED TO CONVEY EITHER GUIDANCE OR MANDATORY MESSAGES. SINGLE TURN ARROWS USED TO CONVEY A MANDATORY MOVEMENT MUST BE ACCOMPANIED STANDARD SIGNS AND THE PAVEMENT MARKING WORD "ONLY".
10. PAVEMENT MARKINGS ARE TO BE LOCATED AS SPECIFIED IN THE DESIGN PLANS.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

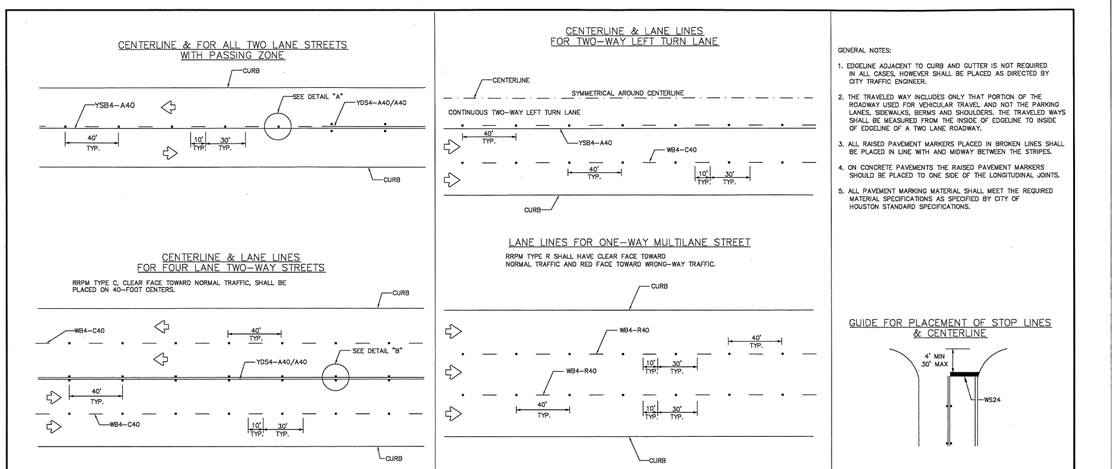
STANDARD PAVEMENT MARKING – SYMBOLS

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-04



GENERAL NOTES:

1. EDGELINE ADJACENT TO CURB AND GUTTER IS NOT REQUIRED IN ALL CASES, HOWEVER SHALL BE PLACED AS DIRECTED BY CITY TRAFFIC ENGINEER.
2. THE TRAVELED WAY INCLUDES ONLY THAT PORTION OF THE ROADWAY USED FOR VEHICULAR TRAVEL AND NOT THE PARKING LANES, SIDEWALKS, BERMS AND SHOULDERS. THE TRAVELED WAYS SHALL BE MEASURED FROM THE INSIDE OF EDGELINE TO INSIDE OF EDGELINE OF A TWO LANE ROADWAY.
3. ALL RAISED PAVEMENT MARKERS PLACED IN BROKEN LINES SHALL BE PLACED IN LINE WITH AND MIDWAY BETWEEN THE STRIPES.
4. ON CONCRETE PAVEMENTS THE RAISED PAVEMENT MARKERS SHOULD BE PLACED TO ONE SIDE OF THE LONGITUDINAL JOINTS.
5. ALL PAVEMENT MARKING MATERIAL SHALL MEET THE REQUIRED MATERIAL SPECIFICATIONS AS SPECIFIED BY CITY OF HOUSTON STANDARD SPECIFICATIONS.

GUIDE FOR PLACEMENT OF STOP LINES & CENTERLINE

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKERS FOR POSITION GUIDANCE

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-05

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
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FB NO. P-6234

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MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
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Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SIGNING AND PAVEMENT MARKING DETAILS

SHEET 4 OF 5

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 34 OF 111	DRAWING SCALE

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No.	Date	Revisions	App.

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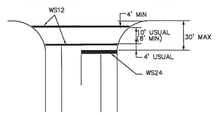
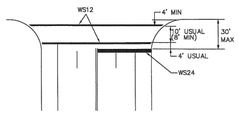
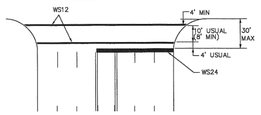
TWO LANES WITH SHOULDERS



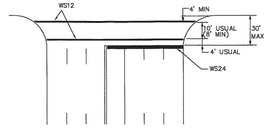
FOUR LANES WITH SHOULDERS



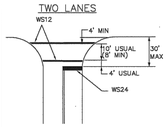
MULTI – LANES



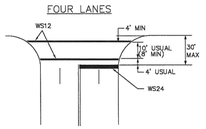
MULTI – LANE WITH MEDIAN



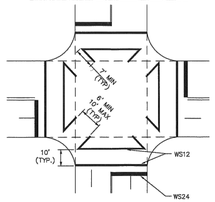
TWO LANES



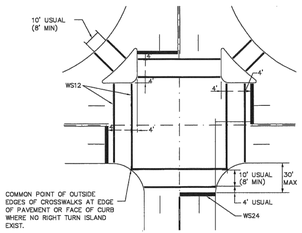
FOUR LANES



EXCLUSIVE PEDESTRIAN PHASE



INTERSECTION WITH RIGHT – TURN ISLANDS



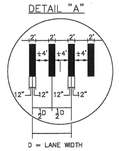
COMMON POINT OF OUTSIDE EDGES OF CROSSWALKS AT EDGE OF PAVEMENT OR FACE OF CURB WHERE NO RIGHT TURN ISLAND EXIST.

HIGH VISIBILITY CROSSWALK DETAIL



TYPICALLY USED AT SIGNALIZED AND NON-SIGNALIZED CROSSINGS ON COLLECTOR AND ARTERIAL ROADWAYS AND AT LOCATIONS REQUIRING EXTRA EMPHASIS.

DETAIL "A"

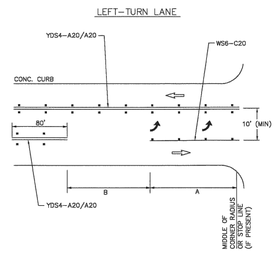


NOTES:

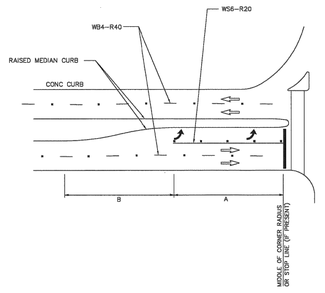
1. CROSSWALKS AND STOP LINES SHALL BE WHITE.
2. "D" IS EQUAL TO ONE HALF THE WIDTH OF TRAVEL LANE.

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TYPICAL CROSSWALK DETAILS (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01510-10

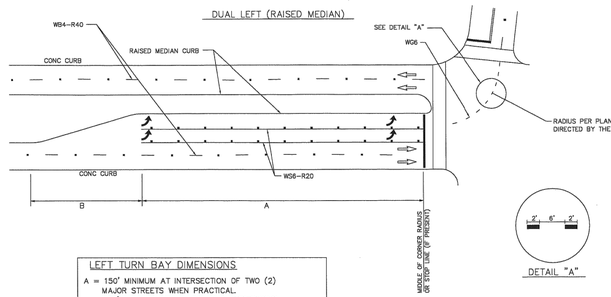
LEFT-TURN LANE



LEFT-TURN LANE (RAISED MEDIAN)



DUAL LEFT (RAISED MEDIAN)



DETAIL "A"

LEFT TURN BAY DIMENSIONS

A = 150' MINIMUM AT INTERSECTION OF TWO (2) MAJOR STREETS WHEN PRACTICAL.
= 100' MINIMUM AT ALL OTHER INTERSECTIONS.

B = 100' MINIMUM ON STRAIGHT ROADWAYS.
*TAPER LENGTH MAY BE SHORTER IF IT IS ON A HORIZONTAL CURVE TO THE LEFT.
*TAPER LENGTH MAY BE LONGER IF CURVE IS TO THE RIGHT.

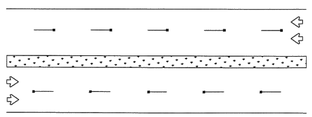
NOTE:
1. DIMENSIONS SHALL BE ADJUSTED AS DETERMINED BY CITY OF HOUSTON TRAFFIC ENGINEER.
2. REFER TO CITY OF HOUSTON DESIGN MANUAL (DWG No. 10.06-07) FOR DETAILS.

NOTES:

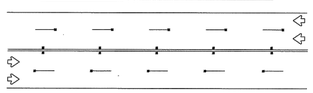
1. THE DIMENSIONS GIVEN FOR DUAL LEFT (RAISED MEDIAN) ON THIS SHEET ARE ALSO APPLICABLE FOR DUAL RIGHT-TURN LANES.
2. STORAGE LENGTHS LONGER THAN THE MINIMUMS LISTED ON THIS DRAWING MAY BE DETERMINED USING TRAFFIC ENGINEERING ANALYSIS.
3. FOR THE PLACEMENT OF PAVEMENT ARROWS AND WORDS SEE LEFT-TURN "ONLY" AND ARROW SPACING WORKSHEET.
4. REFER TO APPLICABLE STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKERS FOR POSITION GUIDANCE AND LEFT-TURN & RIGHT-TURN LANE STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKINGS.
5. REFER TO BICYCLE LANE PAVEMENT MARKINGS STANDARD FOR TYPE AND PLACEMENT.

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
LEFT-TURN LANE & RIGHT-TURN LANE DESIGN WORKSHEET 1 (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01510-11

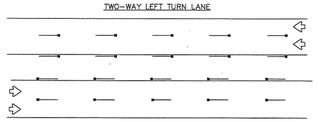
LANE LINES FOR DIVIDED STREET



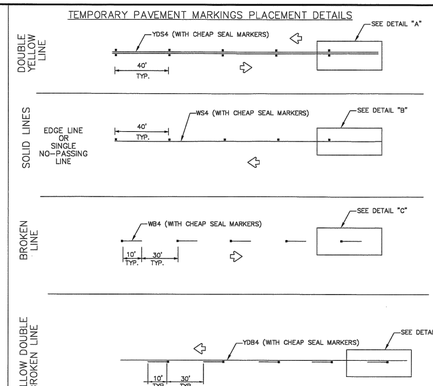
LANE & CENTER LINES FOR MULTILANE UNDIVIDED STREETS



TWO-WAY LEFT TURN LANE



TEMPORARY PAVEMENT MARKINGS PLACEMENT DETAILS



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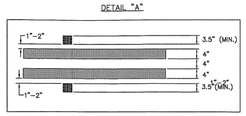

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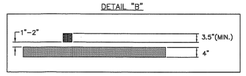

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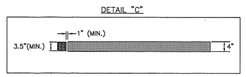

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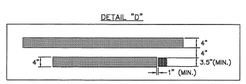
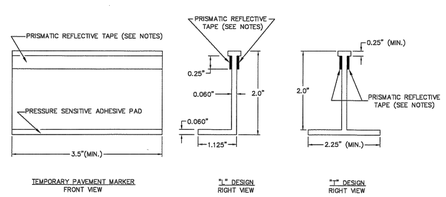


NOTES:

1. YELLOW MARKERS SHALL HAVE YELLOW BODIES AND YELLOW REFLECTIVE TAPE.
2. WHITE MARKERS SHALL HAVE WHITE BODIES AND WHITE REFLECTIVE TAPE.
3. ONE-WAY OR TWO-WAY REFLECTIVE SHALL BE USED AS NECESSARY FOR APPLICATION.
4. THE CLEAR PLASTIC COVER MAY VARY FROM ONE MANUFACTURER TO ANOTHER IF DEEMED NECESSARY BY SPECIFIC PROJECT.
5. ALL TEMPORARY PAVEMENT MARKERS SHALL BE PLACED WITH REFLECTIVE SIDE FACING ON COMING TRAFFIC.
6. ALL TEMPORARY STRIPING SHALL BE WATER BASED PAINT.

TEMPORARY CHIP SEAL MARKER DETAIL



TEMPORARY PAVEMENT MARKER FRONT VIEW | "L" DESIGN RIGHT VIEW | "T" DESIGN RIGHT VIEW

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
REFLECTIVE CHIP SEAL MARKER USE FOR TEMPORARY MARKINGS (NOT TO SCALE)	
DGN TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01510-06

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-62.34

STATE OF TEXAS — MARK WOODWARD — 96072 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SIGNING AND PAVEMENT MARKING DETAILS

SHEET 5 OF 5

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 35 OF 111	DRAWING SCALE

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No.	Date	Revisions	App.

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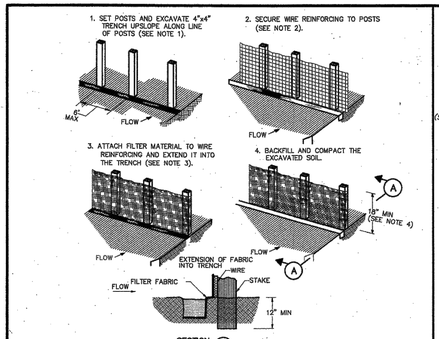
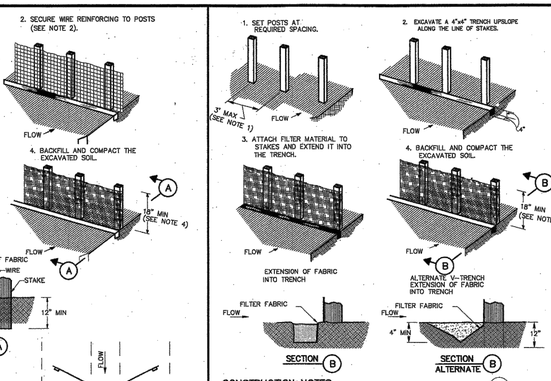


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

REINFORCED FILTER FABRIC BARRIER

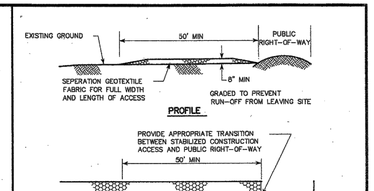


CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

FILTER FABRIC BARRIER

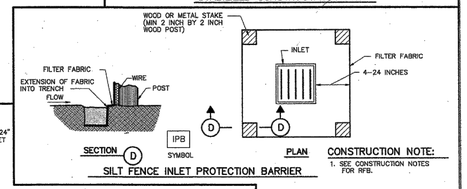


CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SC
SYMBOL

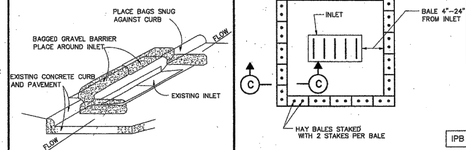
STABILIZED CONSTRUCTION ACCESS



SILT FENCE INLET PROTECTION BARRIER

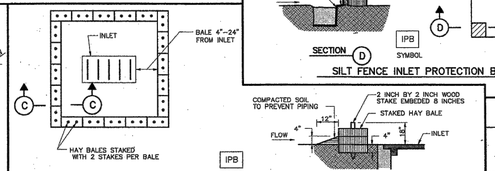
CONSTRUCTION NOTE:

1. SEE CONSTRUCTION NOTES FOR RFB.



INLET PROTECTION BARRIER

(FOR STAGE II INLETS)
BAGGED GRAVEL BARRIER

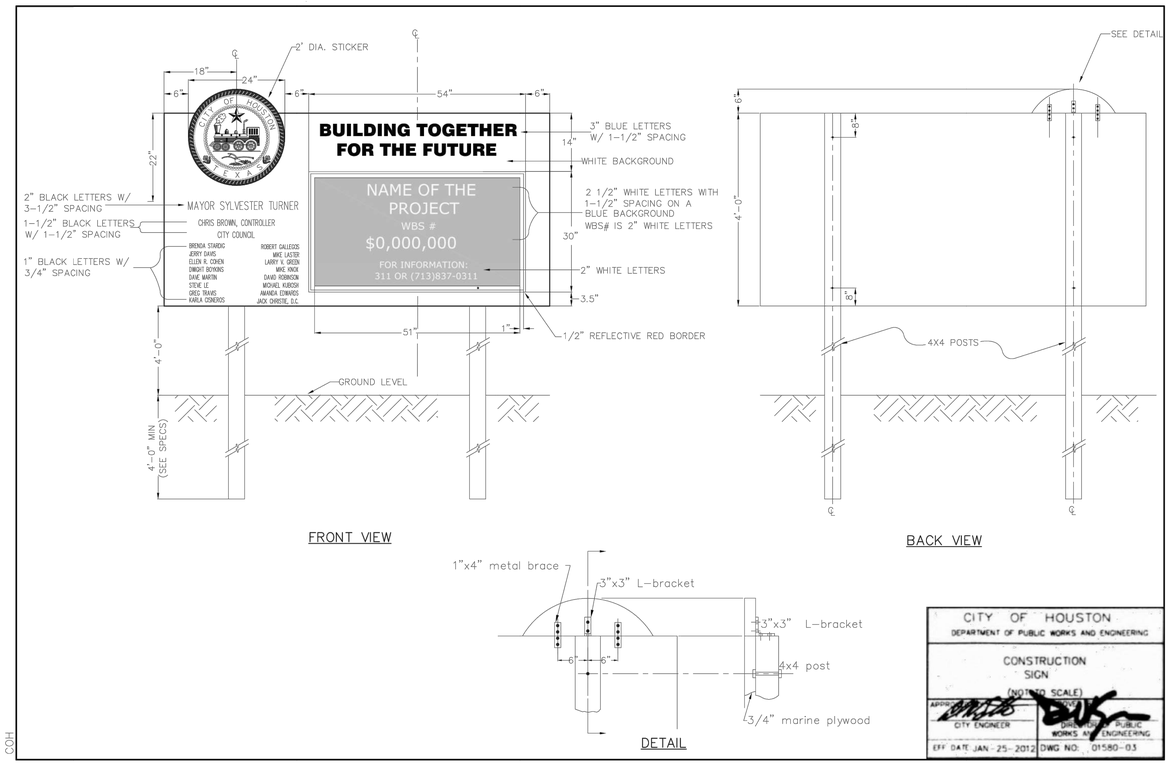


HAY BALE INLET PROTECTION BARRIER

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

APPROVED: CITY ENGINEER — DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010 DWG NO: 01571-01



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

CONSTRUCTION SIGN
(NOT TO SCALE)

APPROVED: CITY ENGINEER — DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JAN-25-2012 DWG NO: 01580-03

COH

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

SWPPP AND PROJECT SIGN DETAILS

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 36 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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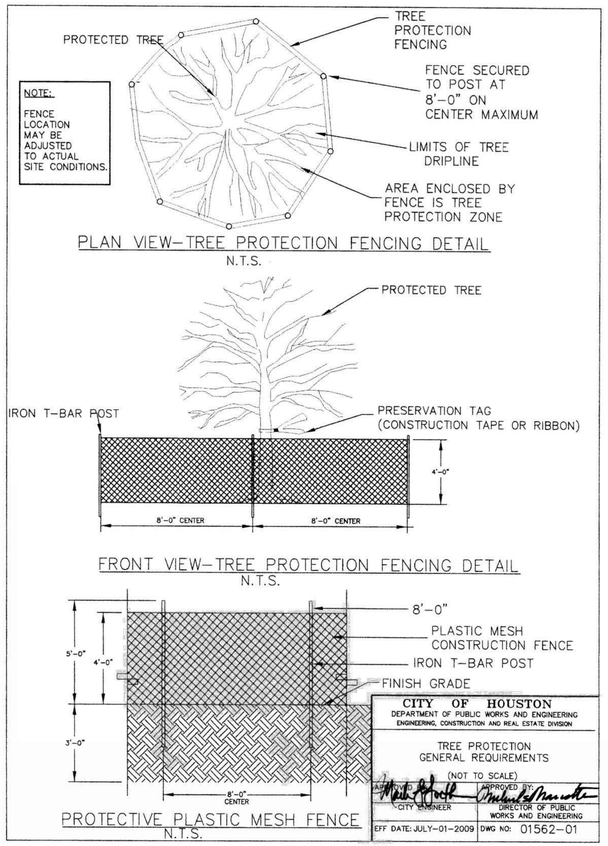
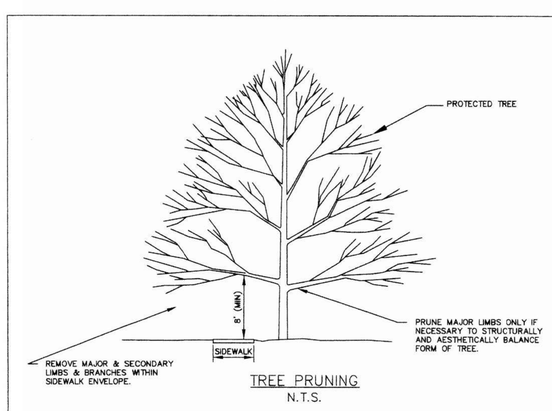


PLAN VIEW–TREE PROTECTION FENCING DETAIL
N.T.S.

FRONT VIEW–TREE PROTECTION FENCING DETAIL
N.T.S.

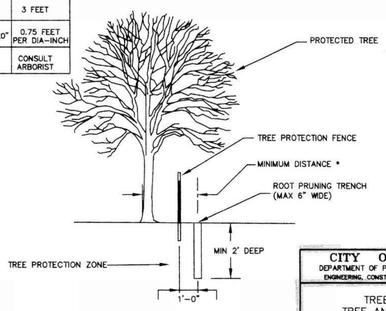
PROTECTIVE PLASTIC MESH FENCE
N.T.S.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
TREE PROTECTION GENERAL REQUIREMENTS (NOT TO SCALE)	
APPROVED BY CITY ENGINEER	APPROVED BY DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2009	DWG NO: 01562-01



TREE PRUNING
N.T.S.

TREE TRUNK DIA. (IN)	* MINIMUM DISTANCE
< 6"	3 FEET
6" ≤ DIA. ≤ 20"	0.75 FEET PER DIA-INCH
> 20"	CONSULT ARBORIST

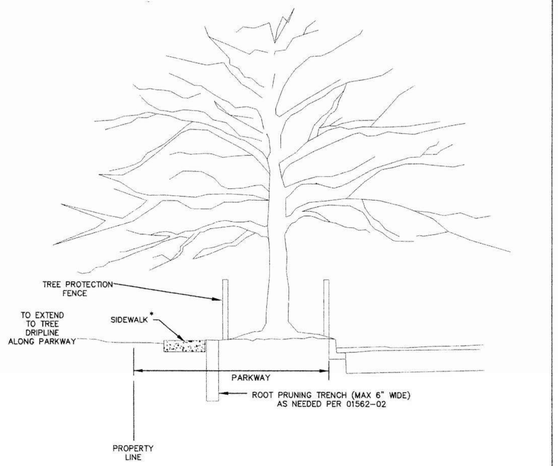


ROOT PRUNING DETAIL
N.T.S.

NOTE: APPLICABLE TO ROOT PRUNING ON ONE SIDE OF TREE ONLY. CONSULT ARBORIST FOR MORE EXTENSION ROOT PRUNING.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
TREE PROTECTION TREE AND ROOT PRUNING (NOT TO SCALE)	
APPROVED BY CITY ENGINEER	APPROVED BY DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2009	DWG NO: 01562-02

* SIDEWALK SHALL BE CONSTRUCTED OF EITHER CEMENT, CONCRETE, ASPHALT OR OTHER DURABLE MATERIAL AS THE COUNCIL MAY DESIGNATE (CHAPTER 40-91, CODE OF ORDINANCES).



CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
TREE PROTECTION/ IN SIDEWALK REPAIRS IN PARKWAY AREAS (NOT TO SCALE)	
APPROVED BY CITY ENGINEER	APPROVED BY DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2009	DWG NO: 01562-03

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 96672 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TREE PROTECTION DETAILS

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 37 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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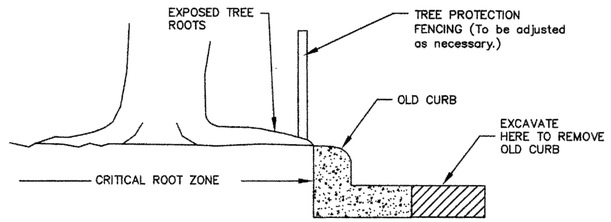
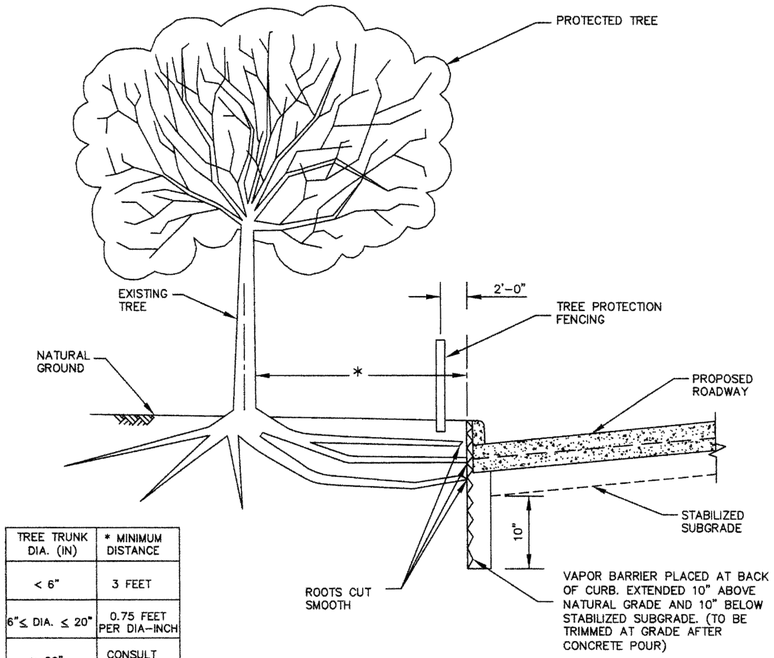


OLD CURB REMOVAL
N.T.S.



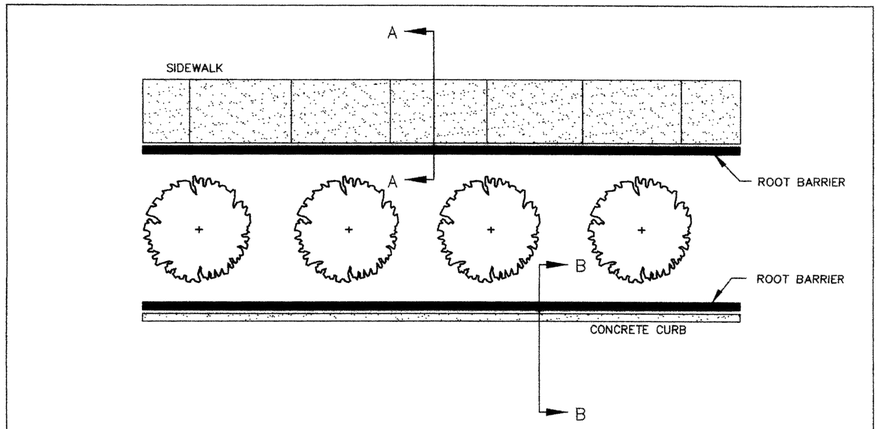
TREE TRUNK DIA. (IN)	* MINIMUM DISTANCE
< 6"	3 FEET
6" ≤ DIA. ≤ 20"	0.75 FEET PER DIA-INCH
> 20"	CONSULT ARBORIST

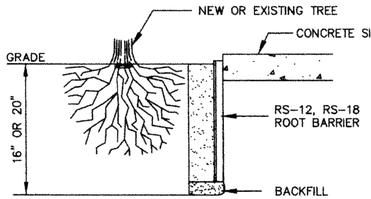
ZERO CURB CUT DETAIL
N.T.S.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

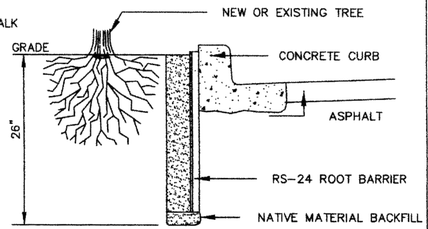
TREE PROTECTION
ZERO CURB CUT
(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2009	DWG NO: 01562-04





SECTION A-A
SIDEWALK



SECTION B-B
CURB & GUTTER PROTECTIONS

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. THE RAISED ROOT GUIDING RIBS MUST BE FACING TOWARDS THE TREE ROOTS.
3. THE TOP OF THE BARRIER PANELS MUST BE SIGHTLY ABOVE GRADE (NEVER BELOW GRADE).
4. POSITION BARRIER PANELS VERTICALLY WITH TOP AGAINST THE STRUCTURE TO BE PROTECTED.
5. SEE LANDSCAPE SITE PLAN TO DETERMINE TREES THAT REQUIRE BARRIER PANEL.
6. KEEP THE BARRIERTOP EDGE AT LEAST 1/2" ABOVE GRADE.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TREE ROOT BARRIERS
(LINEAR)
(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2009	DWG NO: 02912-02

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TREE PROTECTION DETAILS

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: N.T.S. VERT: N.T.S.
SHEET NO. 38 OF 111	DRAWING SCALE

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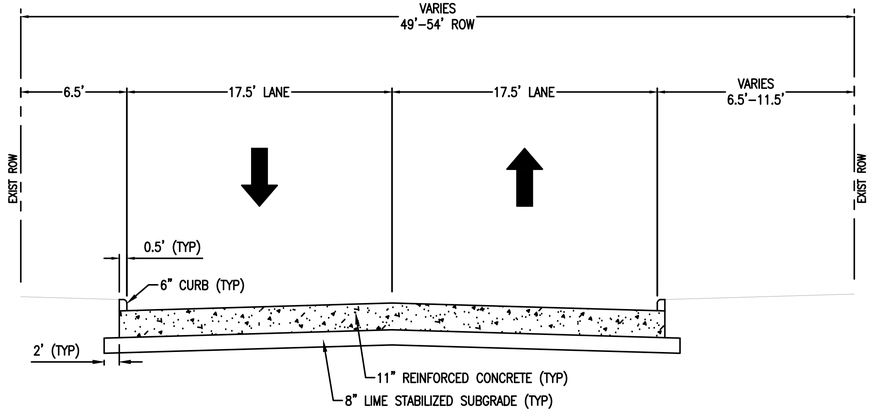
LEGEND

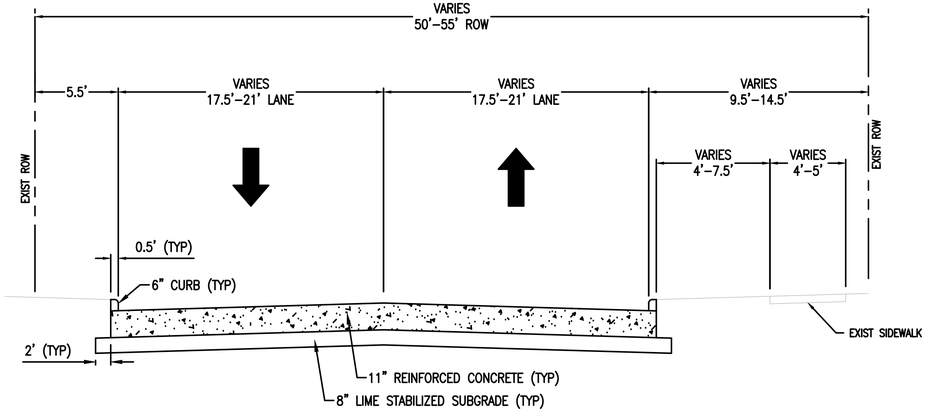
DIRECTION OF TRAFFIC

NOTE:

1. MAXIMUM EXPANSION JOINT SPACING AT FLUSH CURB/GUTTER AND CURB & GUTTER = 80'.
2. MAXIMUM TRANSVERSE CONTROL JOINT SPACING AT FLUSH CURB/GUTTER AND CURB & GUTTER = 15'.



MOSLEY RD
STA 1+37.70 TO STA 27+20.50



MOSLEY RD
STA 27+20.50 TO STA 32+21.00

BASE BID

POSTED SPEED LIMIT = 30 MPH

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED TYPICAL SECTIONS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.

HORZ: NTS
VERT: NTS

SHEET NO. 39 OF 111

DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

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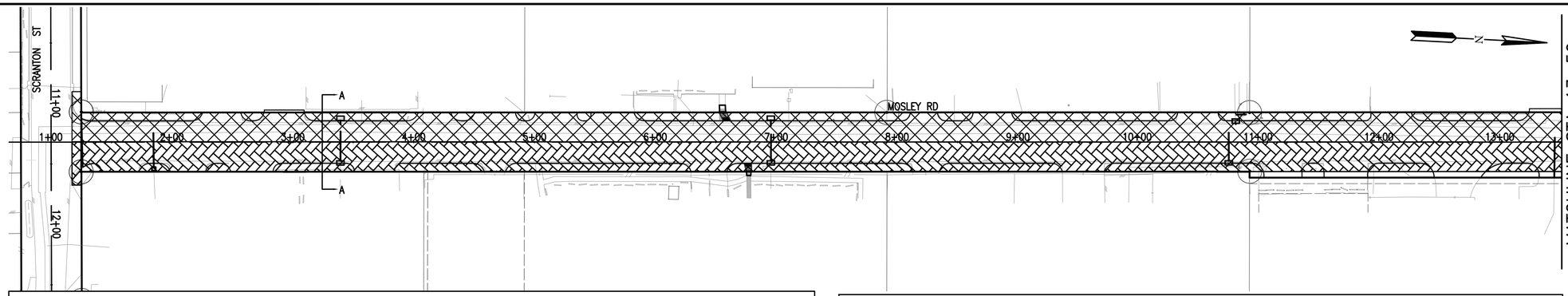


SEQUENCE OF CONTRUCTION

PHASE I
CONSTRUCT WATER LINE IMPROVEMENTS ON EITHER SIDE OF THE ROADWAY FROM SCRANTON ST TO IH-45 FRONTAGE ROAD. MAINTAIN MINIMUM 1~10-FT WIDE LANE IN EITHER DIRECTION AT ALL TIMES USING A COMBINATION OF LANE REDUCTION, LANE SHIFT, HARRIS COUNTY ONE-LANE TWO-WAY OPERATION AND STANDARD CITY OF HOUSTON DETOURS.

INSTALL TEMPORARY 8-INCH ASPHALT BASE TYPE B (BASE BID SEGMENT) AT ALL DISTURBED AREAS AS NEEDED TO MAINTAIN EITHER 1 OR 2-WAY TARFFIC FOR FUTURE TCP PHASES, INSTALL 10-INCH ASPHALT TYPE B BASE WITH 3-INCH ASPHALT TYPE D AND 8-INCH CEMENT STABILIZED FOR SECTIONS NORTH OF AIRPORT BLVD IF ALTERNATE 1 IS NOT RELEASED FOR CONSTRUCTION. TEMP ASPHALT IS INCIDENTAL TO TRAFFIC CONTROL PAY ITEM.

MAINTAIN DRAINAGE AT ALL TIMES.

PHASE II STEP I
MAINTAIN MINIMUM 1~12-FT WIDE NORTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE II STEP I TCP AND DETOURS. CONSTRUCT ALL WESTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, RCP STORM SEWER INSTALLATION, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS WITHIN THIS PHASE MUST DRIVE SOUTHBOUND ALONG HANSEN RD TO SCRANTON ST, THEN LEFT ON SCRANTON ST, THEN LEFT ON MOSLEY RD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

MAINTAIN DRAINAGE AT ALL TIMES. DO NOT BEGIN PHASE II STEP II UNTIL THIS PHASE IS COMPLETE.

PHASE II STEP II
OPEN TRAFFIC ON PHASE II STEP I LIMITS (CARS ONLY) AND CONTINUE TO MAINTAIN MINIMUM 1~12-FT WIDE NORTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE II STEP II TCP AND DETOURS. CONTINUE TO CONSTRUCT ALL WESTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, RCB CLEANING/DE-SILTING, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS WITHIN THIS PHASE MUST DRIVE SOUTHBOUND ALONG HANSEN RD TO SCRANTON ST, THEN LEFT ON SCRANTON ST, THEN LEFT ON MOSLEY RD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG SCRANTON ST AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

SEQUENCE OF CONSTRUCTION

PHASE III STEP I
MAINTAIN MINIMUM 1~12-FT WIDE SOUTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE III STEP I TCP AND DETOURS. CONSTRUCT ALL EASTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS MUST DRIVE SOUTHBOUND ALONG MOSLEY RD TO SCRANTON ST, THEN RIGHT ON SCRANTON ST AND THE RIGHT ON HANSEN RD TO AIRPORT BLVD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

MAINTAIN DRAINAGE AT ALL TIMES. DO NOT BEGIN PHASE III STEP II UNTIL THIS PHASE IS COMPLETE.

PHASE III STEP II
OPEN TRAFFIC ON PHASE III STEP I LIMITS AND CONTINUE TO MAINTAIN MINIMUM 1~12-FT WIDE SOUTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE III STEP II TCP AND DETOURS. CONTINUE TO CONSTRUCT ALL EASTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS WITHIN THIS PHASE MUST DRIVE SOUTHBOUND ALONG MOSLEY RD TO SCRANTON ST, THEN RIGHT ON SCRANTON ST, THEN RIGHT ON HANSEN RD TO AIRPORT BLVD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

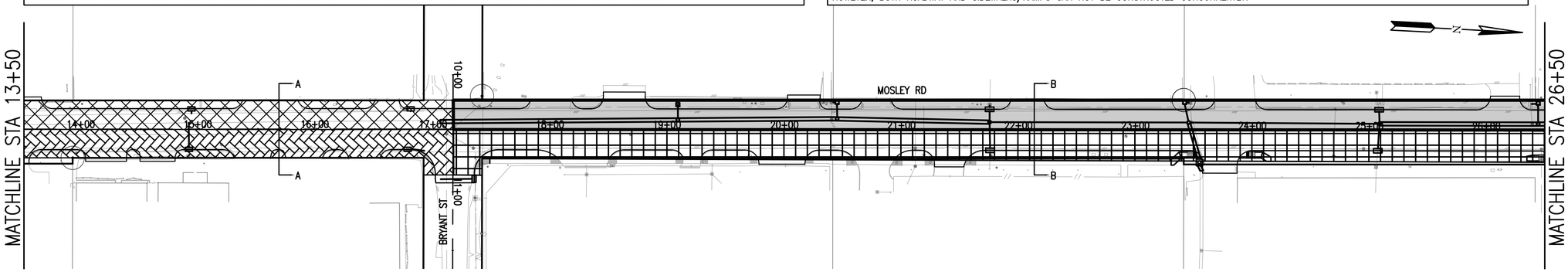
IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG SCRANTON ST AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

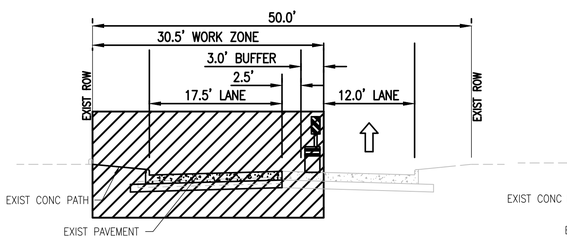
MAINTAIN DRAINAGE AT ALL TIMES.

AIRPORT BLVD PHASE
MAINTAIN MINIMUM 2~12-FT WIDE EASTBOUND LANES AND ALL WESTBOUND LANES OPEN AT ALL TIMES BY IMPLEMENTING TCP AND DETOUR. CONSTRUCT PROP CURB, REINFORCED CONCRETE PAVEMENT, SIDEWALKS, LIMITED STORM SEWER AND APPURTENANCES.

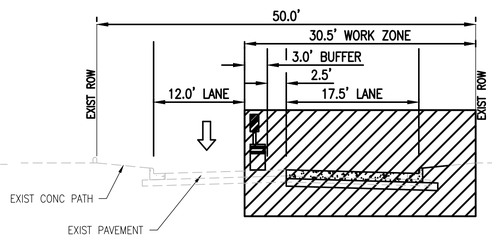
MAINTAIN DRAINAGE AT ALL TIMES. DO NOT BEGIN PHASE III STEP II UNTIL THIS PHASE IS COMPLETE.

NORTHERN SIDEWALKS AND RAMPS CAN BE COMPLETED AS PART OF THIS PHASE BY IMPLEMENTING TYPICAL CITY OF HOUSTON ONE LANE CLOSURE. HOWEVER, BOTH ROADWAY AND SIDEWALKS/RAMPS CAN NOT BE CONSTRUCTED CONCURRENTLY.





PHASE II STEP II
TYPICAL SECTION A-A
N.T.S



PHASE III STEP II
TYPICAL SECTION A-A
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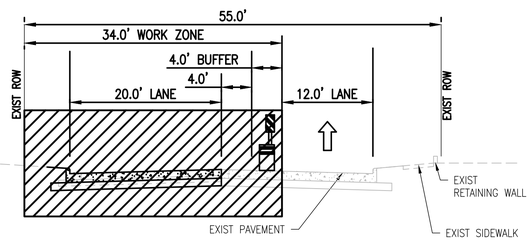
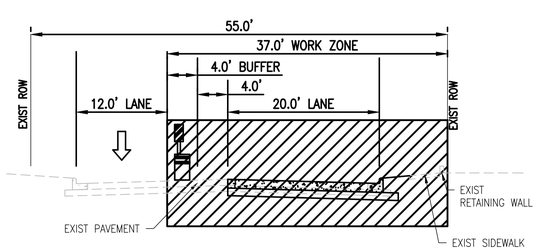


PHASE II STEP I
TYPICAL SECTION B-B
N.T.S



PHASE III STEP I
TYPICAL SECTION B-B
N.T.S

BASE BID

LEGEND

- BASE BID (PHASE II STEP I)
- BASE BID (PHASE II STEP II)
- BASE BID (PHASE III STEP I)
- BASE BID (PHASE III STEP II)
- BASE BID (AIRPORT BLVD)
- WORK ZONE

NOTES
1. CONTRACTOR TO IMPLEMENT PEDESTRIAN DETOURS USING COH STD DTL 02893-18.
2. CONTRACTOR MUST COORDINATE WITH RICK SCHNEIDER MIDDLE SCHOOL PERSONAL FOR POTENTIAL TRAFFIC IMPACTS AT LEAST 2 WEEKS IN ADVANCE.

RICK SCHNEIDER MIDDLE SCHOOL
8420 EASTHAVEN BLVD
HOUSTON, TX 77075
(713) 740-0920

0' 50' 100'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234
MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 40 OF 111	DRAWING SCALE

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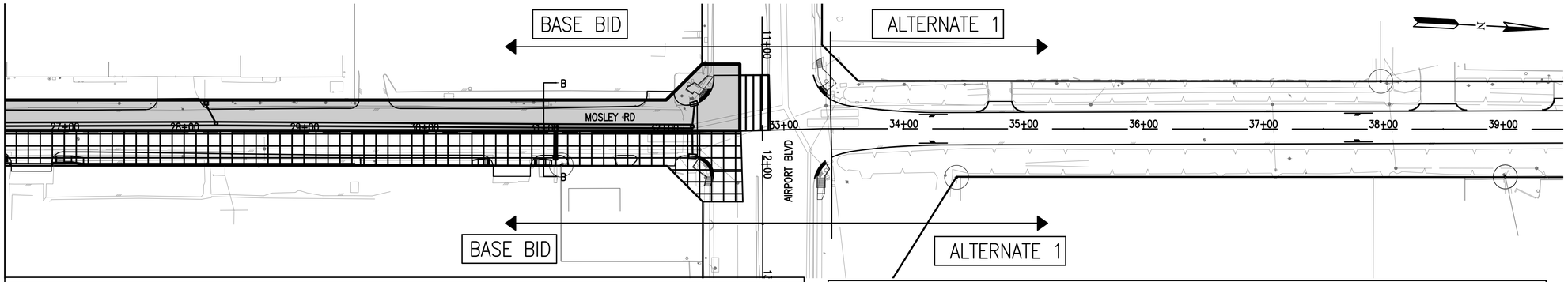


SEQUENCE OF CONTRUCTION

PHASE I
CONSTRUCT WATER LINE IMPROVEMENTS ON EITHER SIDE OF THE ROADWAY FROM SCRANTON ST TO IH-45 FRONTAGE ROAD. MAINTAIN MINIMUM 1~10-FT WIDE LANE IN EITHER DIRECTION AT ALL TIMES USING A COMBINATION OF LANE REDUCTION, LANE SHIFT, HARRIS COUNTY ONE-LANE TWO-WAY OPERATION AND STANDARD CITY OF HOUSTON DETOURS.

INSTALL TEMPORARY 8-INCH ASPHALT BASE TYPE B (BASE BID SEGMENT) AT ALL DISTURBED AREAS AS NEEDED TO MAINTAIN EITHER 1 OR 2-WAY TARFFIC FOR FUTURE TCP PHASES, INSTALL 10-INCH ASPHALT TYPE B BASE WITH 3-INCH ASPHALT TYPE D AND 8-INCH CEMENT STABILIZED FOR SECTIONS NORTH OF AIRPORT BLVD IF ALTERNATE 1 IS NOT RELEASED FOR CONSTRUCTION. TEMP ASPHALT IS INCIDENTAL TO TRAFFIC CONTROL PAY ITEM.

MAINTAIN DRAINAGE AT ALL TIMES.

PHASE II STEP I
MAINTAIN MINIMUM 1~12-FT WIDE NORTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE II STEP I TCP AND DETOURS. CONSTRUCT ALL WESTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, RCP STORM SEWER INSTALLATION, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS WITHIN THIS PHASE MUST DRIVE SOUTHBOUND ALONG HANSEN RD TO SCRANTON ST, THEN LEFT ON SCRANTON ST, THEN LEFT ON MOSLEY RD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

MAINTAIN DRAINAGE AT ALL TIMES. DO NOT BEGIN PHASE II STEP II UNTIL THIS PHASE IS COMPLETE.

PHASE II STEP II
OPEN TRAFFIC ON PHASE II STEP I LIMITS (CARS ONLY) AND CONTINUE TO MAINTAIN MINIMUM 1~12-FT WIDE NORTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE II STEP II TCP AND DETOURS. CONTINUE TO CONSTRUCT ALL WESTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, RCB CLEANING/DE-SILTING, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS WITHIN THIS PHASE MUST DRIVE SOUTHBOUND ALONG HANSEN RD TO SCRANTON ST, THEN LEFT ON SCRANTON ST, THEN LEFT ON MOSLEY RD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG SCRANTON ST AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

SEQUENCE OF CONSTRUCTION

PHASE III STEP I
MAINTAIN MINIMUM 1~12-FT WIDE SOUTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE III STEP I TCP AND DETOURS. CONSTRUCT ALL EASTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS MUST DRIVE SOUTHBOUND ALONG MOSLEY RD TO SCRANTON ST, THEN RIGHT ON SCRANTON ST AND THE RIGHT ON HANSEN RD TO AIRPORT BLVD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

MAINTAIN DRAINAGE AT ALL TIMES. DO NOT BEGIN PHASE III STEP II UNTIL THIS PHASE IS COMPLETE.

PHASE III STEP II
OPEN TRAFFIC ON PHASE III STEP I LIMITS AND CONTINUE TO MAINTAIN MINIMUM 1~12-FT WIDE SOUTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE III STEP II TCP AND DETOURS. CONTINUE TO CONSTRUCT ALL EASTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP CURB, REINFORCED CONCRETE PAVEMENT, PARTIAL SIDEWALKS, PARTIAL/COMPLETE INLET REPLACEMENTS, DRIVEWAYS AND APPURTENANCES). ALL TRUCKS/CRANE/RIGS WITHIN THIS PHASE MUST DRIVE SOUTHBOUND ALONG MOSLEY RD TO SCRANTON ST, THEN RIGHT ON SCRANTON ST, THEN RIGHT ON HANSEN RD TO AIRPORT BLVD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.

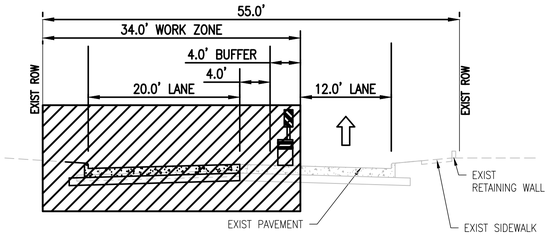
IMPLEMENT TEMPORARY TYPICAL ONE-LANE CLOSURE ALONG SCRANTON ST AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND IMPROVEMENTS.

MAINTAIN DRAINAGE AT ALL TIMES.

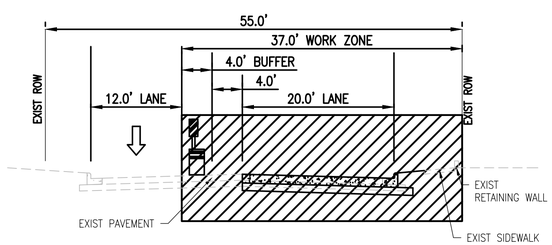
AIRPORT BLVD PHASE
MAINTAIN MINIMUM 2~12-FT WIDE EASTBOUND LANES AND ALL WESTBOUND LANES OPEN AT ALL TIMES BY IMPLEMENTING TCP AND DETOUR.
CONSTRUCT PROP CURB, REINFORCED CONCRETE PAVEMENT, SIDEWALKS, LIMITED STORM SEWER AND APPURTENANCES.

MAINTAIN DRAINAGE AT ALL TIMES. DO NOT BEGIN PHASE III STEP II UNTIL THIS PHASE IS COMPLETE.

NORTHERN SIDEWALKS AND RAMPS CAN BE COMPLETED AS PART OF THIS PHASE BY IMPLEMENTING TYPICAL CITY OF HOUSTON ONE LANE CLOSURE.
HOWEVER, BOTH ROADWAY AND SIDEWALKS/RAMPS CAN NOT BE CONSTRUCTED CONCURRENTLY.



PHASE II STEP I
TYPICAL SECTION B-B
N.T.S



PHASE III STEP I
TYPICAL SECTION B-B
N.T.S

LEGEND

- BASE BID (PHASE II STEP I)
- BASE BID (PHASE II STEP II)
- BASE BID (PHASE III STEP I)
- BASE BID (PHASE III STEP II)
- BASE BID (AIRPORT BLVD)
- WORK ZONE

NOTES
1. CONTRACTOR TO IMPLEMENT PEDESTRIAN DETOURS USING COH STD DTL 02893-18.
2. CONTRACTOR MUST COORDINATE WITH RICK SCHNEIDER MIDDLE SCHOOL PERSONAL FOR POTENTIAL TRAFFIC IMPACTS AT LEAST 2 WEEKS IN ADVANCE.

RICK SCHNEIDER MIDDLE SCHOOL
8420 EASTHAVEN BLVD
HOUSTON, TX 77075
(713) 740-0920

0' 50' 100'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 41 OF 111	DRAWING SCALE

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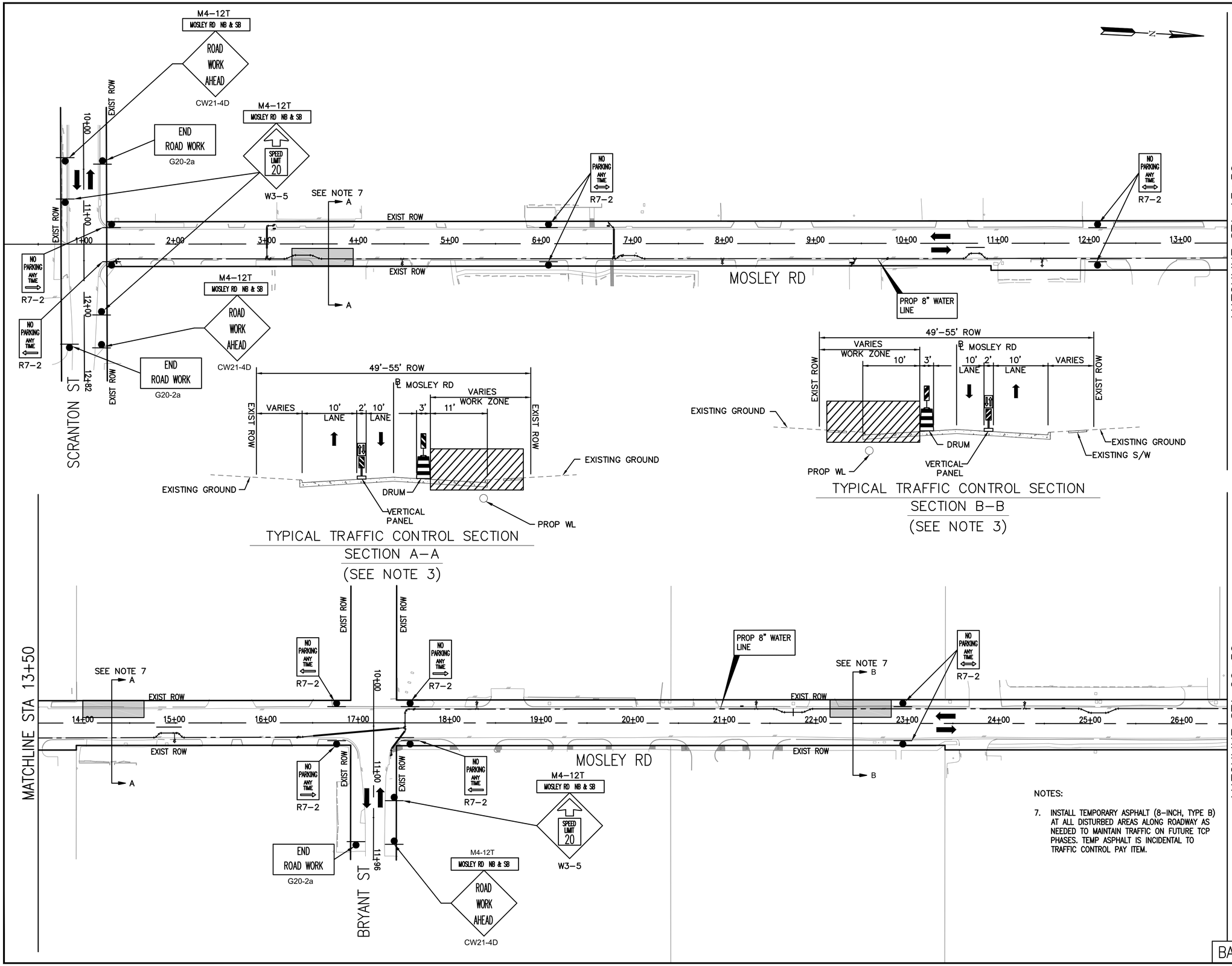

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- DRUMS
- VERTICAL PANEL
- TEMP GROUND MOUNTED SIGNS
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL

No.	Date	Revisions	App.

NOTES:

1. INSTALL ALL WATER LINES IN THIS PHASE.
2. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
3. CONSTRUCT WATER LINE USING A COMBINATION OF LANE REDUCTION, LANE SHIFT DETAILS, HARRIS COUNTY ONE–LANE TWO–WAY OPERATION AND STANDARD DETOURS AS DEEMED APPROPRIATE.
4. TWO–WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. REFER TO CITY OF HOUSTON STANDARD DETOUR DETAILS IF DETOUR IS REQUIRED FOR THE WORK. DETOUR INCIDENTAL TO TRAFFIC CONTROL PAY ITEM.
6. INSTALL CONCRETE BARRIER LOW PROFILE CONC BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6–FEET FROM EDGE OF TRAVEL LANES DURING WATER LINE INSTALLATION.

0' 50' 100'
SCALE IN FEET

NOTES:

7. INSTALL TEMPORARY ASPHALT (8–INCH, TYPE B) AT ALL DISTURBED AREAS ALONG ROADWAY AS NEEDED TO MAINTAIN TRAFFIC ON FUTURE TCP PHASES. TEMP ASPHALT IS INCIDENTAL TO TRAFFIC CONTROL PAY ITEM.

Lockwood, Andrews & Newnam, Inc.
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2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
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FB NO. P-6234
MARK WOODWARD
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LICENSED
PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
TRAFFIC CONTROL PLAN
PHASE I

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

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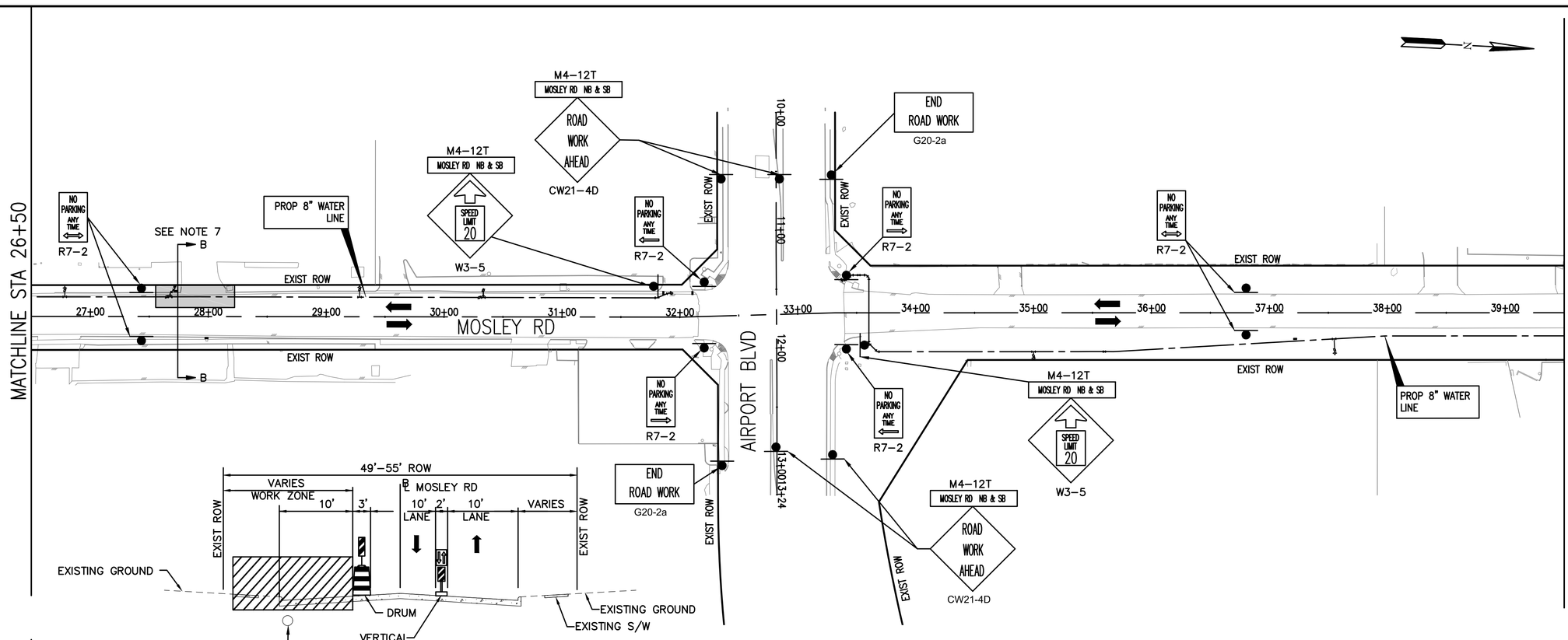
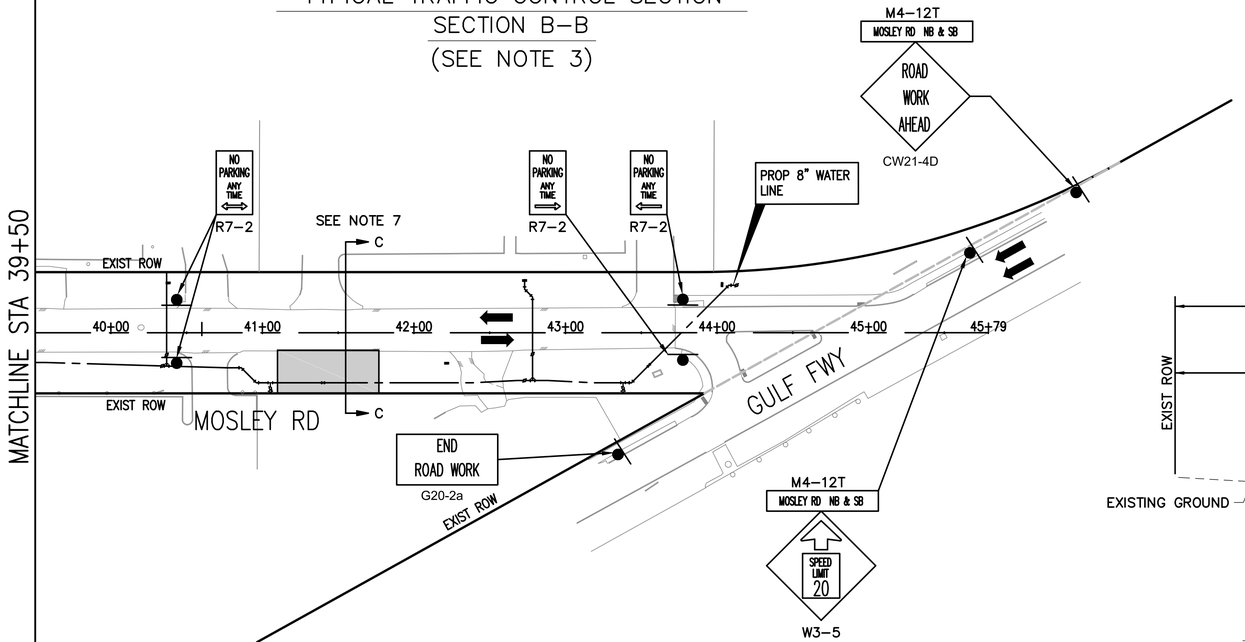
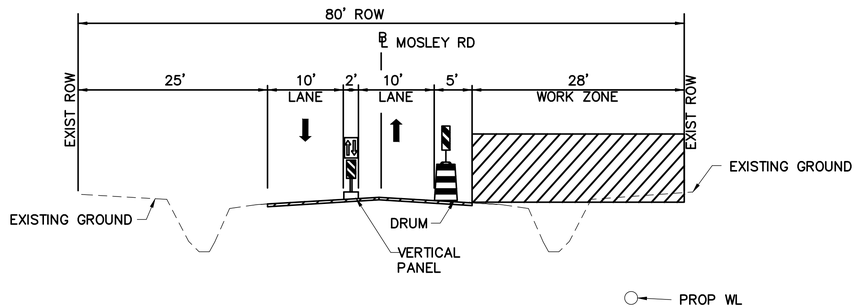


TYPICAL TRAFFIC CONTROL SECTION
SECTION B–B
(SEE NOTE 3)





TYPICAL TRAFFIC CONTROL SECTION
SECTION C–C
(SEE NOTE 3)

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- DRUMS
- VERTICAL PANEL
- TEMP GROUND MOUNTED SIGNS
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL

NOTES:

1. INSTALL ALL WATER LINES IN THIS PHASE.
2. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
3. CONSTRUCT WATER LINE USING A COMBINATION OF LANE REDUCTION, LANE SHIFT DETAILS, HARRIS COUNTY ONE–LANE TWO–WAY OPERATION AND STANDARD DETOURS AS DEEMED APPROPRIATE.
4. TWO–WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. REFER TO CITY OF HOUSTON STANDARD DETOUR DETAILS IF DETOUR IS REQUIRED FOR THE WORK. DETOUR INCIDENTAL TO TRAFFIC CONTROL PAY ITEM.
6. INSTALL CONCRETE BARRIER LOW PROFILE CONC BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6–FEET FROM EDGE OF TRAVEL LANES DURING WATER LINE INSTALLATION.

0' 50' 100'
SCALE IN FEET

NOTES:

7. INSTALL TEMPORARY ASPHALT (8–INCH, TYPE B) AT ALL DISTURBED AREAS ALONG ROADWAY AS NEEDED TO MAINTAIN TRAFFIC ON FUTURE TCP PHASES. TEMP ASPHALT IS INCIDENTAL TO TRAFFIC CONTROL PAY ITEM.

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96172
LICENSED PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
TRAFFIC CONTROL PLAN
PHASE I

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

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FOR CITY OF HOUSTON USE ONLY

BASE BID

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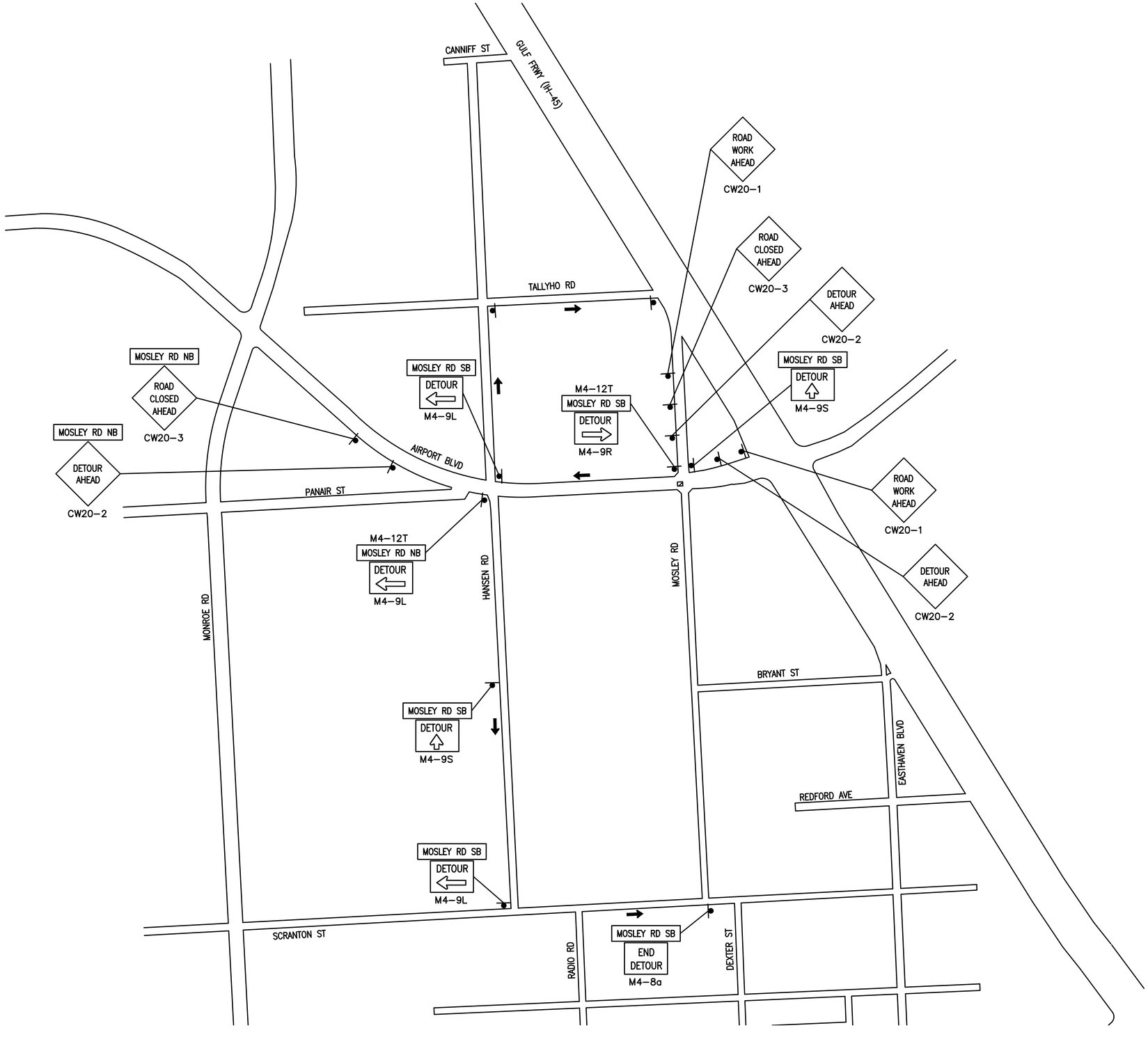

LEGEND

- WORK ZONE
- TRAFFIC FLOW
- SIGN
- TYPE III BARRICADE W/ ROAD CLOSED SIGN (R11-2)

NOTES

1. ALL TRUCKS/CRANES/RIGS MUST BE DETOURED TO HANSEN RD SOUTHBOUND, THEN EASTBOUND ALONG SCRANTRON ST TO MOSLEY RD. CONTRACTOR TO COORDINATE WITH BUSINESSES OWNERS FOR DETOURING.
2. SIGNS WITH ASTERISK (**) ARE ONLY FOR NW INTERSECTION OF MOSLEY RD AND BRYANT ST WORK CLOSURE. DO NOT CLOSE THE INTERSECTION OR PLACE SIGNS OR BARRICADES UNTIL WORK BEGINS.
3. PLACE DETOUR SIGNS ON SAME POLES WHERE OVERLAPPING SIGN OCCURS DURING WORK AT THE NW INTERSECTION OF MOSLEY RD AND BRYANT ST.

N

0' 400' 800'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 96012 LICENSED PROFESSIONAL ENGINEER 7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN AIRPORT INTERSECTION DETOUR

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=400' VERT: N/A
SHEET NO. 44 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

BASE BID

DWG FILE: P:\120\120-12106-013\4-0-PRODUCTION-WORKING\4-1-BIM-CAD\TCP\TCP-DETR-ALL-PHASES.DWG

PEN TABLE: LAN-COH.ctb

USERNAME: Nagarabsina, Pavan

PLOTED: 7/28/2023 11:56 AM

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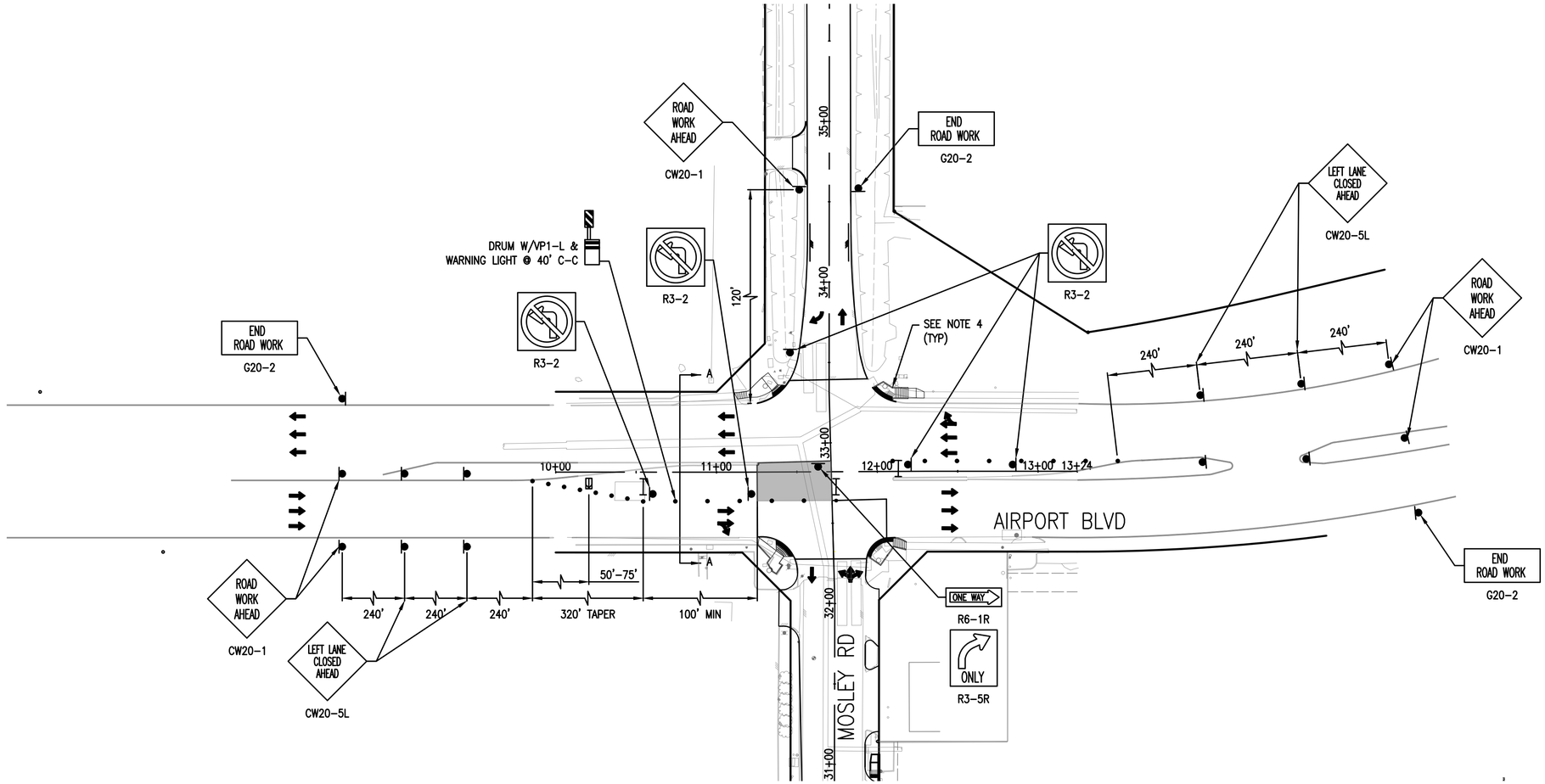

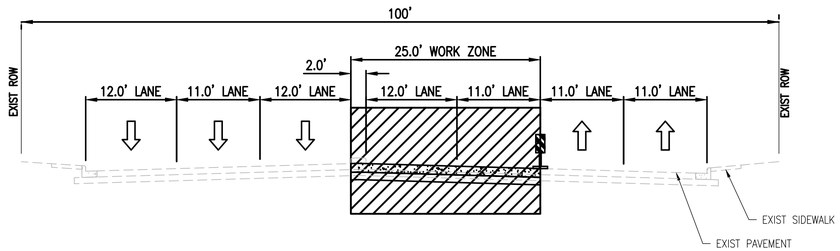

AIRPORT INTERSECTION TCP
TYPICAL SECTION A-A
N.T.S

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
3. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
4. IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR WHEELCHAIR/SIDEWALK REPLACEMENTS AND OTHER IMPROVEMENTS. CONTRACTOR SHALL NOT WORK ON BOTH ROADWAY PAVEMENT AND SIDEWALK/WHEELCHAIR RAMPS CONCURRENTLY.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
VOID
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP AIRPORT BLVD INTERSECTION

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 45 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

BASE BID

PLOTED: 7/28/2023 11:57 AM
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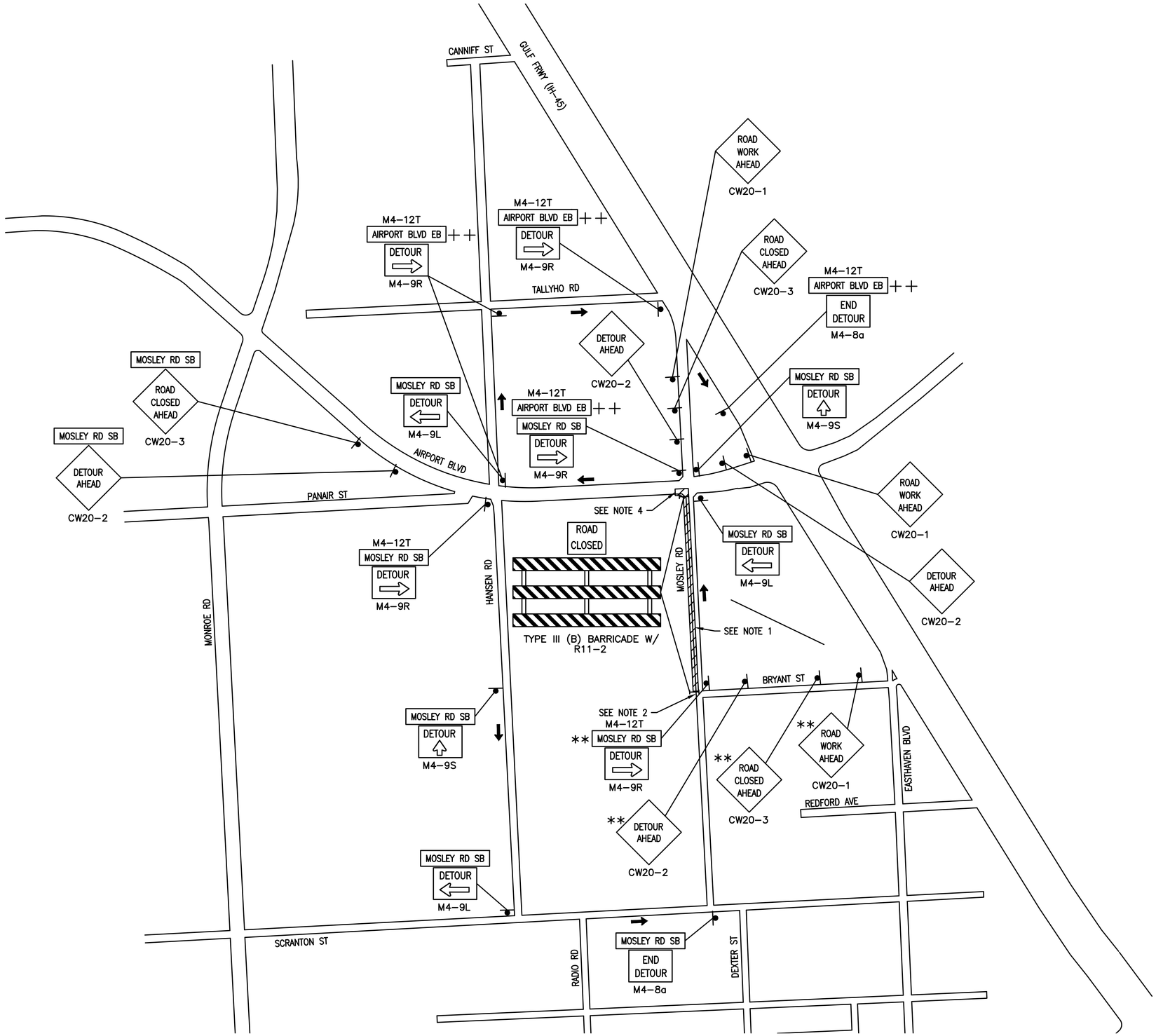

LEGEND

- WORK ZONE
- TRAFFIC FLOW
- SIGN
- TYPE III BARRICADE W/ ROAD CLOSED SIGN (R11-2)

NOTES

1. ALL TRUCKS/CRANES/RIGS MUST BE DETOURED TO HANSEN RD SOUTHBOUND, THEN EASTBOUND ALONG SCRANTRON ST TO MOSLEY RD. CONTRACTOR TO COORDINATE WITH BUSINESSES OWNERS FOR DETOURING.
2. SIGNS WITH ASTERISK (**) ARE ONLY FOR NW INTERSECTION OF MOSLEY RD AND BRYANT ST WORK CLOSURE. DO NOT CLOSE THE INTERSECTION OR PLACE SIGNS OR BARRICADES UNTIL WORK BEGINS.
3. PLACE DETOUR SIGNS ON SAME POLES WHERE OVERLAPPING SIGN OCCURS DURING WORK AT THE NW INTERSECTION OF MOSLEY RD AND BRYANT ST.
4. SIGNS WITH CROSS SYMBOL (++) ARE ONLY FOR SW QUADRANT OF MOSLEY RD AND AIRPORT BLVD. DO NOT CLOSE QUADRANT/INTERSECTION, PLACE SIGNS OR BARRICADES UNTIL WORK BEGINS.

N

0' 400' 800'
SCALE IN FEET

BASE BID

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS — MATTHEW W. LOCKWOOD — 96012 — LICENSED PROFESSIONAL ENGINEER — 7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN PHASE II STEP I DETOUR

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=400' VERT: N/A
SHEET NO. 46 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

DWG FILE: P:\120\120-12106-013\4-0-PRODUCTION-WORKING\4-1-BIM-CAD\TCP\TCP-DETR-ALL-PHASES.DWG
PEN TABLE: LAN-COH.ctb
USERNAME: Nagarabsina, Pavan
PLOTED: 7/28/2023 11:57 AM
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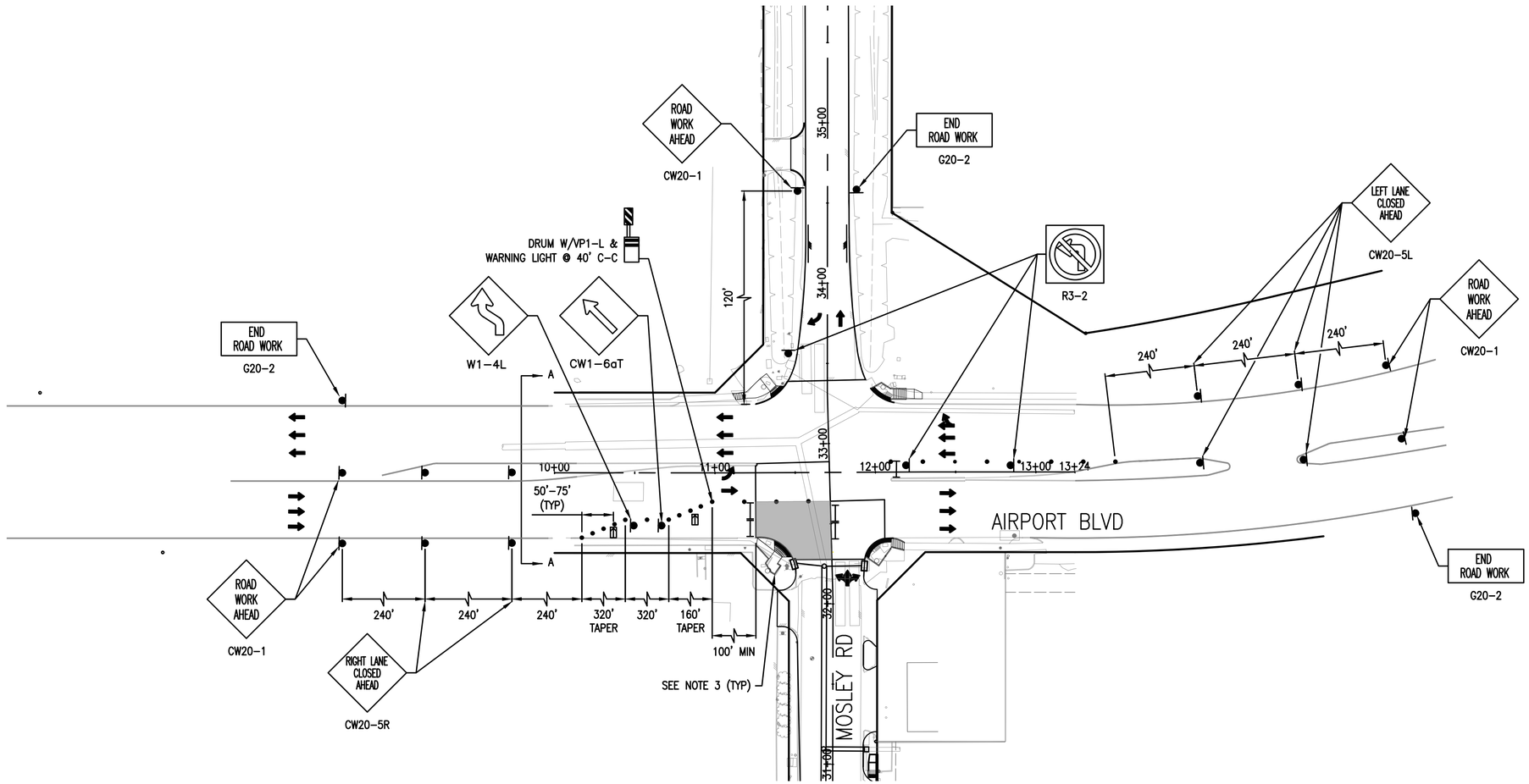

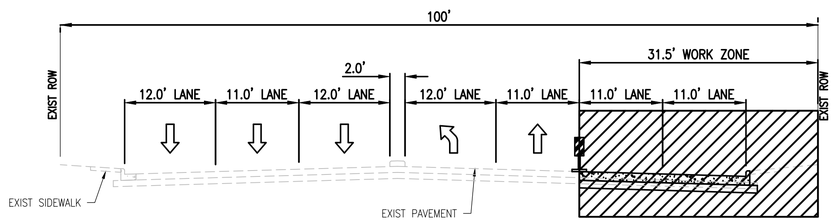

AIRPORT INTERSECTION TCP
TYPICAL SECTION A-A
N.T.S

BASE BID

N

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
3. IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR WHEELCHAIR/SIDEWALK REPLACEMENTS AND OTHER IMPROVEMENTS. CONTRACTOR SHALL NOT WORK ON BOTH ROADWAY PAVEMENT AND SIDEWALKS/WHEELCHAIR RAMPS CONCURRENTLY.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96672
LICENSED
PROFESSIONAL ENGINEER
VOID
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE II STEP I &
AIRPORT BLVD INTERSECTION

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 47 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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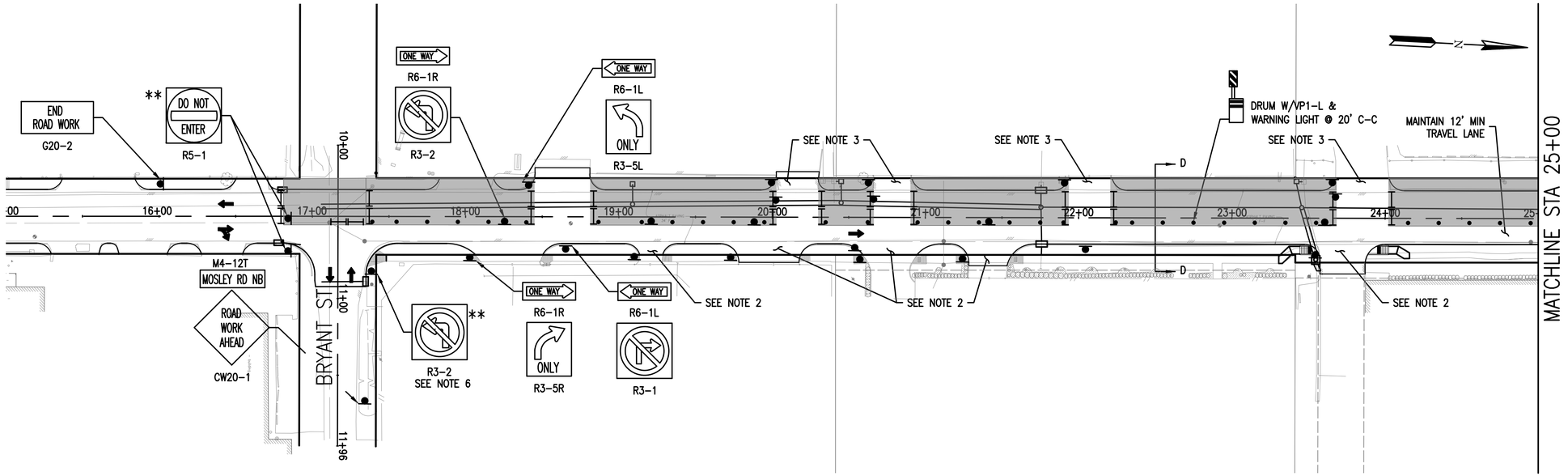
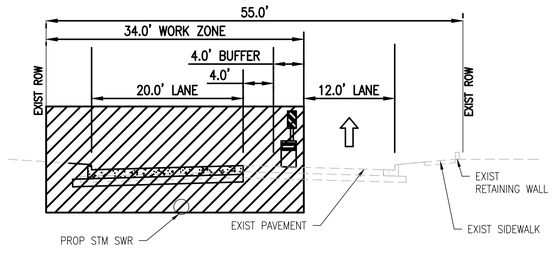
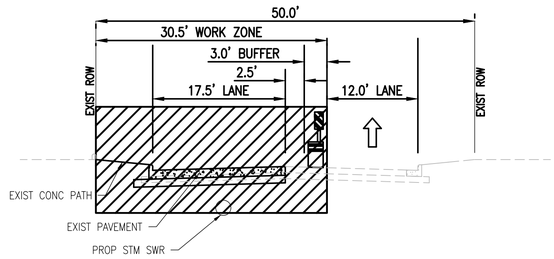
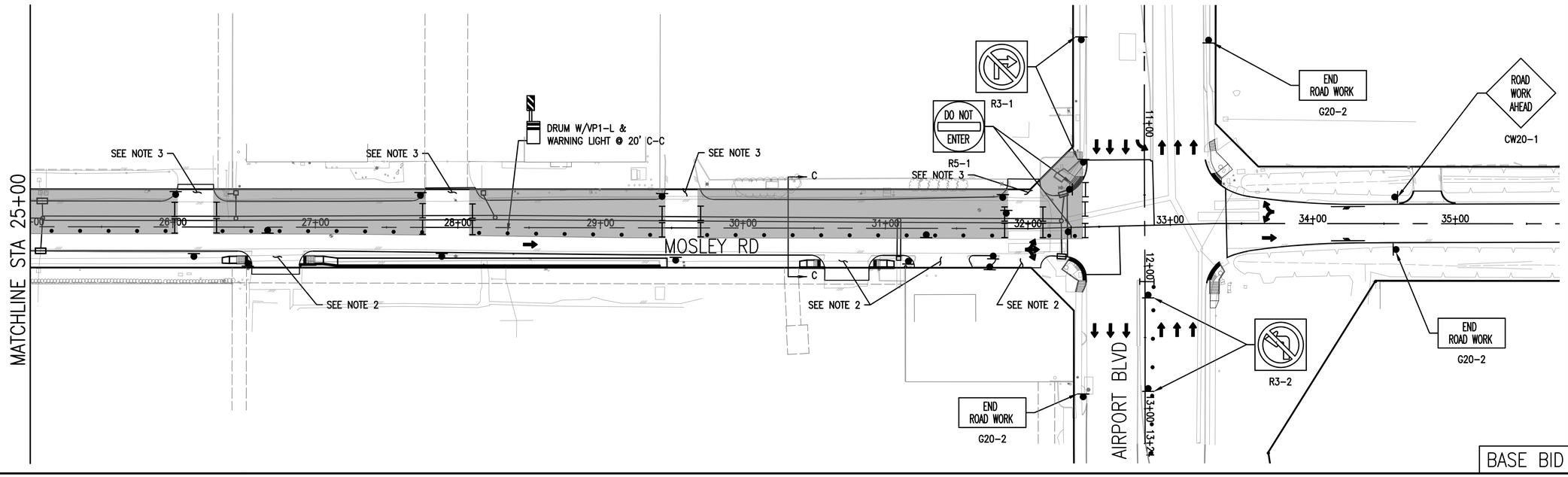




PHASE II STEP I
TYPICAL SECTION C-C
N.T.S



PHASE II STEP I
TYPICAL SECTION D-D
N.T.S



LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL SIGNS (R6-1R W/R3-5R & R6-1R W/R3-2) AT EACH DRIVEWAY ON EASTERN SIDE OF MOSLEY RD.
3. INSTALL SIGNS (R6-1L W/R3-5L & R6-1L W/R3-1) AT EACH DRIVEWAY ON WESTERN SIDE OF MOSLEY RD.
4. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
6. TRAFFIC SIGNS AND DEVICES IDENTIFIED WITH AN ASTERISK SYMBOL (**) ARE TO BE INSTALLED DURING INTERSECTION (QUADRANT) WORK. DO NOT BEGIN WORKING OR CLOSE INTERSECTION/ QUADRANT UNTIL WORK NORTH OF INTERSECTION HAS BEEN COMPLETED.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE II STEP I & BRYANT ST INTERSECTION

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 48 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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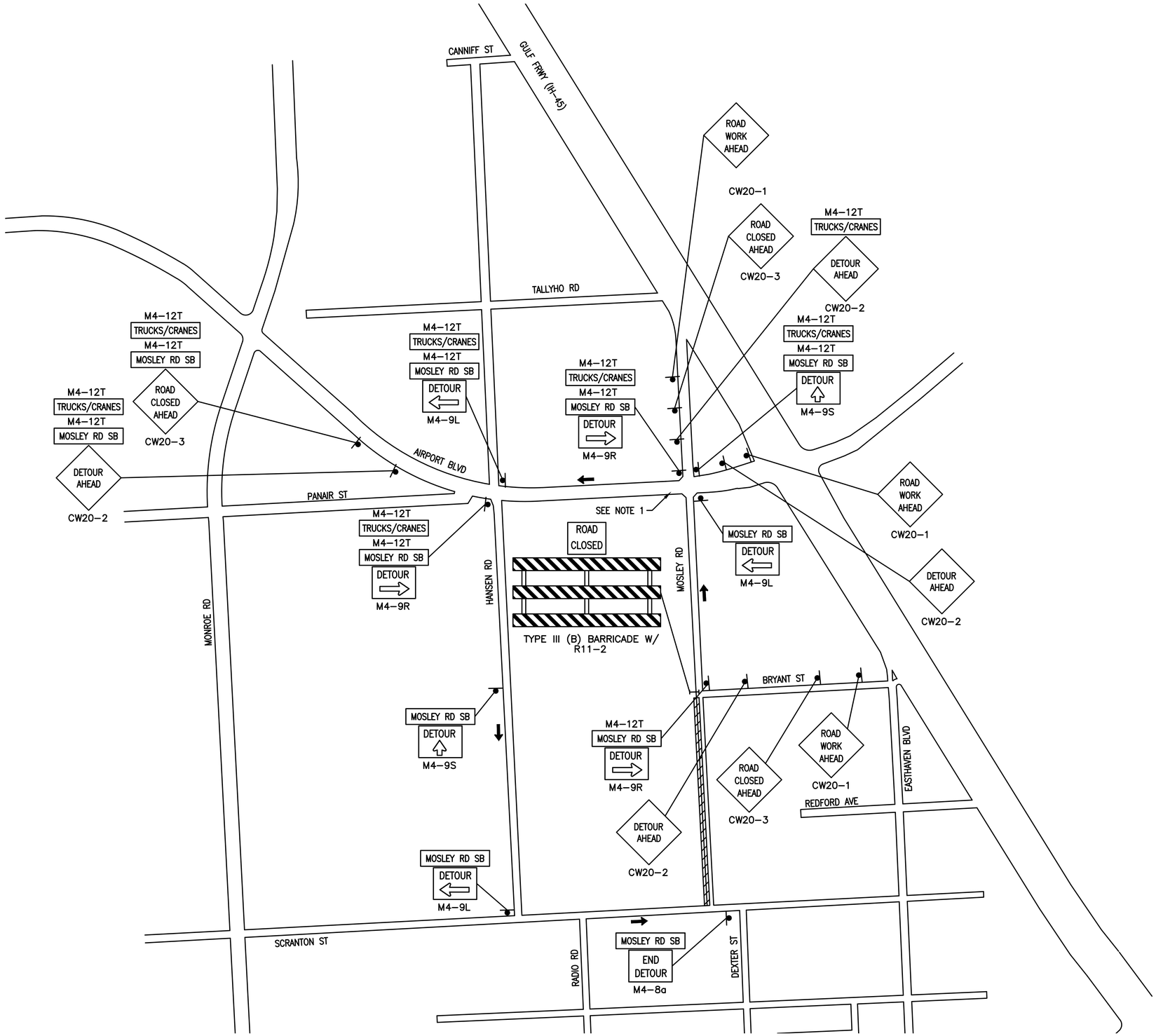

LEGEND

- WORK ZONE
- TRAFFIC FLOW
- SIGN
- TYPE III BARRICADE W/ ROAD CLOSED SIGN (R11-2)

NOTES

1. ALL TRUCKS/CRANES/RIGS MUST BE DETOURED TO HANSEN RD SOUTHBOUND, THEN EASTBOUND ALONG SCRANTRON ST TO MOSLEY RD. CONTRACTOR TO COORDINATE WITH BUSINESSES OWNERS FOR DETOURING.
2. PLACE DETOUR SIGNS ON SAME POLES WHERE OVERLAPPING SIGN OCCURS DURING WORK AT THE NW INTERSECTION OF MOSLEY RD AND BRYANT ST.

N

0' 400' 800'
SCALE IN FEET

BASE BID

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS — MICHAEL W. LOCKWOOD — 96012 — LICENSED PROFESSIONAL ENGINEER — 7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN
PHASE II STEP II DETOUR

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=400' VERT: N/A
SHEET NO. 49 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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PLOTED: 7/28/2023 11:57 AM
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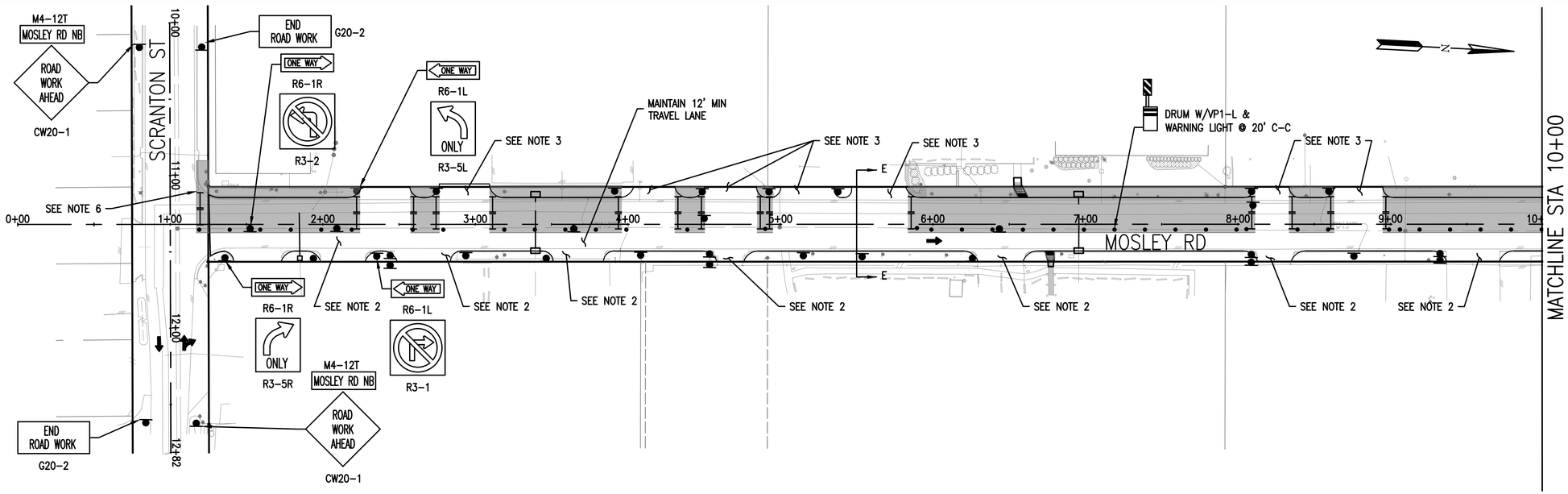
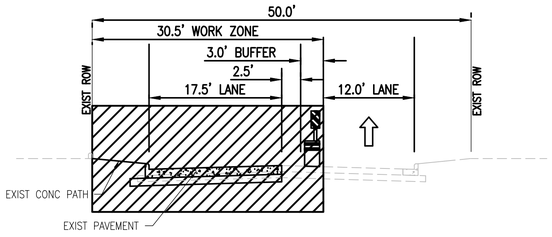
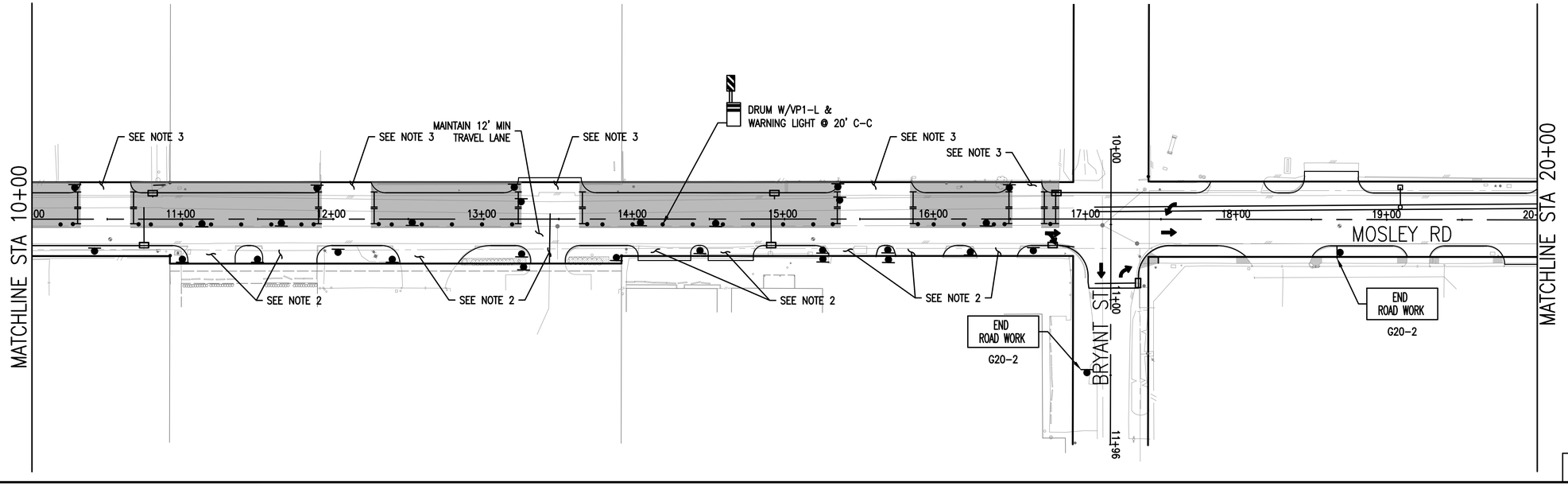




PHASE III STEP II
TYPICAL SECTION E-E
N.T.S



BASE BID

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL SIGNS (R6-1R W/R3-5R & R6-1L W/R3-2) AT EACH DRIVEWAY ON EASTERN SIDE OF MOSLEY RD.
3. INSTALL SIGNS (R6-1L W/R3-5L & R6-1L W/R3-1) AT EACH DRIVEWAY ON WESTERN SIDE OF MOSLEY RD.
4. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
6. IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG SCRANTON ST USING THE TCP TYPICAL 3-WAY INTERSECTION DETAILS FOR ROADWAY TIE-IN AND OTHER IMPROVEMENTS.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOOD WARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE II STEP II

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 50 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

PEN TABLE: LAN-COH.ctb
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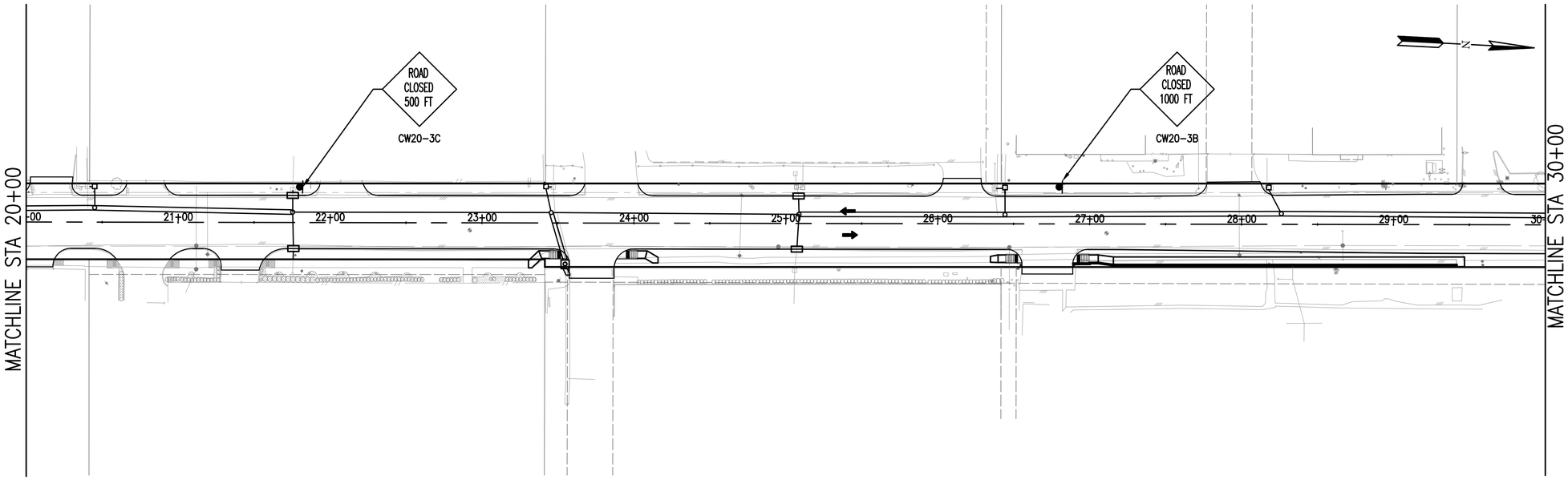

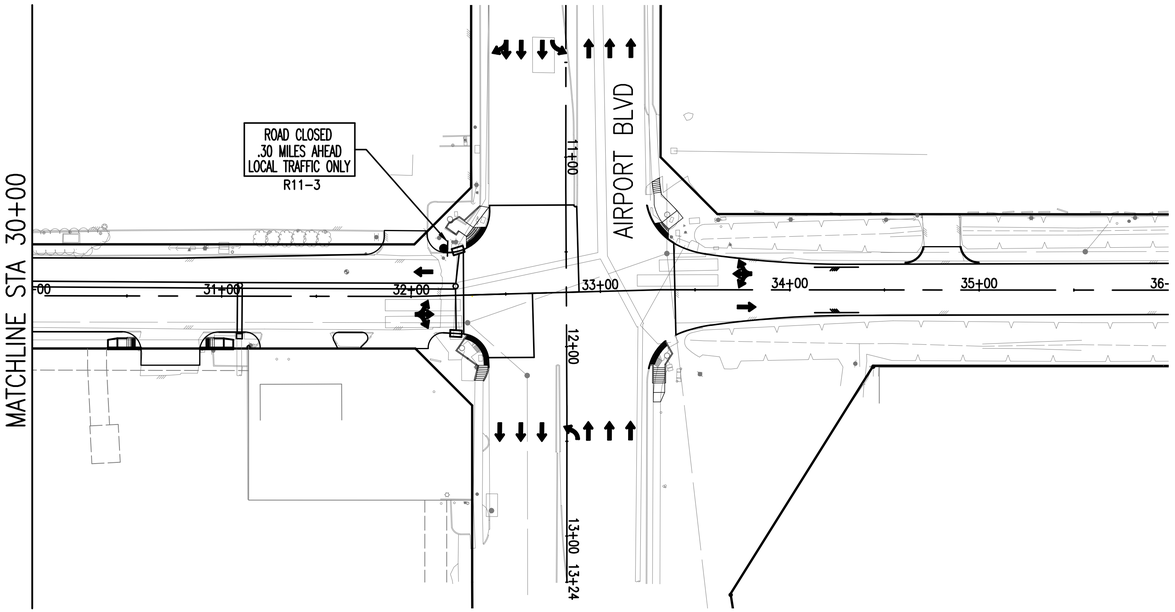

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL SIGNS (R6-1R W/R3-5R & R6-1L W/R3-2) AT EACH DRIVEWAY ON EASTERN SIDE OF MOSLEY RD.
3. INSTALL SIGNS (R6-1L W/R3-5L & R6-1L W/R3-1) AT EACH DRIVEWAY ON WESTERN SIDE OF MOSLEY RD.
4. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.

0' 40' 80'
SCALE IN FEET

BASE BID

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK W. DELAWDER
96672
LICENSED PROFESSIONAL ENGINEER
7/28/2023

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE II STEP II

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 51 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

FILE PATH: P:\120\120-12108-013\4-0-Production-Working\4-1-BIM-CAD\TCP\TCP-PH2-S2.dwg
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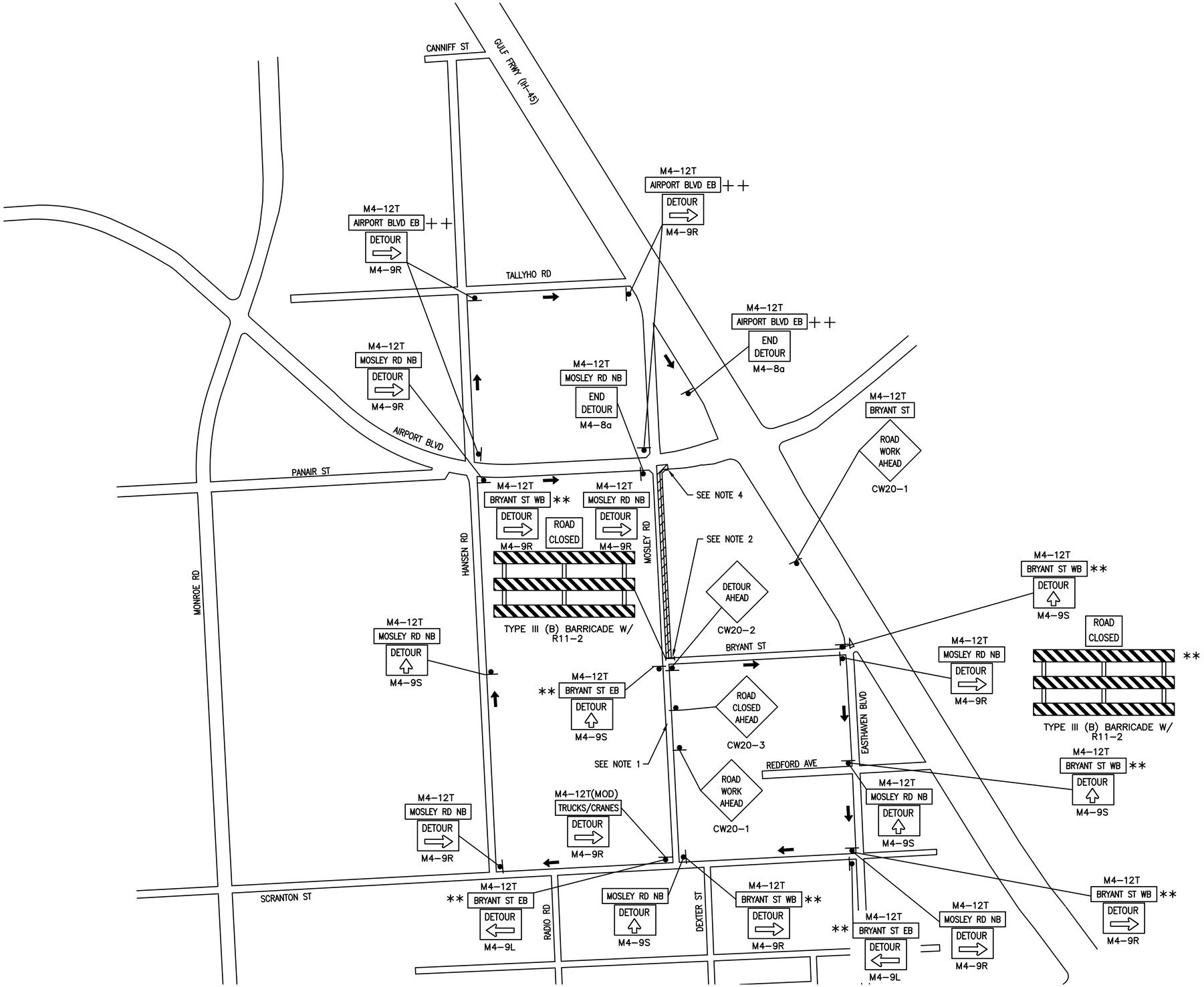
PEN TABLE: LAN-COH.ctb
PLOTED: 7/28/2023 11:57 AM



LEGEND

- WORK ZONE
- TRAFFIC FLOW
- SIGN
- TYPE III BARRICADE W/ ROAD CLOSED SIGN (R11-2)

NOTES

1. ALL TRUCKS/CRANES/RIGS ENTERING/EXITING YARDS/BUSINESSES MUST TRAVEL MOSLEY SOUTHBOUND TO SCRANTON ST, THEN WESTBOUND ALONG SCRANTON ST TO HANSEN RD, THEN NORTHBOUND ALONG HANSEN RD TO AIRPORT BLVD. CONTRACTOR TO COORDINATE WITH BUSINESSES OWNERS FOR DETOURING.
2. SIGNS WITH ASTERISK (**) ARE ONLY FOR NE INTERSECTION WORK CLOSURE. DO NOT CLOSE THE INTERSECTION OR PLACE SIGNS OR BARRICADES UNTIL WORK BEGINS.
3. PLACE DETOUR SIGNS ON SAME POLES WHERE OVERLAPPING SIGN OCCURS DURING WORK AT THE NE INTERSECTION OF MOSLEY RD AND BRYANT ST.
4. SIGNS WITH CROSS SYMBOL (++) ARE ONLY FOR SE QUADRANT OF MOSLEY RD AND AIRPORT BLVD. DO NOT CLOSE QUADRANT/INTERSECTION, PLACE SIGNS OR BARRICADES UNTIL WORK BEGINS.

N

0' 400' 800'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS — MARK WOODWARD — 96072 — LICENSED PROFESSIONAL ENGINEER — 7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN PHASE III STEP I DETOUR

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. HORZ: 1"=400'
VERT: N/A
SHEET NO. 52 OF 111 DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

BASE BID

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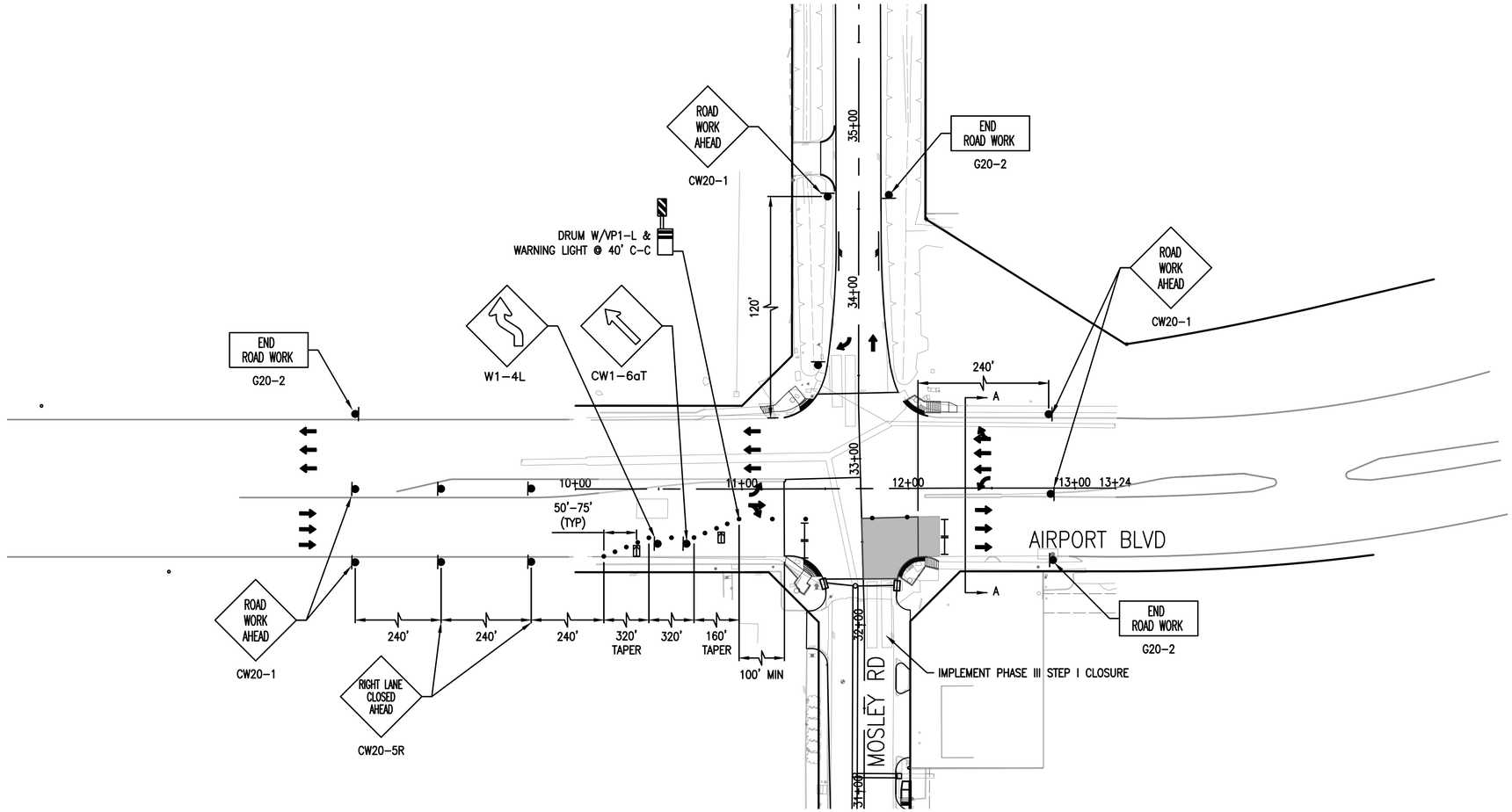

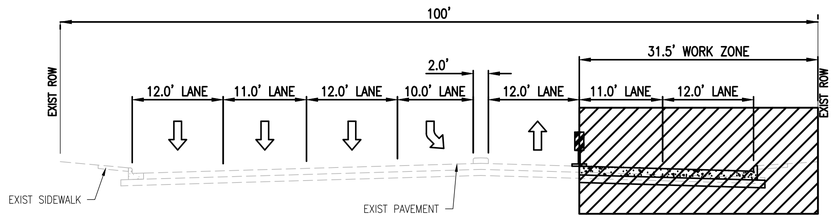

AIRPORT INTERSECTION TCP
TYPICAL SECTION A-A
N.T.S

BASE BID

N

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE III STEP I &
AIRPORT BLVD INTERSECTION

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40'
	VERT: N/A
SHEET NO. 53 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

PLOTED: 7/28/2023 11:57 AM
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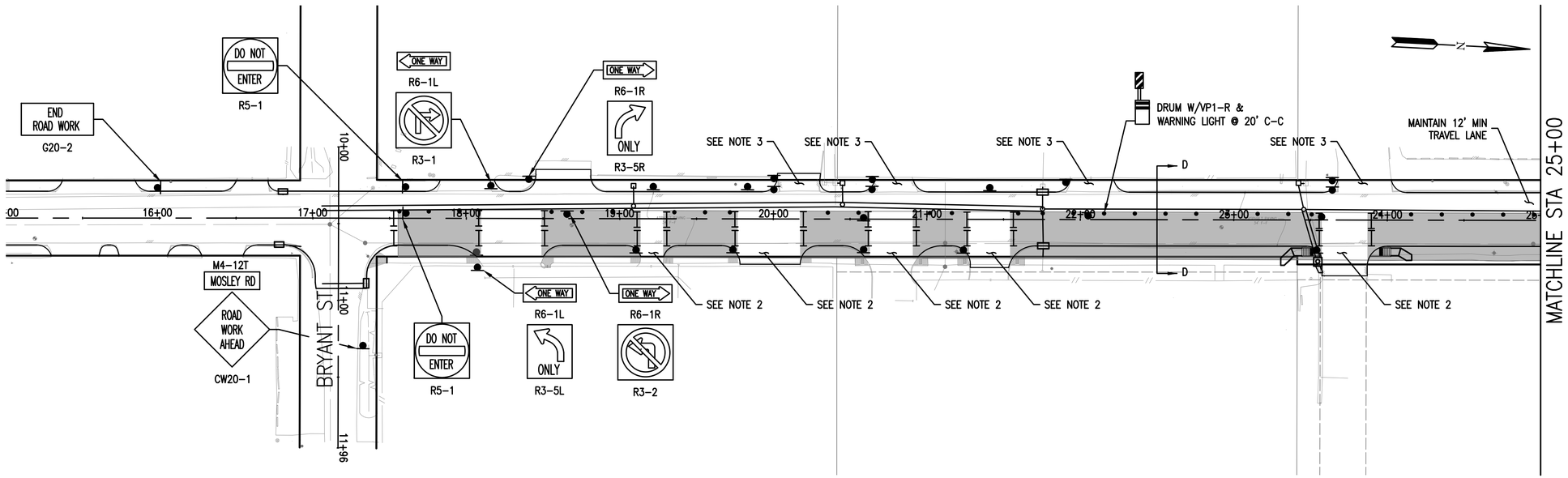
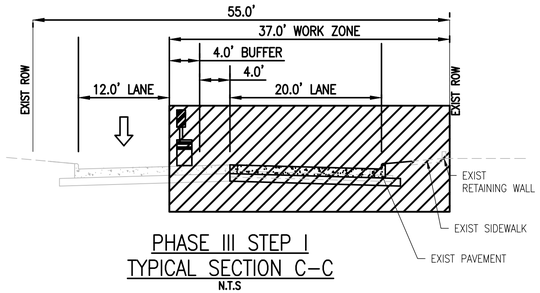
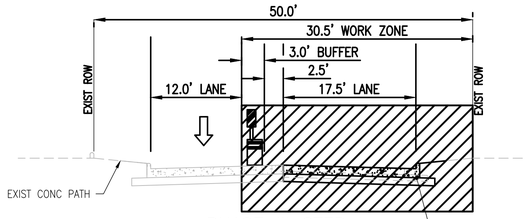
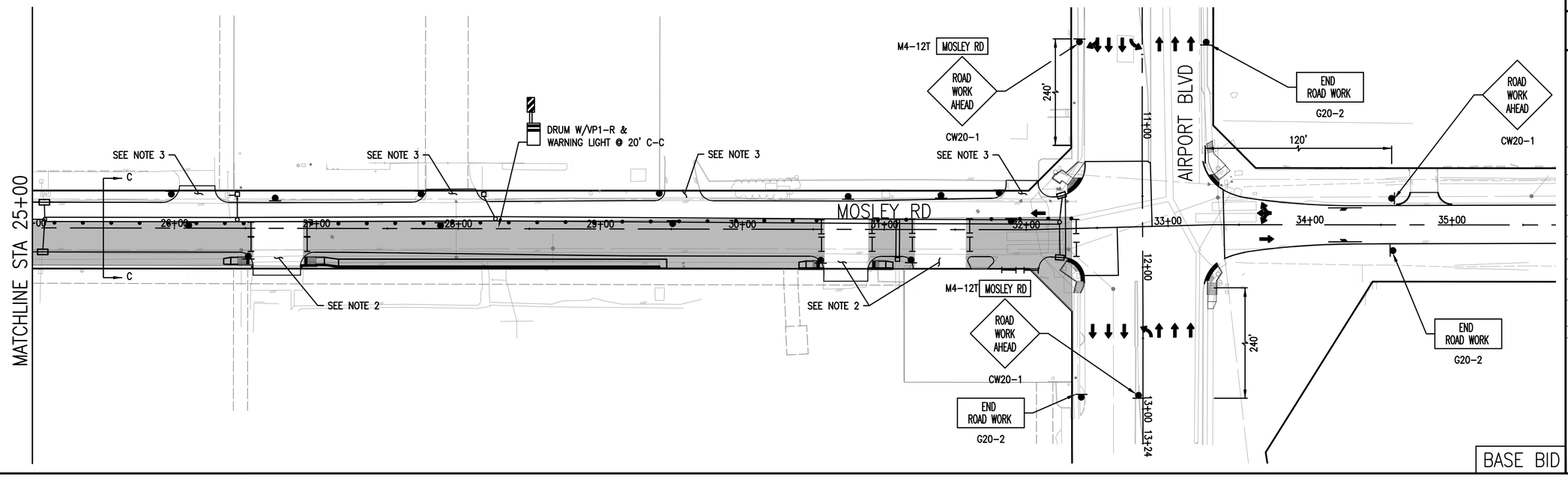




PHASE III STEP I
TYPICAL SECTION C-C
N.T.S



PHASE III STEP I
TYPICAL SECTION D-D
N.T.S



LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL SIGNS (R6-1L W/R3-5L & R6-1L W/R3-1) AT EACH DRIVEWAY ON EASTERN SIDE OF MOSLEY RD.
3. INSTALL SIGNS (R6-1R W/R3-5R & R6-1R W/R3-2) AT EACH DRIVEWAY ON WESTERN SIDE OF MOSLEY RD.
4. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.

No.	Date	Revisions	App.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96082
LICENSED PROFESSIONAL ENGINEER
07/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE III STEP I

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 54 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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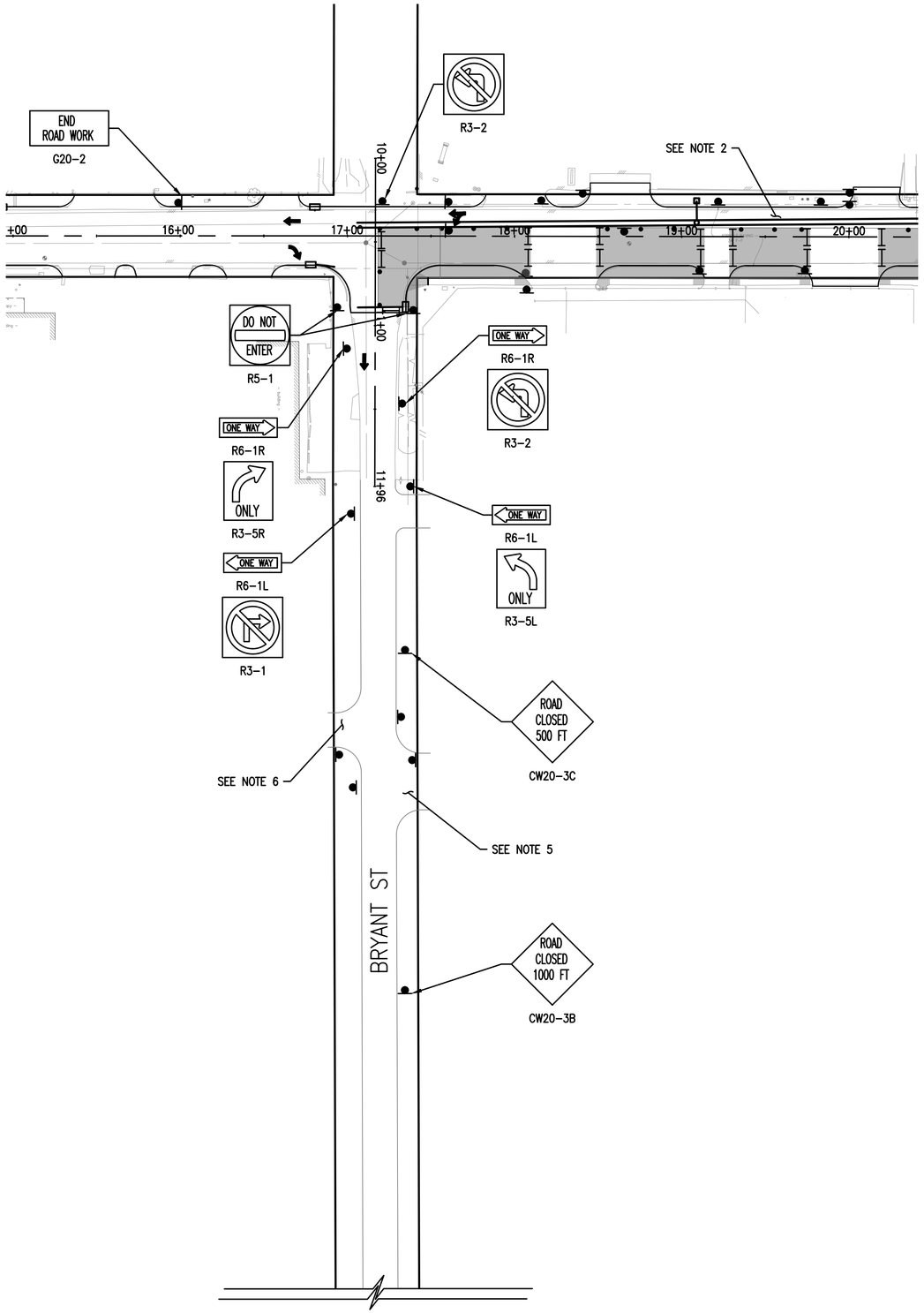

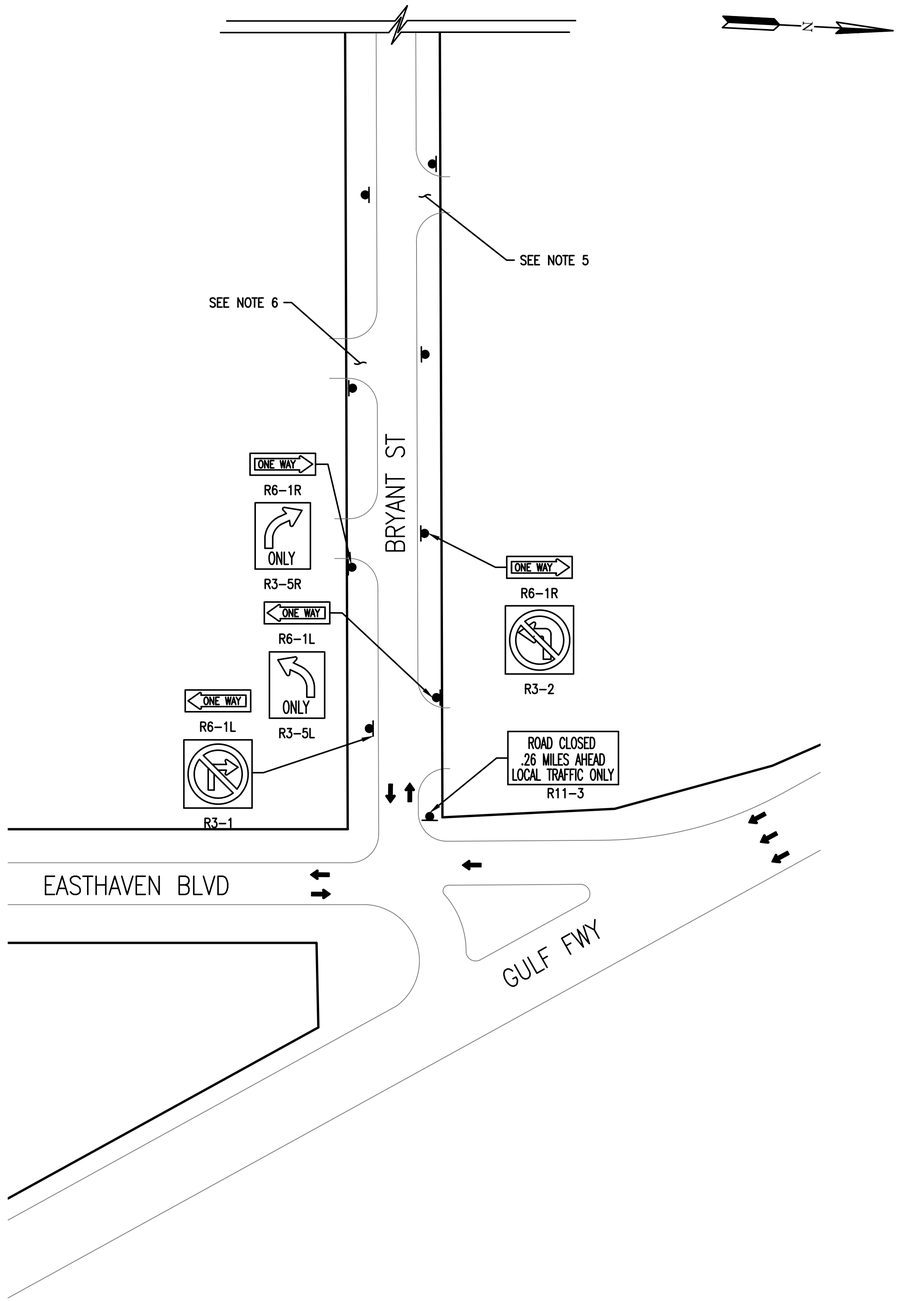

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. MAINTAIN PHASE III STEP I TRAFFIC CONTROL DURING INTERSECTION WORK.
3. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
4. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
5. INSTALL SIGNS (R6-1R W/R3-5R & R6-1R W/R3-2) AT EACH DRIVEWAY ON NORTHERN SIDE OF MOSLEY RD.
6. INSTALL L SIGNS (R6-1R W/R3-5R & R6-1R W/R3-2) AT EACH DRIVEWAY ON SOUTHERN SIDE OF MOSLEY RD.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE III STEP I INTERSECTION

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 55 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

BASE BID

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PLOTED: 7/28/2023 11:58 AM
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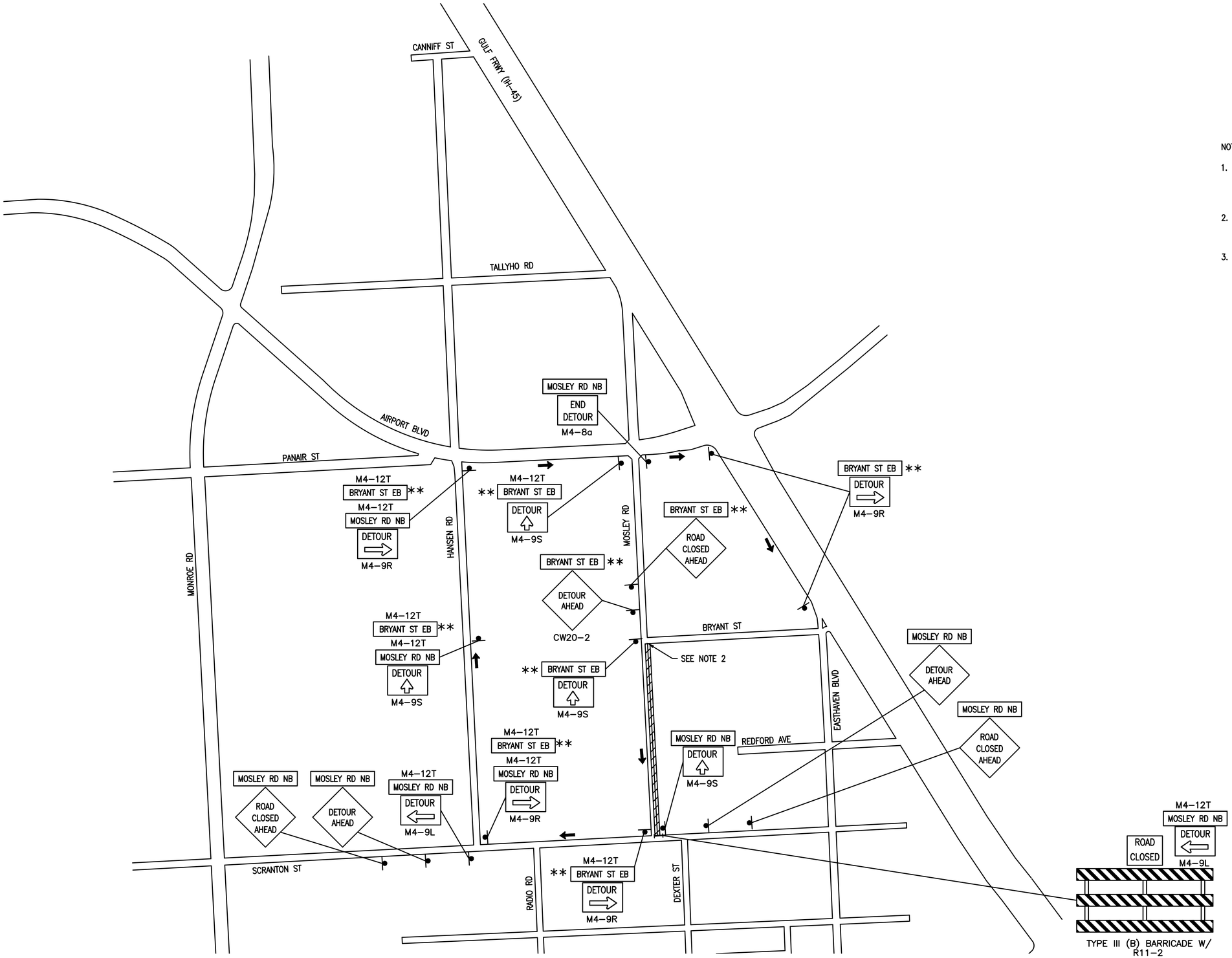

LEGEND

- WORK ZONE
- TRAFFIC FLOW
- SIGN
- TYPE III BARRICADE W/ ROAD CLOSED SIGN (R11-2)

NOTES

1. ALL TRUCKS/CRANES/RIGS WITHIN THIS PHASE MUST DRIVE SOUTHBOUND ALONG MOSLEY RD TO SCRANTON ST, THEN RIGHT ON SCRANTON ST, THEN RIGHT ON HANSEN RD TO AIRPORT BLVD. COORDINATE WITH BUSINESS REPS TO CONVEY INFORMATION.
2. SIGNS WITH ASTERISK (**) ARE ONLY FOR SE INTERSECTION WORK CLOSURE. DO NOT CLOSE THE INTERSECTION OR PLACE SIGNS OR BARRICADES UNTIL WORK BEGINS.
3. PLACE DETOUR SIGNS ON SAME POLES WHERE OVERLAPPING SIGN OCCURS DURING WORK AT THE NE INTERSECTION OF MOSLEY RD AND BRYANT ST.

N

0' 400' 800'
SCALE IN FEET

BASE BID

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MATTHEW D. WOLDT 96012 LICENSED PROFESSIONAL ENGINEER 7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN
PHASE III STEP II DETOUR

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=400' VERT: N/A
SHEET NO. 56 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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PLOTED: 7/28/2023 11:58 AM

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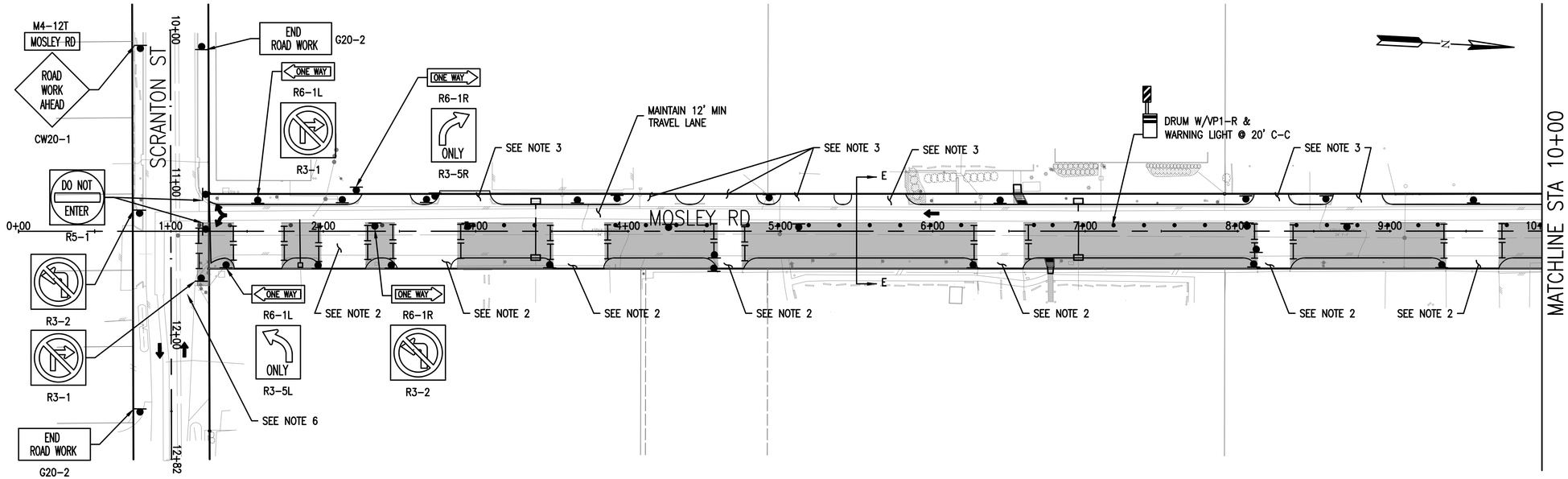
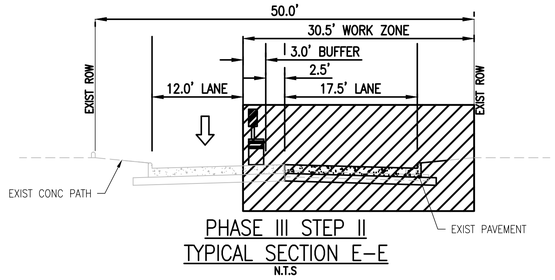
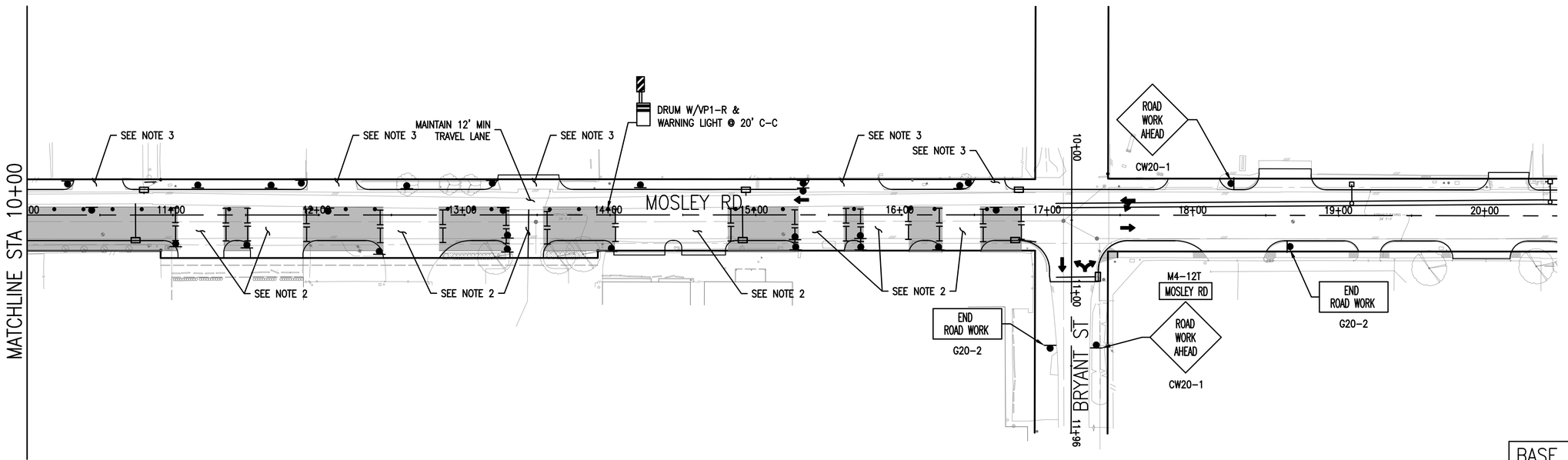




PHASE III STEP II
TYPICAL SECTION E-E
N.T.S



BASE BID

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL SIGNS (R6-1L W/R3-5L & R6-1L W/R3-1) AT EACH DRIVEWAY ON EASTERN SIDE OF MOSLEY RD.
3. INSTALL SIGNS (R6-1R W/R3-5R & R6-1R W/R3-2) AT EACH DRIVEWAY ON WESTERN SIDE OF MOSLEY RD.
4. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
6. IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG SCRANTON ST USING THE TCP TYPICAL 3-WAY INTERSECTION DETAILS FOR ROADWAY TIE-IN AND OTHER IMPROVEMENTS.

0' 40' 80'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE III STEP II

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=40'
VERT: N/A
SHEET NO. 57 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

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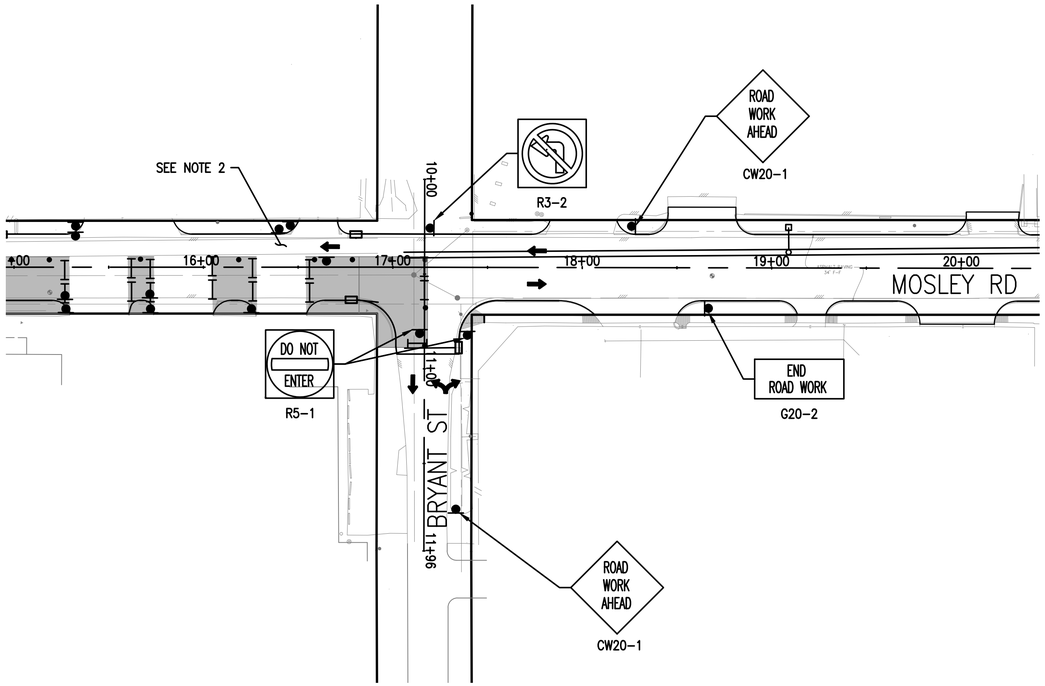

N

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. MAINTAIN PHASE III STEP II TRAFFIC CONTROL DURING INTERSECTION WORK.
3. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
4. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96012
LICENSED PROFESSIONAL ENGINEER
VOID
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE III STEP II INTERSECTION

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 58 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

BASE BID

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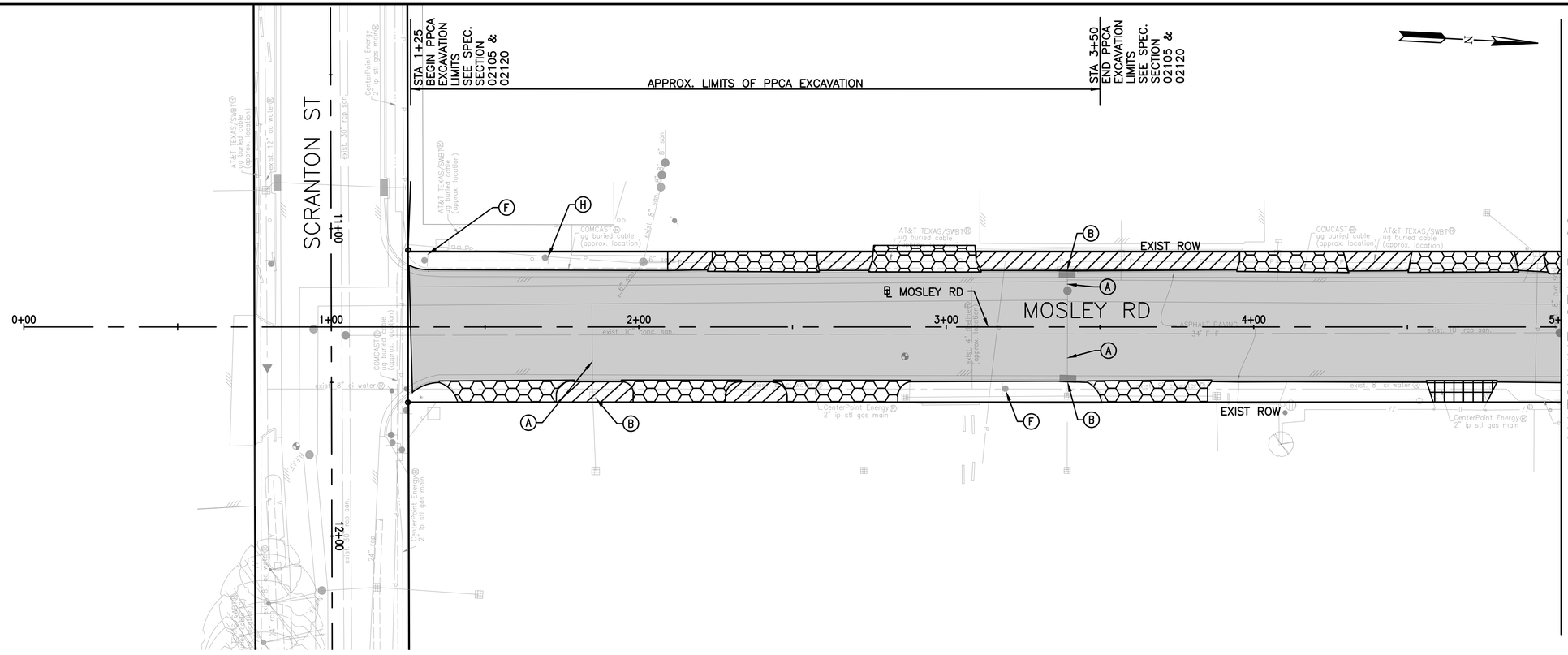

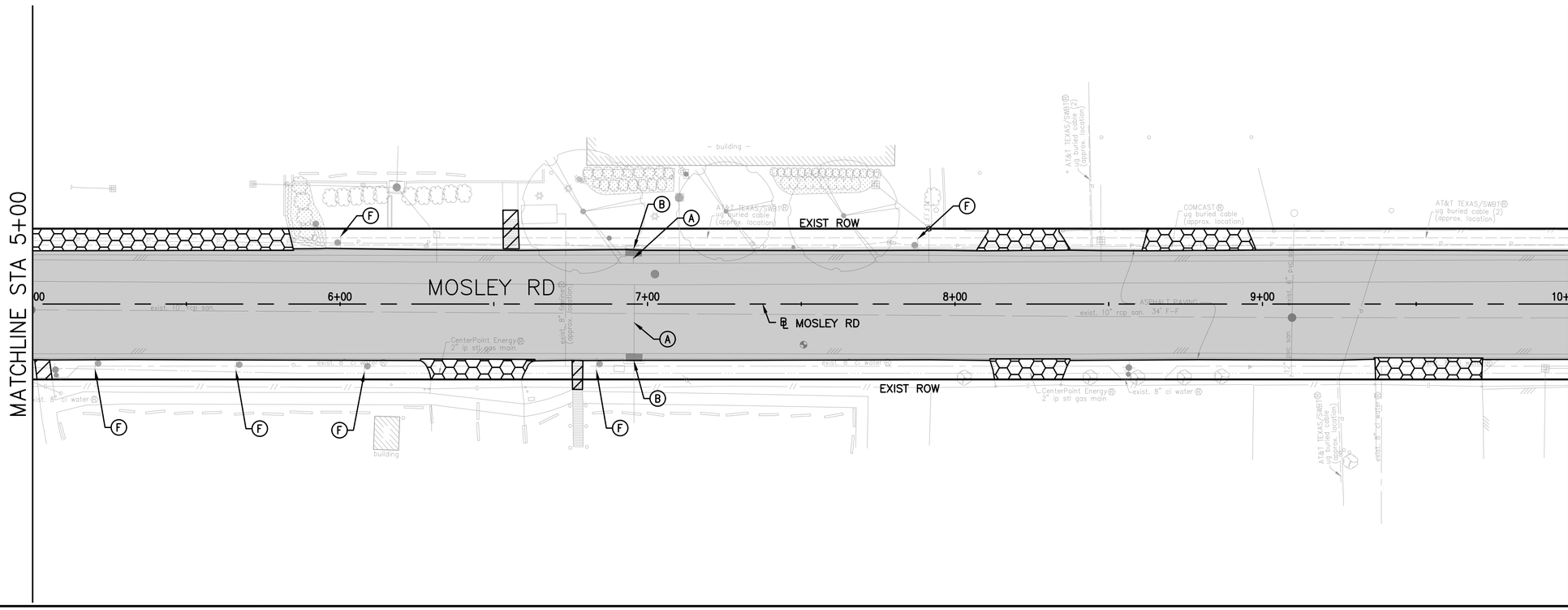

LEGEND:

- (A) REMOVE PIPE (RCP OR CMP)
- (B) REMOVE INLET
- (C) REMOVE MH
- (D) REMOVE CURB
- (E) REMOVE SMALL STRUCTURES
- (F) REMOVE SIGNS
- (G) REMOVE INLET STAGE II SECTION ONLY
- (H) REMOVE, STORE AND RE-INSTALL SIGNS

REMOVE ASPH PAV & BASE
REMOVE CONC DRWY
REMOVE CONC SIDEWALK
REMOVE ASPH DRWY
REMOVE CONC PAV

NOTES:

1. REFER TO TREE PROTECTION STANDARD DETAILS FOR MORE INFORMATION.
2. COORDINATE WITH PROPERTY OWNER PRIOR TO DEMOLITION IMPACTS TO EXISTING FENCES, BOLLARDS, RETAINING WALLS AND MAILBOXES.
3. REMOVE AND REPLACE DISTURBED LANDSCAPE/SHRUBS IN KIND PER SITE RESTORATION PAY ITEM.
4. DURING DRIVEWAY DEMOLITION, AVOID DISTURBING FENCES, BOLLARDS/POST, RETAINING WALLS AND MAINTAIN SAME ELEVATION AT FENCE LOCATION TIE-IN. CONTRACTOR TO REPAIR ANY DAMAGE TO FENCES, BOLLARDS/POST, AND RETAINING WALLS. NO SEPARATE PAY.

0' 20' 40'
SCALE IN FEET

BASE BID

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
VOID
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

DEMOLITION PLANS

SHEET 1 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=20'
VERT: N/A
SHEET NO. 59 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

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PLOTED: 7/28/2023 2:28 PM
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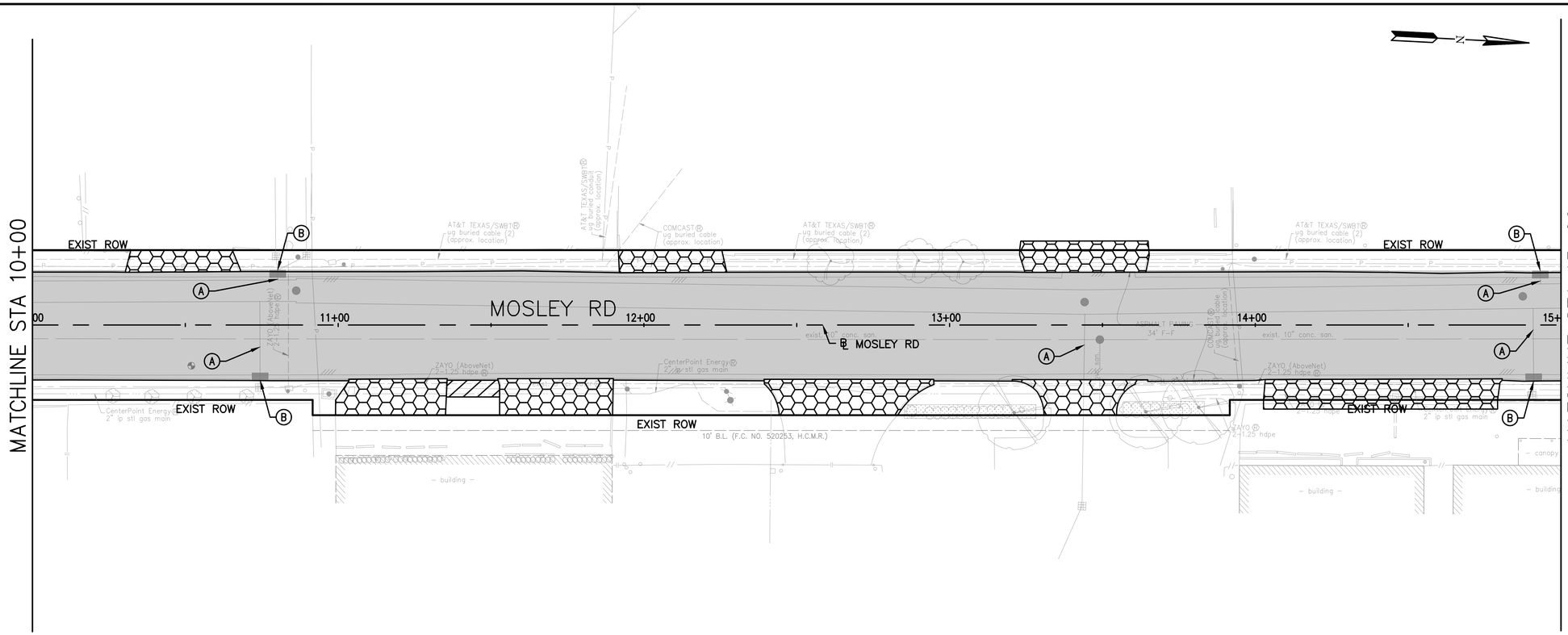

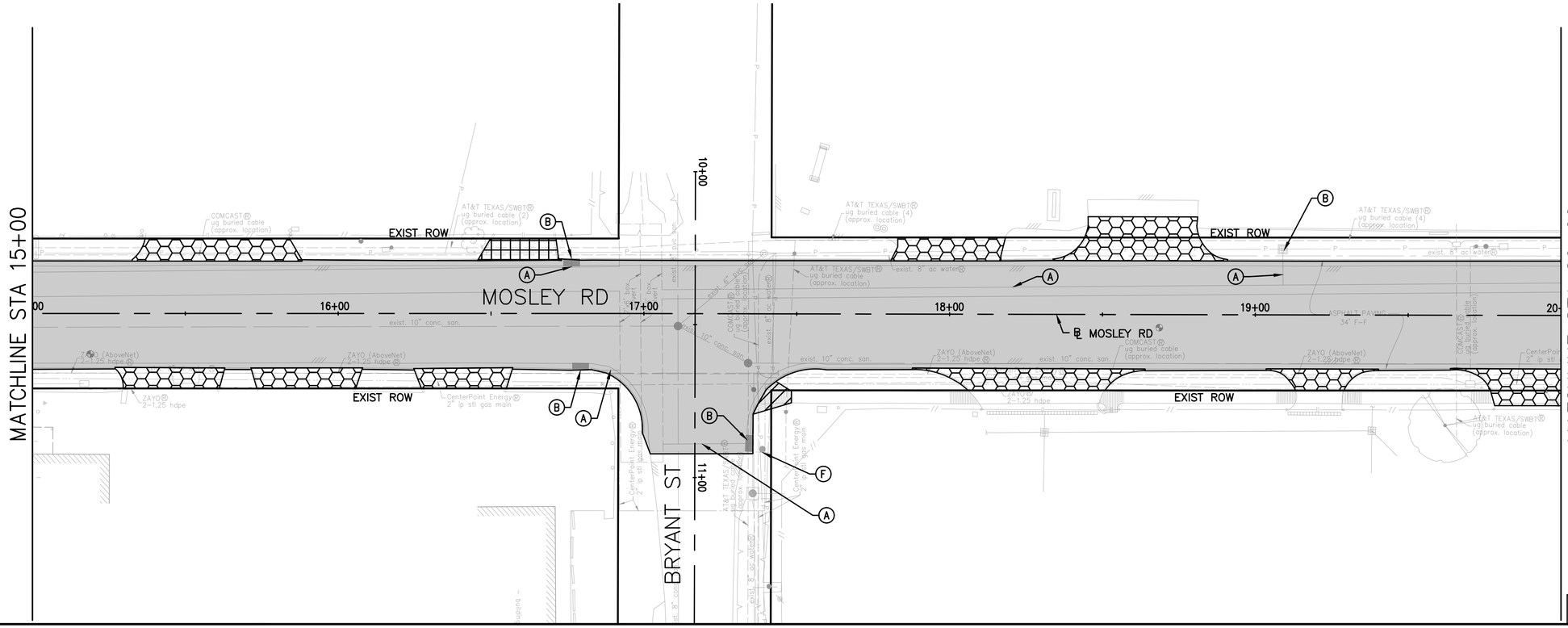

LEGEND:

- (A) REMOVE PIPE (RCP OR CMP)
- (B) REMOVE INLET
- (C) REMOVE MH
- (D) REMOVE CURB
- (E) REMOVE SMALL STRUCTURES
- (F) REMOVE SIGNS
- (G) REMOVE INLET STAGE II SECTION ONLY
- (H) REMOVE, STORE AND RE-INSTALL SIGNS

REMOVE ASPH PAV & BASE
REMOVE CONC DRWY
REMOVE CONC SIDEWALK
REMOVE ASPH DRWY
REMOVE CONC PAV

NOTES:

1. REFER TO TREE PROTECTION STANDARD DETAILS FOR MORE INFORMATION.
2. COORDINATE WITH PROPERTY OWNER PRIOR TO DEMOLITION IMPACTS TO EXISTING FENCES, BOLLARDS, RETAINING WALLS AND MAILBOXES.
3. REMOVE AND REPLACE DISTURBED LANDSCAPE/SHRUBS IN KIND PER SITE RESTORATION PAY ITEM.
4. DURING DRIVEWAY DEMOLITION, AVOID DISTURBING FENCES, BOLLARDS/POST, RETAINING WALLS AND MAINTAIN SAME ELEVATION AT FENCE LOCATION TIE-IN. CONTRACTOR TO REPAIR ANY DAMAGE TO FENCES, BOLLARDS/POST, AND RETAINING WALLS. NO SEPARATE PAY.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOOD WARD
96612
LICENSED PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2814

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

DEMOLITION PLANS

SHEET 2 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 60 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

PEN TABLE: LAN-ODH.ctb
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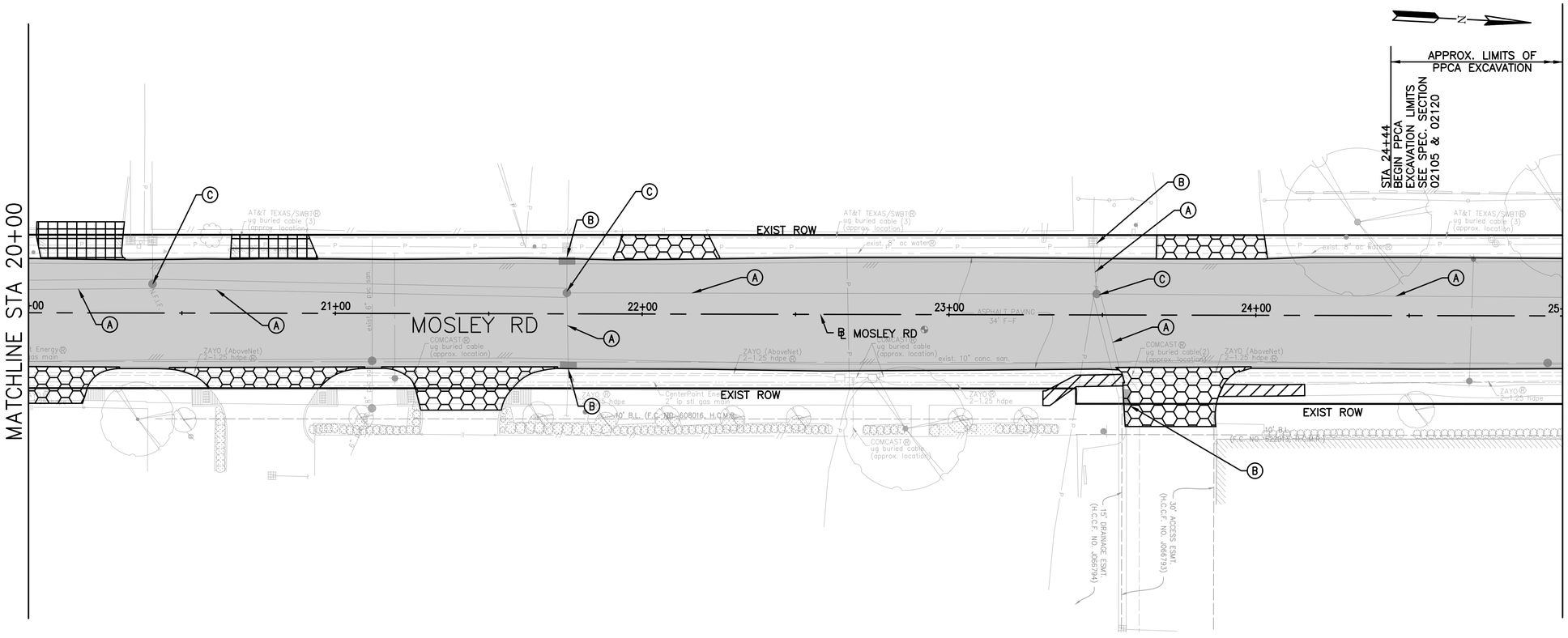

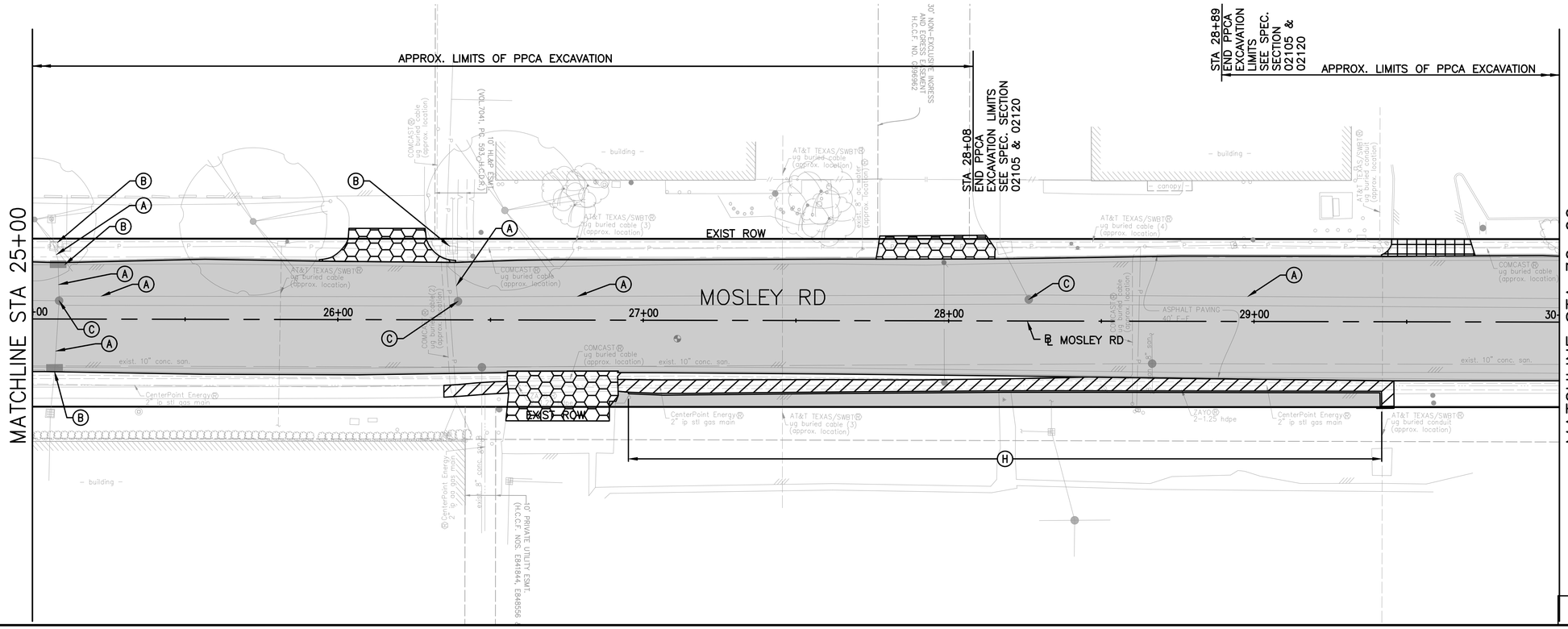

LEGEND:

- (A) REMOVE PIPE (RCP OR CMP)
- (B) REMOVE INLET
- (C) REMOVE MH
- (D) REMOVE CURB
- (E) REMOVE SMALL STRUCTURES
- (F) REMOVE SIGNS
- (G) REMOVE INLET STAGE II SECTION ONLY
- (H) REMOVE, STORE AND RE-INSTALL SIGNS

REMOVE ASPH PAV & BASE

REMOVE CONC DRWY

REMOVE CONC SIDEWALK

REMOVE ASPH DRWY

REMOVE CONC PAV

NOTES:

1. REFER TO TREE PROTECTION STANDARD DETAILS FOR MORE INFORMATION.
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0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96072
LICENSED PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

DEMOLITION PLANS

SHEET 3 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 61 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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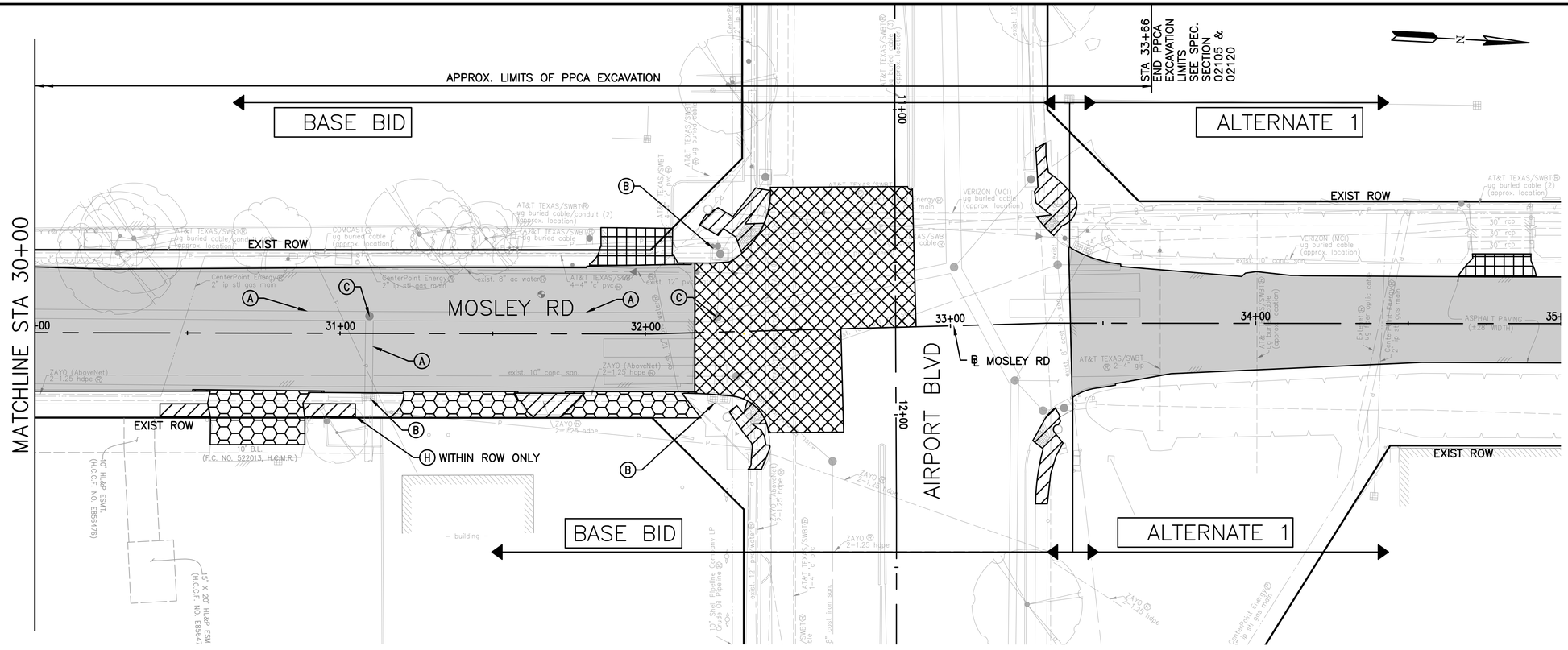

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- (C) REMOVE MH
- (D) REMOVE CURB
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- (H) REMOVE, STORE AND RE-INSTALL SIGNS

REMOVE ASPH PAV & BASE

REMOVE CONC DRWY

REMOVE CONC SIDEWALK

REMOVE ASPH DRWY

REMOVE CONC PAV

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0' 20' 40'
SCALE IN FEET

BASE BID

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
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VOID
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

DEMOLITION PLANS

SHEET 4 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 62 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

PEN TABLE: LAN-COH.ctb
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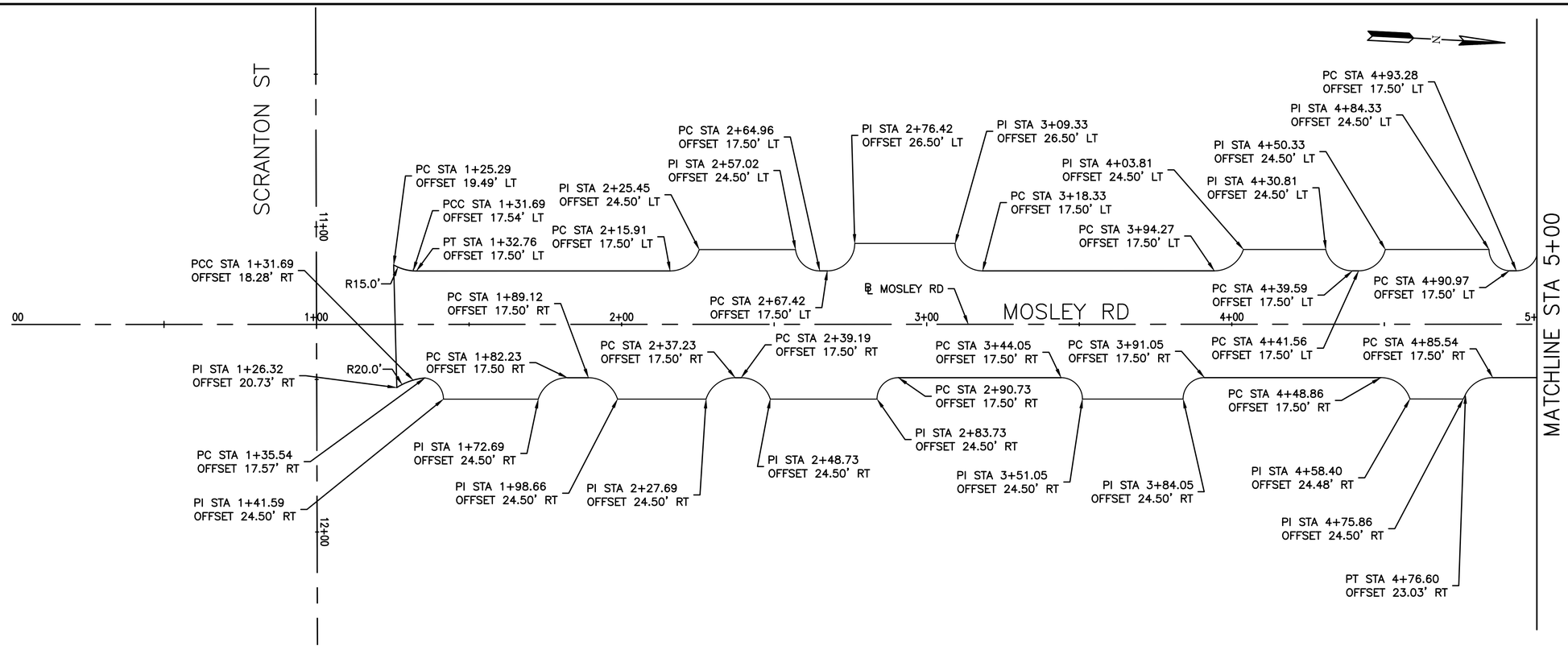

NOTE

1. DIMENSIONS/OFFSETS WITHIN CONCRETE SECTIONS ARE MEASURED TO FACE OF CURB.
2. DIMENSIONS/OFFSETS WITHIN ASPHALT WITH FLUSH CURB/GUTTER SECTION ARE MEASURED TO BACK OF CURB.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
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STATE OF TEXAS
MARK WOODWARD
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Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED
HORIZONTAL
GEOMETRY LAYOUT

SHEET 1 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 63 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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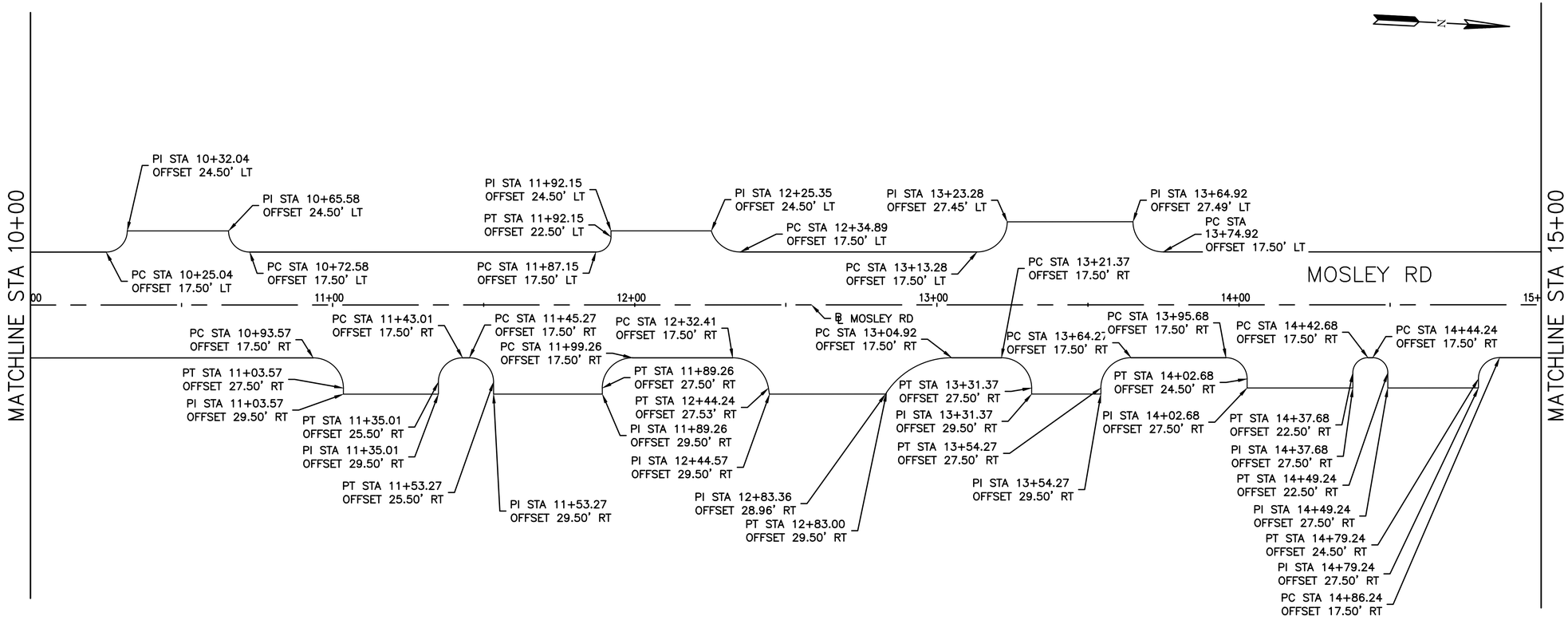

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SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED
HORIZONTAL
GEOMETRY LAYOUT

SHEET 2 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 64 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

PEN TABLE: LAN-COH.ctb
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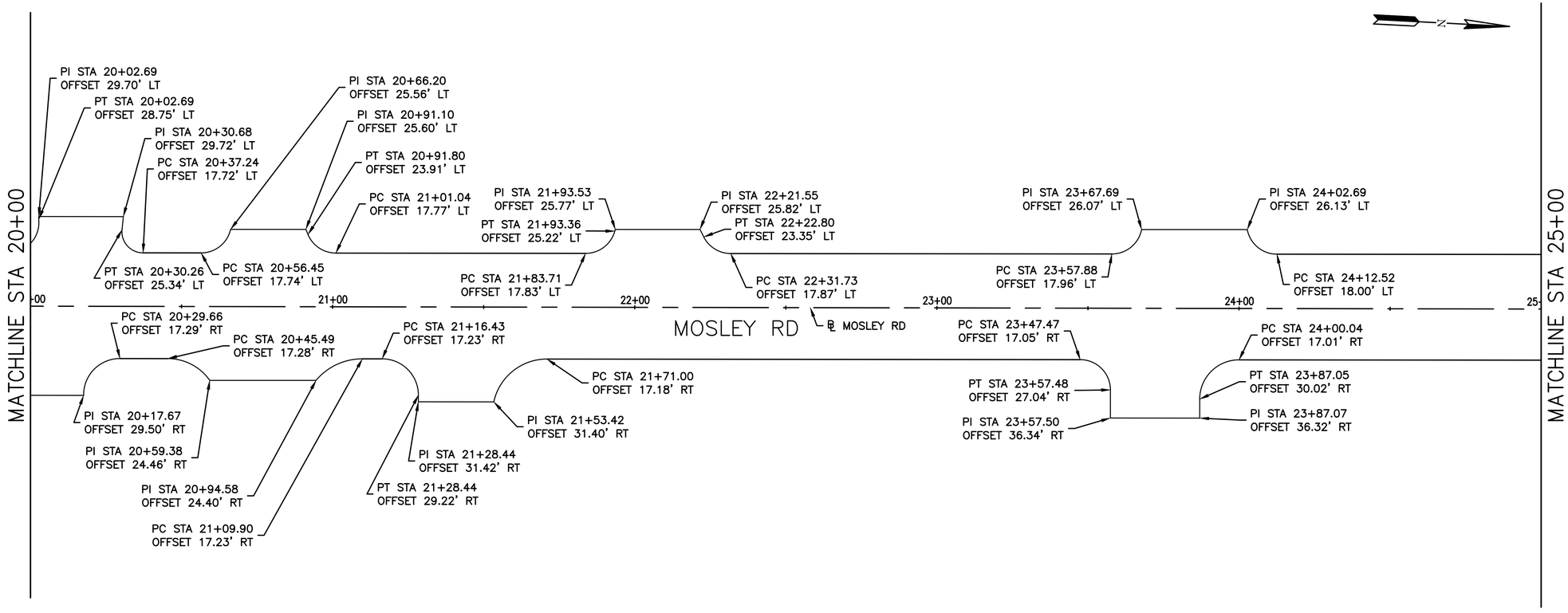

BASE BID

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No.	Date	Revisions	App.

0' 20' 40'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96672
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2814

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED HORIZONTAL GEOMETRY LAYOUT

SHEET 3 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 65 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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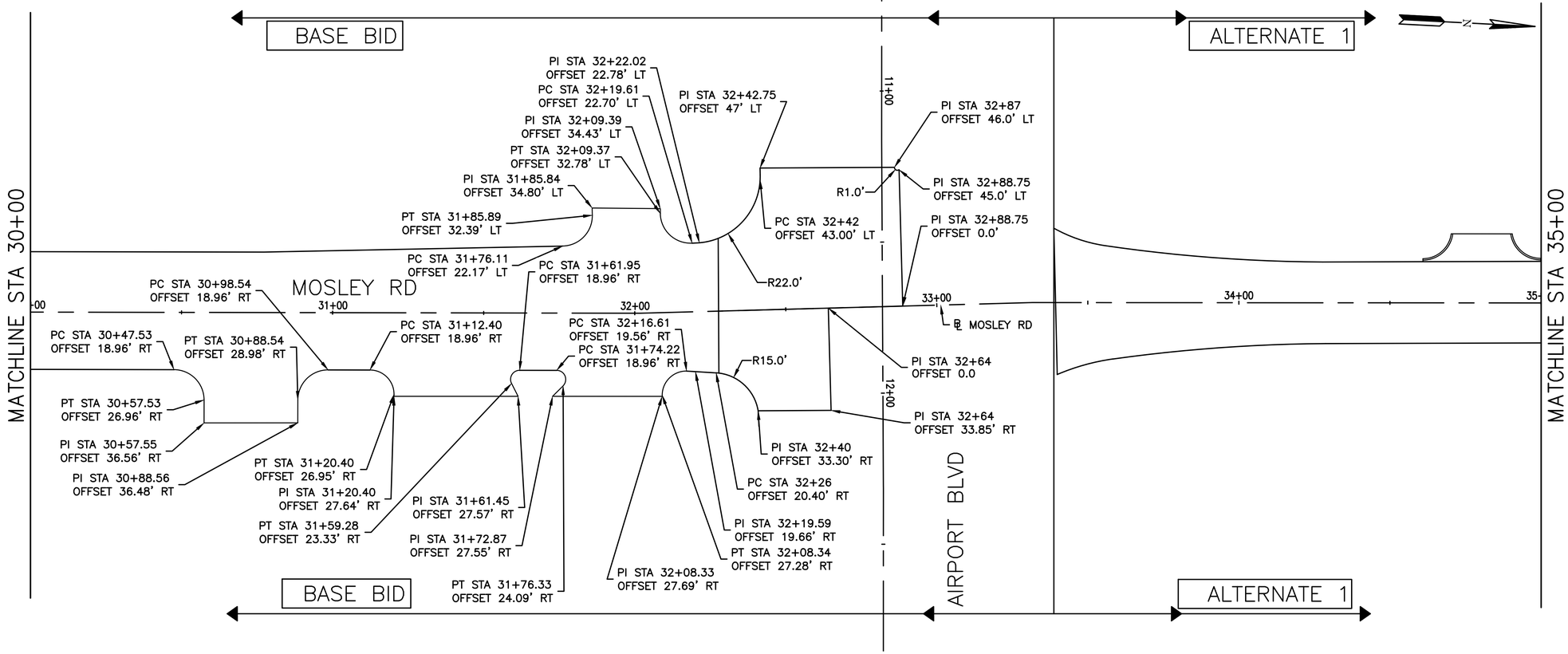

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SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

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KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96072
LICENSED PROFESSIONAL ENGINEER
7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED HORIZONTAL GEOMETRY LAYOUT

SHEET 4 OF 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 66 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

BASE BID

FILE PATH: P:\120\120-1206-013\4-0-Production-Working\4-1-BIM-CAD\Rodney\PW\HORZ GEO-01.dwg
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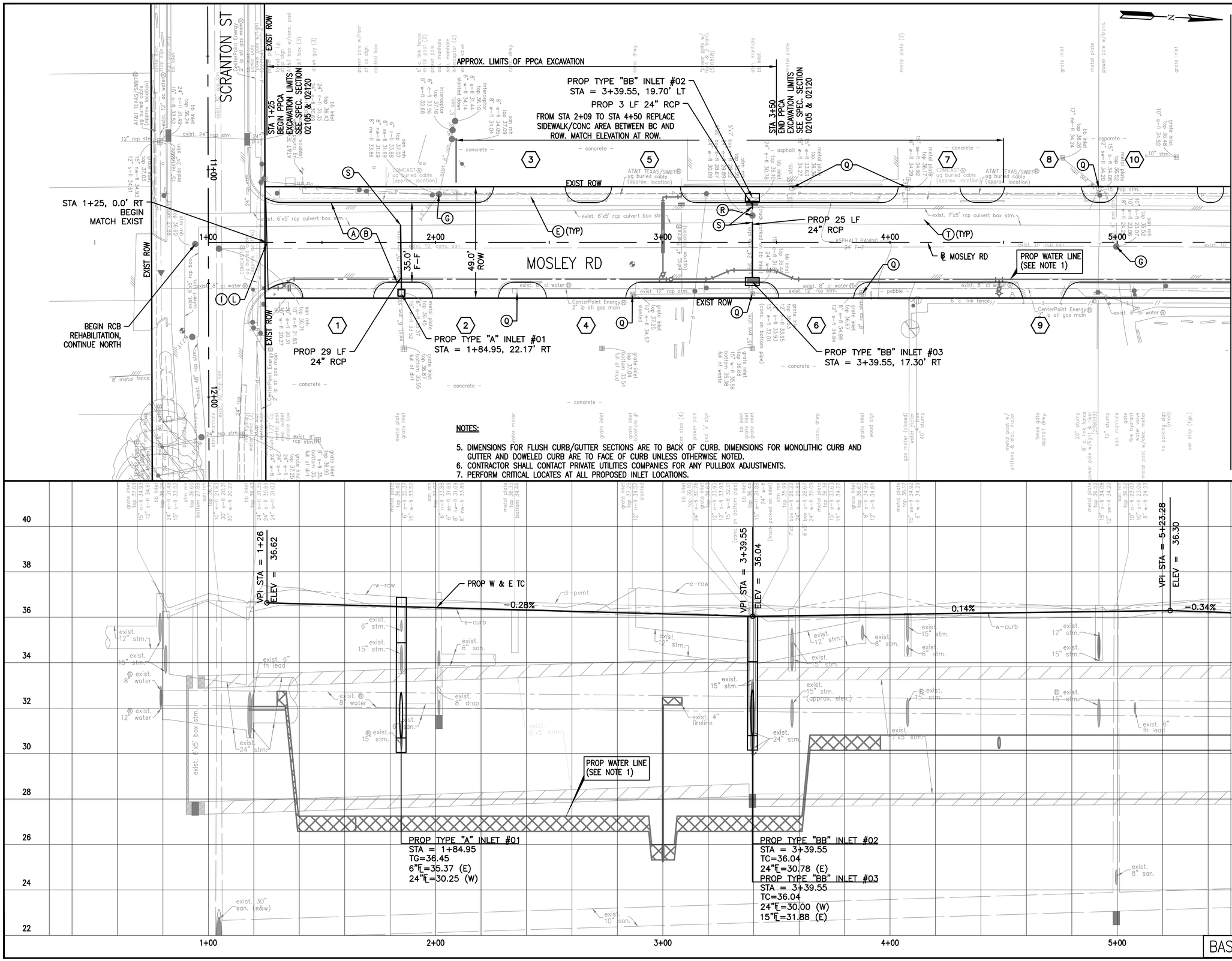

NOTES:

5. DIMENSIONS FOR FLUSH CURB/GUTTER SECTIONS ARE TO BACK OF CURB. DIMENSIONS FOR MONOLITHIC CURB AND GUTTER AND DOWELED CURB ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL CONTACT PRIVATE UTILITIES COMPANIES FOR ANY PULLBOX ADJUSTMENTS.
7. PERFORM CRITICAL LOCATES AT ALL PROPOSED INLET LOCATIONS.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

NOTES:

1. REFER TO DEMOLITION, ROADWAY HORIZONTAL GEOMETRY, WATER LINE, SIGNING & PAVEMENT MARKINGS, CROSS-SECTIONS, AND SWPPP SHEETS FOR ADDITIONAL INFORMATION.
2. CONTRACTOR TO MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL BRACE AND SUPPORT WOOD POLES DURING CONSTRUCTION AS NECESSARY AT NO COST TO OWNER.
4. ALL EXISTING WATER METER BOXES, IRRIGATION BOXES, WATER VALVES AND ENCOUNTERED OBJECTS TO REMAIN ARE TO BE REPLACED AND ADJUSTED TO FINAL GRADE. REPLACE METER BOXES WITH CONCRETE TYPE. ITEMS INCIDENTAL TO ROADWAY WORK. NO SEPARATE PAY.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App.

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

VERIFICATION OF PRIVATE UTILITY LINES

Mike Brower Date: 07-24-23
CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
Signature valid for six months.

Mike Brower Date: 07-24-23
CenterPoint Energy/UNDERGROUND Electrical facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification)
Signature valid for six months.

Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only. Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
BEGIN STA TO STA 5+50

SHEET 1 OF 7

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 67 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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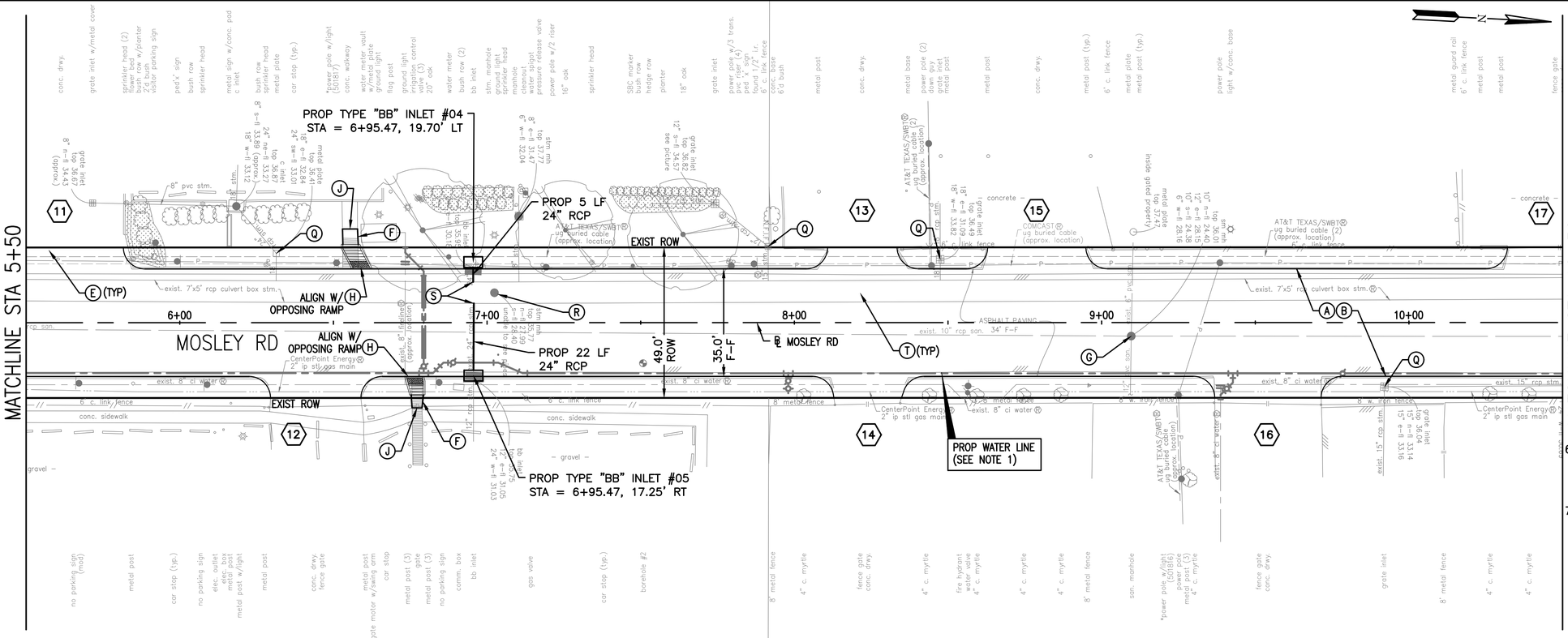
MATCHLINE STA 5+50
MATCHLINE STA 10+50
MOSLEY RD
PROP TYPE "BB" INLET #04
STA = 6+95.47, 19.70' LT
PROP 5 LF
24" RCP
PROP 22 LF
24" RCP
PROP TYPE "BB" INLET #05
STA = 6+95.47, 17.25' RT
EXIST ROW
ALIGN W/
OPPOSING RAMP
49.0'
ROW
35.0'
F-F
℄ MOSLEY RD
PROP WATER LINE
(SEE NOTE 1)
6+00
7+00
8+00
9+00
10+00
11
12
13
14
15
16
17
exist. 7'x5' rcp culvert box stm.
exist. 8" ci water
6' c. link fence
conc. sidewalk
gravel
8' metal fence
ASPHALT PAVING
exist. 10" rcp san. 34' F-F
CenterPoint Energy 2" ip stl gas main
AT&T TEXAS/SWBT ug buried cable (approx. location)
COMCAST ug buried cable (approx. location)
AT&T TEXAS/SWBT ug buried cable (2) (approx. location)
exist. 15" rcp stm.
exist. 8" ci water
exist. 6" w. iron fence
BENCHMARK:
CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.
ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*
* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.
NOTES:
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4. DIMENSIONS FOR FLUSH CURB/GUTTER SECTIONS ARE TO BACK OF CURB. DIMENSIONS FOR MONOLITHIC CURB AND GUTTER AND DOWELED CURB ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
5. ALL EXISTING WATER METER BOXES, IRRIGATION BOXES, WATER VALVES AND ENCOUNTERED OBJECTS TO REMAIN ARE TO BE REPLACED AND ADJUSTED TO FINAL GRADE. REPLACE METER BOXES WITH CONCRETE TYPE. ITEMS INCIDENTAL TO ROADWAY WORK. NO SEPARATE PAY.
0' 20' 40'
SCALE IN FEET
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CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
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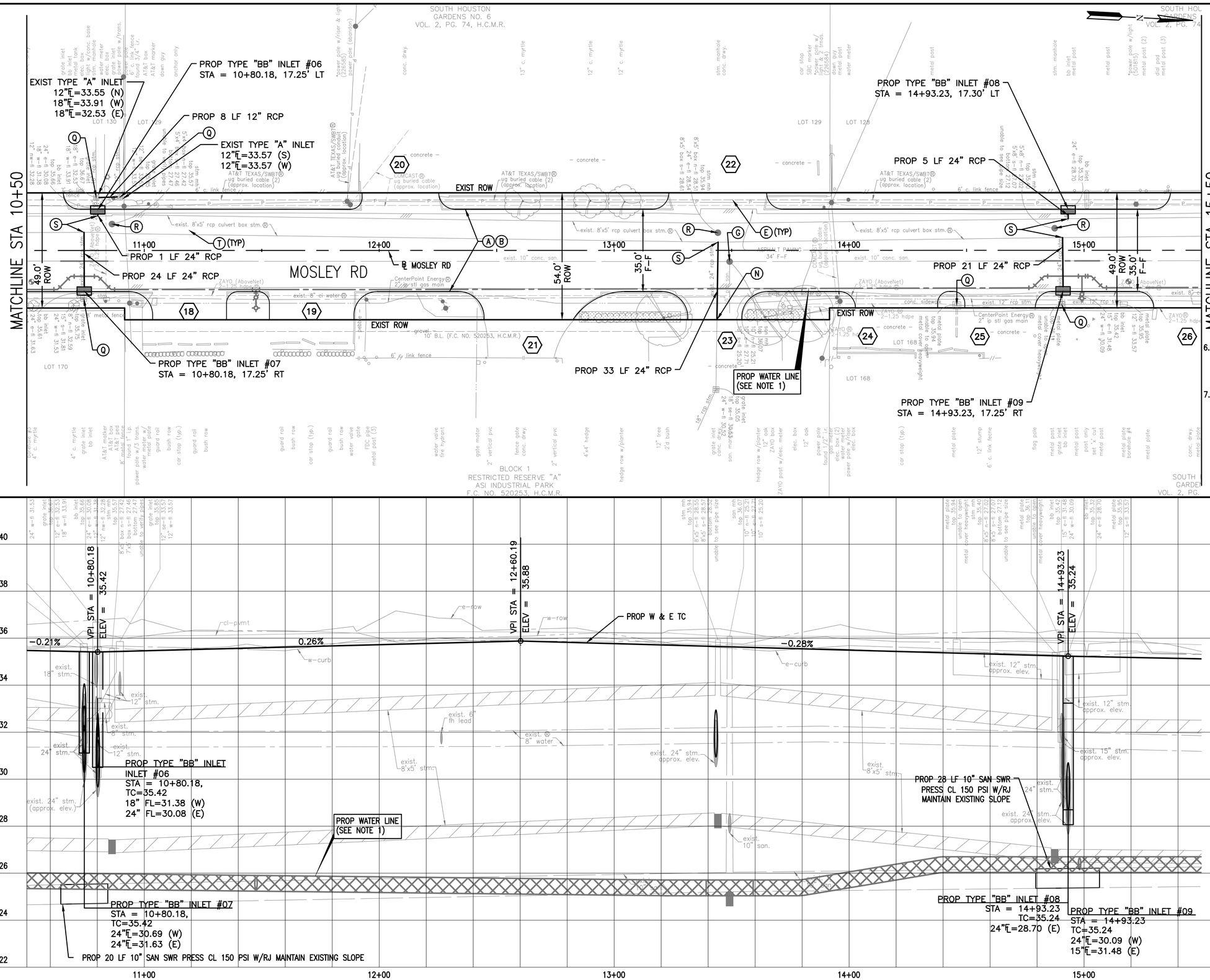
CenterPoint Energy/UNDERGROUND Electrical facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification)
Signature valid for six months.
Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only. Signature valid for one year.
Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-62.34
STATE OF TEXAS MARC WOOD WARD 96022 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614
GULFGATE REDEVELOPMENT AUTHORITY
MOSLEY RD STREET REHABILITATION
MOSLEY ROAD
PLAN & PROFILE
STA 5+50 TO STA 10+50
SHEET 2 OF 7
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES
CITY OF HOUSTON
HOUSTON PUBLIC WORKS
WATER
STORM WATER QUALITY
WASTE WATER
FACILITIES
STORM WATER
TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.
HORZ: 1"=20'
VERT: 1"=2'
SHEET NO. 68 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY
No. Date Revisions App
PEN TABLE: LAN-COH.ctb
USERNAME: Carrillo, Ismael
PLOTED: 7/20/2023 4:59 PM
FILE PATH: P:\120\120-12108-013\4-0-Production-Working\4-1-BIM-CAD\Roadway\Plan\MOSLEY-RPP-01.dwg
40 38 36 34 32 30 28 26 24 22
-0.34%
0.22%
-0.21%
VPI STA = 6+95.47
ELEV = 35.71
VPI STA = 8+15.47
ELEV = 35.98
PROP W & E TC
w-curb
e-curb
w-row
e-row
cl-pvmt
exist. 24" stm.
exist. 18" stm.
exist. 18" stm. (approx. elev.)
exist. 8" water
exist. 8" fireline
exist. 12" stm.
exist. 7'x5' stm.
exist. 15" stm.
exist. 6" fh lead
exist. 12" san.
exist. 6" san.
exist. 10" san.
PROP TYPE "BB" INLET #04
STA = 6+95.47
TC=35.71
24" ℄ = 30.18 (E)
PROP TYPE "BB" INLET #05
STA = 6+95.47
TC=35.71
24" ℄ = 31.05 (W)
12" ℄ = 31.05 (E)
6+00 7+00 8+00 9+00 10+00
BASE BID



BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

NOTES:

1. REFER TO DEMOLITION, ROADWAY HORIZONTAL GEOMETRY, WATER LINE, SIGNING & PAVEMENT MARKINGS, CROSS-SECTIONS, AND SWPPP SHEETS FOR ADDITIONAL INFORMATION.
2. CONTRACTOR TO MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
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6. CONTRACTOR SHALL CONTACT PRIVATE UTILITIES COMPANIES FOR ANY PULLBOX ADJUSTMENTS.
7. PERFORM CRITICAL LOCATES AT ALL PROPOSED INLET LOCATIONS.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App'd

NOTICE:
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VERIFICATION OF PRIVATE UTILITY LINES

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CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
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Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only. Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-62,34

STATE OF TEXAS MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 10+50 TO STA 15+50

SHEET 3 OF 7

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=20'
VERT: 1"=2'
SHEET NO. 69 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

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MATCHLINE STA 15+50

MATCHLINE STA 20+50

MOSLEY RD

BRYANT ST

PROP TYPE "BB" INLET #10
STA = 16+79.07, 17.25' LT

PROP TYPE "BB" INLET #11
STA = 16+79.07, 17.25' RT

PROP TYPE "BB" INLET #12
STA = 17+34.85, 42.40' RT

PROP WATER LINE
(SEE NOTE 1)

PROP 27"x44"
ARCH PIPE

PROP TYPE "A" INLET #13
STA = 19+08.98, 21.40' LT

PROP 12 LF 24" RCP

PROP "C" MH
STA 19+08.961, 8.27' LT

PROP "A" INLET #14
STA = 20+45.10, 23.2' LT
TG=35.40
24"fL=29.93 (E)
12"fL=33.31 (S)

PROP 2 LF 12" RCP

EXIST INLET
12"fL=33.41 (N&S)

PROP 12 LF 24" RCP

PROP "C" MH
STA 20+45.10, 9.46' LT

PROP 27"x44"
ARCH PIPE

PROP 27 LF 24" RCP

R20.0'

EXIST ROW

49.0' ROW

50.0' ROW

35.0' F-F

16+00

17+00

18+00

19+00

20+00

10+00

11+00

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

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0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App'd

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Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96472
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 15+50 TO STA 20+50

SHEET 4 OF 7

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=20'
VERT: 1"=2'
SHEET NO. 70 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

PROP W & E TC
PROP 12 LF ~24" RCP @ EXIST SLOPE
PROP 27 LF ~24" RCP @ EXIST SLOPE
PROP 28 LF 10" SAN SWR PRESS CL 150 PSI W/RJ MAINTAIN EXISTING SLOPE
PROP 205 LF~27"x44" ARCH PIPE @0.11%
PROP 137 LF~27"x44" ARCH PIPE @0.11%
PROP 5 LF~27"x44" ARCH PIPE @0.11%
VPI STA = 16+79.07
ELEV = 34.86
VPI STA = 17+69.64
ELEV = 35.36
-0.20%
0.55%
-0.30%
PROP TYPE "BB" INLET #10
STA = 16+79.07
TC=34.86
24"fL=30.24
PROP TYPE "BB" INLET #11
STA = 16+79.07
TC=34.86
24"fL=30.50 (N)
PROP TYPE "BB" INLET #12
STA = 17+34.85
TC=35.11
24" FL=32.05 (E)
24" FL=30.50 (S)
PROP TYPE "A" INLET #13
STA = 19+08.98,
TG=35.65
24"fL=29.78 (E)
PROP "C" MH
STA 19+08.96
TR=34.69
24"fL=29.68 (W)
27"x44"fL=29.68 (N&S)
PROP "C" MH
STA 20+45.10
TR=34.45
24"fL=29.83 (W)
27"x44"fL=29.83 (N&S)
FL=29.46

BASE BID

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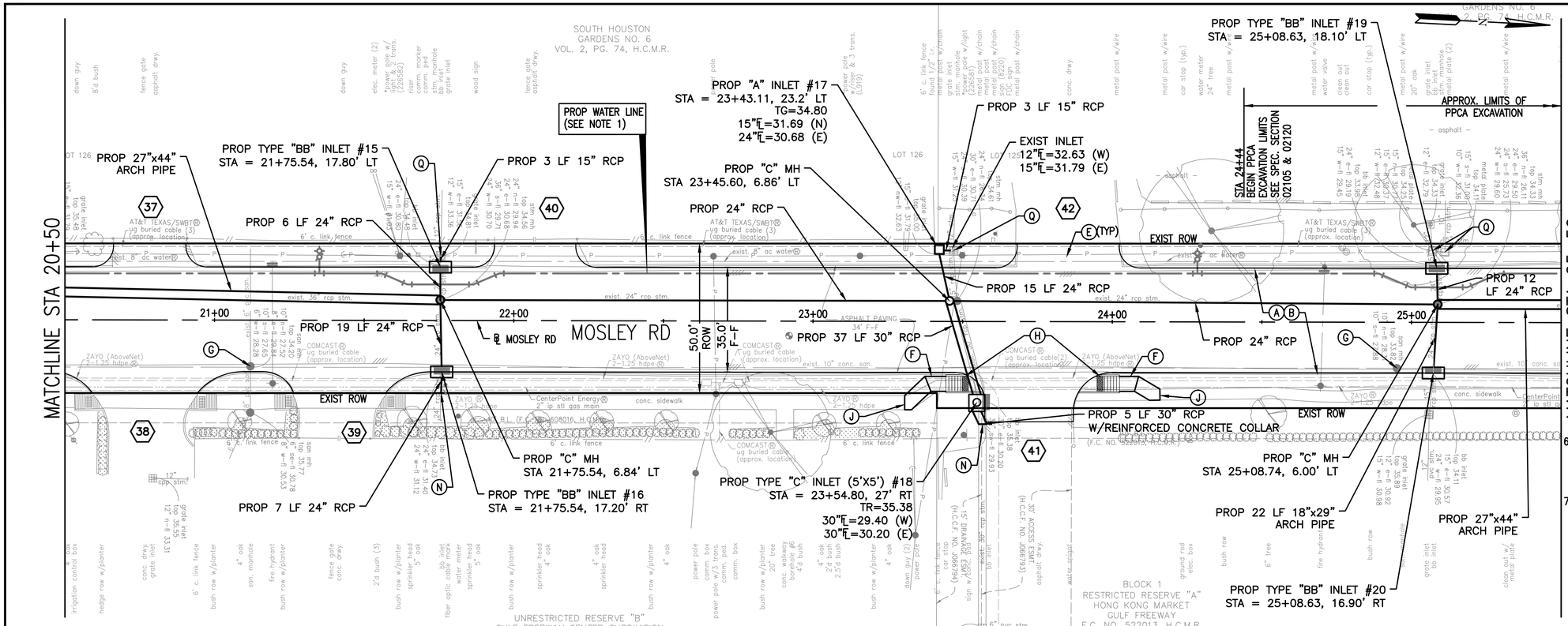

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

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0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App

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2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 20+50 TO STA 25+50

SHEET 5 OF 7

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=20'
VERT: 1"=2'
SHEET NO. 71 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

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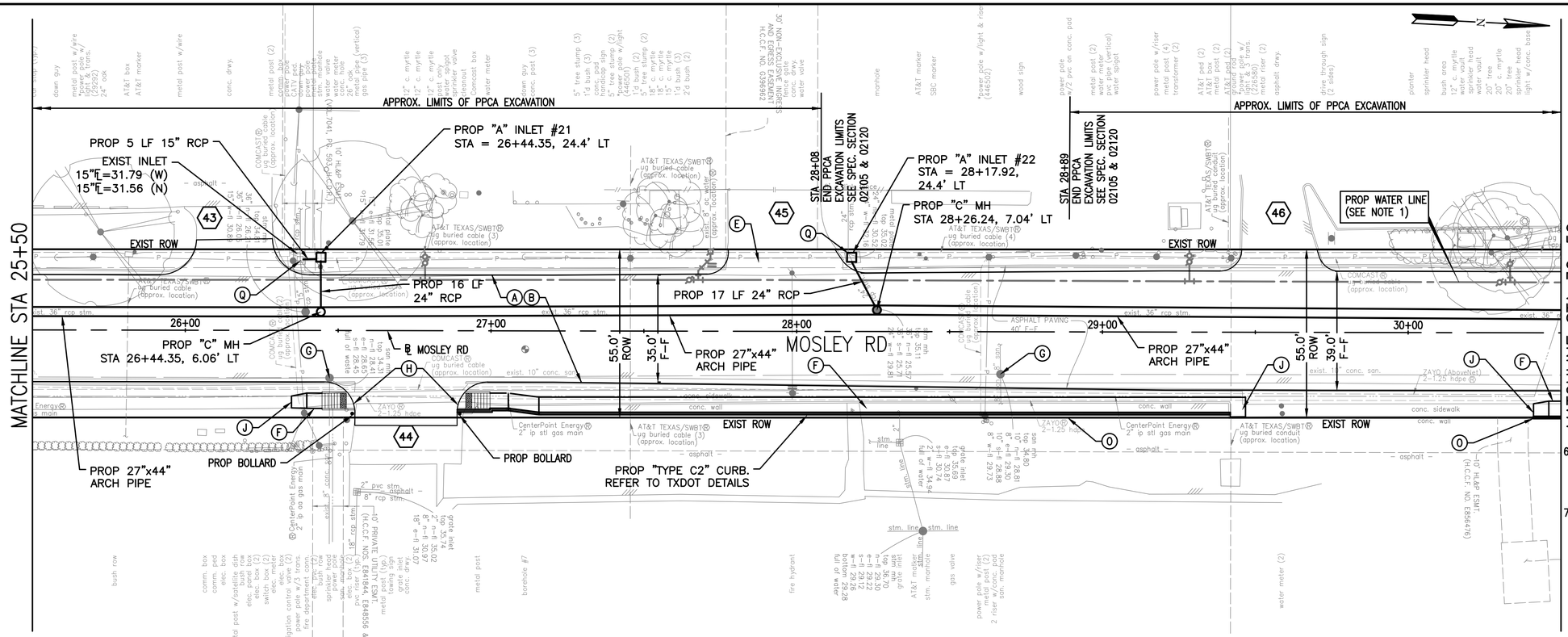

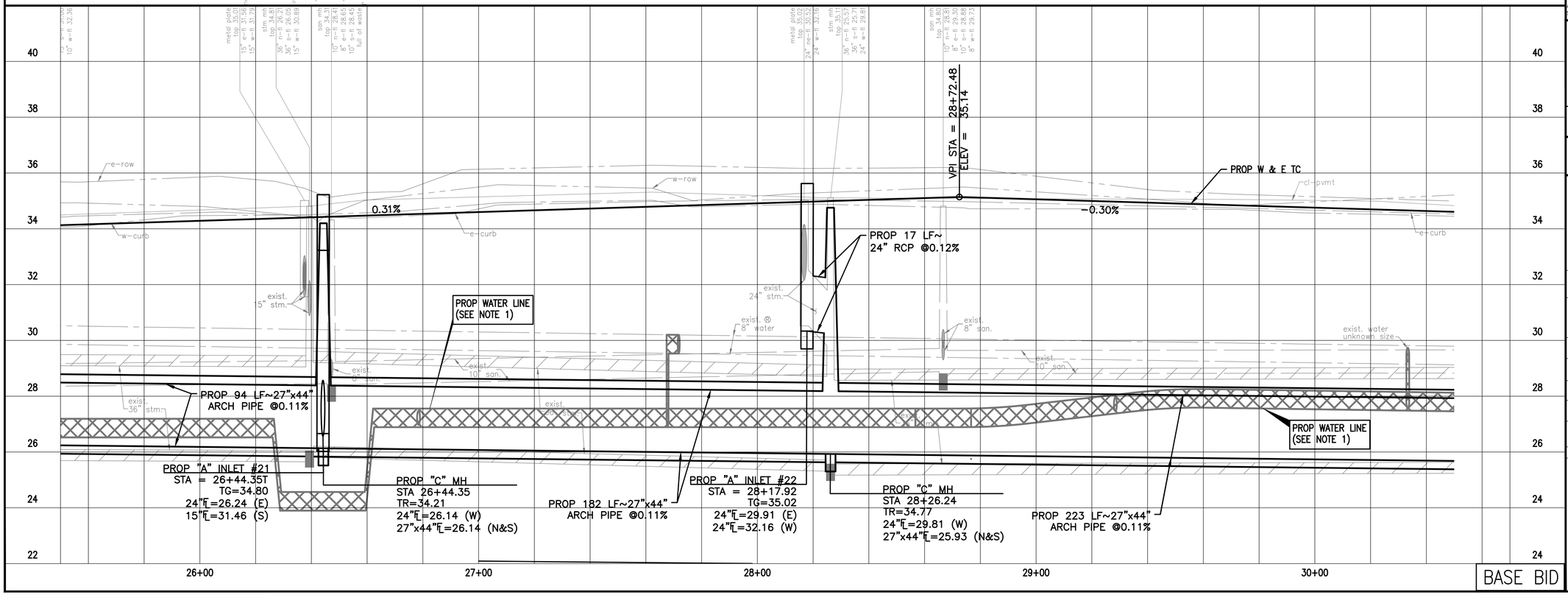

BASE BID

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

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0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	Apb

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A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS MARK WOODWARD 96012 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 25+50 TO STA 30+50

SHEET 6 OF 7

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=20'
VERT: 1"=2'
SHEET NO. 72 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

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MATCHLINE STA 30+50

MATCHLINE STA 35+50

APPROX. LIMITS OF PPCA EXCAVATION

EXIST ROW

PROP WATER LINE (SEE NOTE 1)

PROP TYPE "BB" INLET #25
TC=34.09
24" FL=29.53(NW)
24" FL=29.71(E)

PROP 27"x44" ARCH PIPE

PROP "C" MH
STA 31+09.62, 5.66' LT

PROP 27"x44" ARCH PIPE

MOSLEY RD

40' FL

55.0' ROW

31+00

32+00

33+00

34+00

35+00

SEE NOTE 9

PROP "C" MH
STA 32+23.69,
4.82' LT

R15.0'

PROP 20 LF 18"x29" ARCH PIPE

PROP 24 LF 23"x37" ARCH PIPE

PROP TYPE "BB" INLET #24
STA = 32+21.99, 20.00' RT

SEE NOTE 10

(BY PRIVATE UTILITY OWNER)

PROP TYPE "A" INLET #23
STA 31+09.62, 22.5' RT

BASE BID

℄ MOSLEY RD

AIRPORT BLVD

11+00

12+00

ALTERNATE 1

FAULT HAZARD ZONE

STA 33+66
END PPCA
EXCAVATION LIMITS
SEE SPEC. SECTION
02105 & 02120

SEE NOTE 8

80.0' ROW

27.0' F-F

ASPHALT PAVING (±28' WIDTH)

PROP WATER LINE (SEE NOTE 1)

BENCHMARK:

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6. CONTRACTOR SHALL CONTACT PRIVATE UTILITIES COMPANIES FOR ANY PULLBOX ADJUSTMENTS.
7. PERFORM CRITICAL LOCATES AT ALL PROPOSED INLET LOCATIONS.
8. REPAIR DITCH BERM TO FINAL PAVEMENT GRADE.
9. REPAIR INTERSECTION TRAFFIC SIGNAL LOOPING SYSTEM PER CITY SPECS. REPLACE AND ADJUST ANY ENCOUNTERED TRAFFIC SIGNAL SYSTEM AMENITIES. COST INCIDENTAL TO LOOPING REPAIRS.
10. CONTRACTOR SHALL NOT DISTURB POLE FOUNDATIONS. NO SEPARATE PAY FOR ANY NECESSARY REPAIRS CAUSED BY ANY DAMAGES, WHICH SHALL BE INSPECTED BY CM.

0' 20' 40'
SCALE IN FEET

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A LEO A DALY COMPANY
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SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOOD WARD
96672
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 30+50 TO STA 35+50

SHEET 7 OF 7

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 73 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App'd

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PROP "C" MH
STA 31+09.62
TR=34.22
27"x44"FL=25.62 (N&S)
23"x37"FL=25.62 (E)

PROP "C" MH
STA 32+23.69
TR=34.03
24"FL=29.45 (W)
18"x29"FL=25.49 (E)
27"x44"FL=25.49 (S)
42"FL=25.49 (N)

PROP W & E TC

VPI STA = 32+24.57
ELEV = 34.09

VPI STA = 33+39.51
ELEV = 34.57

BVCS: 34+01.39
BVCE: 35.14

PVI STA: 34+53.89
PVI ELEV: 35.62
K: 133.65
LVC: 105.00

EVCS: 35+06.39
EVCE: 35.68

PROP PGL

-0.30%

0.91%

0.13%

PROP TYPE "BB" INLET #24
STA = 32+20.57
TC=34.09
18"x29"FL=25.59 (W)

MIN 1' CLR

PROP WATER LINE (SEE NOTE 1)

PROP TYPE "A" INLET #23
STA 31+09.62
TG=35.06
23"x37"FL=25.72 (W)
15"FL=31.80 (S)
30" FL=32.02 (E)

PROP 60 LF~27"x44" ARCH PIPE @0.11%

PROP 114 LF~27"x44" ARCH PIPE @0.11%

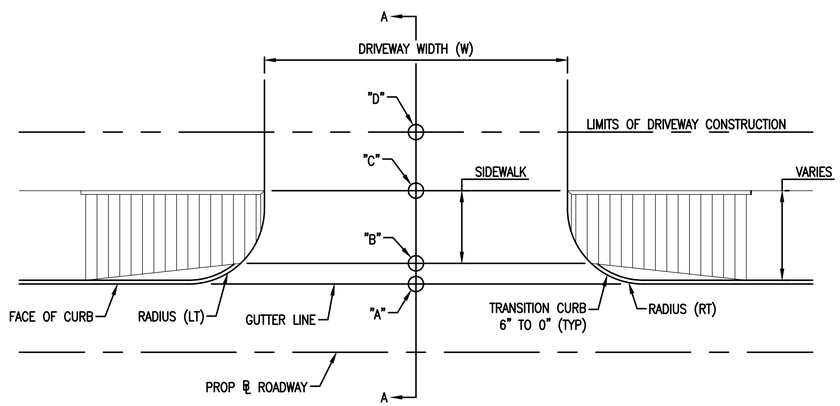
STA 34+11.40 ELEV= 34.94
STA 34+21.40 ELEV= 35.07
STA 34+31.40 ELEV= 35.19
STA 34+41.40 ELEV= 35.30
STA 34+51.40 ELEV= 35.39
STA 34+61.40 ELEV= 35.47
STA 34+71.40 ELEV= 35.53
STA 34+81.40 ELEV= 35.71
STA 34+91.40 ELEV= 35.60
STA 35+01.40 ELEV= 35.62

BASE BID | ALTERNATE 1 | BASE BID

Mosley Road																				
DRIVEWAY NO.	DRIVEWAY CL STATION	OFFSET *					ELEVATION				VERTICAL LIP HEIGHT AT POINT "A" (INCHES)***	SLOPE				RADIUS		DRIVEWAY WIDTH (W)	DRIVEWAY CONCRETE THICKNESS	SIDEWALK WIDTH THRU DRIVEWAY	DRIVEWAY TYPE
		LT/RT	POINT "A"	POINT "B"	POINT "C"	POINT "D"	POINT "A"	POINT "B"	POINT "C"	POINT "D"		*A-B*	*B-C*	*C-D*	*A-D*	LT	RT				
1	1+56.97	RT	17.50	N/A	N/A	24.50	36.04	N/A	N/A	36.70		N/A	N/A	N/A	9.4%	10.00	7.00	31.00	7" CONC	N/A	COMMERCIAL
2	2+13.18	RT	17.50	N/A	N/A	24.50	35.88	N/A	N/A	36.40		N/A	N/A	N/A	7.4%	10.00	10.00	29.00	7" CONC	N/A	COMMERCIAL
3	2+41.24	LT	17.50	N/A	N/A	24.50	35.93	N/A	N/A	36.63	1.5"	N/A	N/A	N/A	10.0%	10.00	8.00	31.50	7" CONC	N/A	COMMERCIAL
4	2+66.23	RT	17.50	N/A	N/A	24.50	35.74	N/A	N/A	36.25		N/A	N/A	N/A	7.2%	7.00	10.00	35.00	7" CONC	N/A	COMMERCIAL
5	2+92.59	LT	17.50	N/A	N/A	26.50	35.78	N/A	N/A	36.76	1.5"	N/A	N/A	N/A	10.9%	9.00	9.00	30.50	7" CONC	N/A	COMMERCIAL
6	3+67.55	RT	17.50	N/A	N/A	24.50	35.57	N/A	N/A	36.30		N/A	N/A	N/A	10.4%	7.00	7.00	33.00	7" CONC	N/A	COMMERCIAL
7	4+17.20	LT	17.50	N/A	N/A	24.50	35.64	N/A	N/A	36.35		N/A	N/A	N/A	10.1%	10.00	9.00	27.00	7" CONC	N/A	COMMERCIAL
8	4+67.33	LT	17.50	N/A	N/A	24.50	35.72	N/A	N/A	36.30		N/A	N/A	N/A	8.2%	9.00	7.00	34.00	7" CONC	N/A	COMMERCIAL
9	4+67.13	RT	17.50	N/A	N/A	24.50	35.83	N/A	N/A	36.60	1.5"	N/A	N/A	N/A	11.0%	10.00	10.00	17.50	7" CONC	N/A	COMMERCIAL
10	5+17.78	LT	17.50	N/A	N/A	24.50	35.78	N/A	N/A	36.25		N/A	N/A	N/A	6.7%	7.00	5.00	35.00	7" CONC	N/A	COMMERCIAL
11	5+64.19	LT	17.50	N/A	N/A	24.50	35.66	N/A	N/A	36.20		N/A	N/A	N/A	7.7%	5.00	10.00	35.00	7" CONC	N/A	COMMERCIAL
12	6+44.24	RT	17.50	N/A	N/A	24.50	35.38	N/A	N/A	36.10		N/A	N/A	N/A	10.2%	10.00	10.00	29.50	7" CONC	N/A	COMMERCIAL
13	8+22.14	LT	17.50	N/A	N/A	24.50	35.46	N/A	N/A	35.99		N/A	N/A	N/A	7.5%	7.00	7.00	22.50	7" CONC	N/A	COMMERCIAL
14	8+23.85	RT	17.50	N/A	N/A	24.50	35.57	N/A	N/A	36.30	1.5"	N/A	N/A	N/A	10.4%	10.00	10.00	22.00	7" CONC	N/A	COMMERCIAL
15	8+78.90	LT	17.50	N/A	N/A	24.50	35.34	N/A	N/A	35.90		N/A	N/A	N/A	7.9%	7.00	7.00	32.00	7" CONC	N/A	COMMERCIAL
16	9+54.10	RT	17.50	N/A	N/A	24.50	35.17	N/A	N/A	35.75		N/A	N/A	N/A	8.2%	10.00	10.00	34.50	7" CONC	N/A	COMMERCIAL
17	10+48.81	LT	17.50	N/A	N/A	24.50	34.97	N/A	N/A	35.52		N/A	N/A	N/A	7.8%	7.00	7.00	33.50	7" CONC	N/A	COMMERCIAL
18	11+19.29	RT	17.50	N/A	N/A	29.50	35.01	N/A	N/A	36.30		N/A	N/A	N/A	10.7%	8.00	10.00	31.50	7" CONC	N/A	COMMERCIAL
19	11+71.42	RT	17.50	N/A	N/A	29.50	35.14	N/A	N/A	36.30		N/A	N/A	N/A	9.6%	10.00	8.00	36.00	7" CONC	N/A	COMMERCIAL
20	12+09.02	LT	17.50	N/A	N/A	24.50	35.24	N/A	N/A	36.00		N/A	N/A	N/A	10.8%	5.00	10.00	32.50	7" CONC	N/A	COMMERCIAL

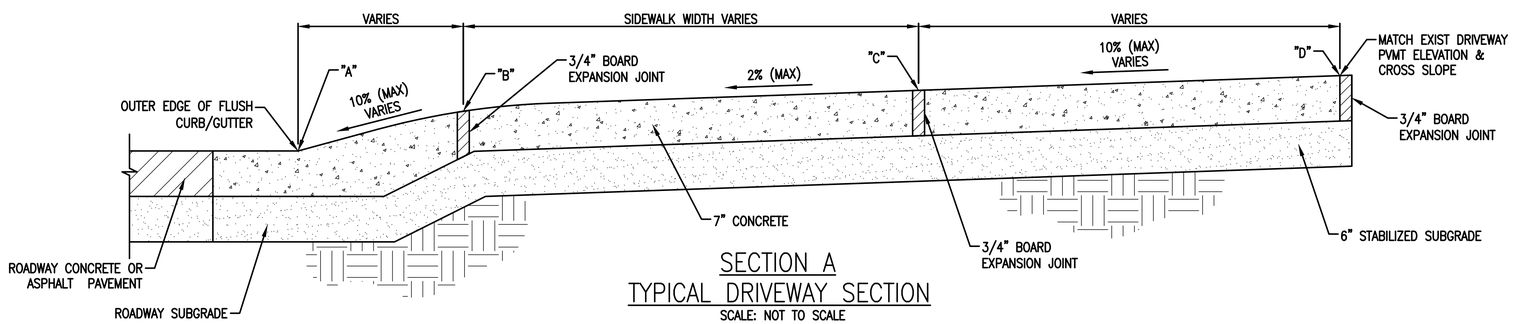
NOTES

1. FOR PROPOSED DRIVEWAYS GREATER THAN 15–FOOT AT ROW, PROVIDE TRANSVERSE EXPANSION JOINTS AT MAX 7.5–FOOT SPACING. ALL EXPANSION JOINTS ARE INCIDENTAL TO DRIVEWAY PAY ITEM.



TYPICAL DRIVEWAY LAYOUT ON CONCRETE ROADWAY

SCALE: NOT TO SCALE



SECTION A

TYPICAL DRIVEWAY SECTION

SCALE: NOT TO SCALE

BASE BID

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 90012 LICENSED PROFESSIONAL ENGINEER 07/28/2023

VOID

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY RD DRIVEWAY TABLE

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: N.T.S.
VERT: N.T.S.

SHEET NO. 74 OF 111
DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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Mosley Road

DRIVEWAY NO.	DRIVEWAY CL STATION	OFFSET *					ELEVATION				VERTICAL LIP HEIGHT AT POINT "A" (INCHES)***	SLOPE				RADIUS		DRIVEWAY WIDTH (W)	DRIVEWAY CONCRETE THICKNESS	SIDEWALK WIDTH THRU DRIVEWAY	DRIVEWAY TYPE
		LT/RT	POINT "A"	POINT "B"	POINT "C"	POINT "D"	POINT "A"	POINT "B"	POINT "C"	POINT "D"		*A-B*	*B-C*	*C-D*	*A-D*	LT	RT				
21	12+63.56	RT	17.50	N/A	N/A	29.50	35.36	N/A	N/A	36.30		N/A	N/A	N/A	7.8%	26.00	12.00	38.00	7" CONC	N/A	COMMERCIAL
22	13+44.09	LT	17.50	N/A	N/A	27.50	35.26	N/A	N/A	36.40	1.5"	N/A	N/A	N/A	11.4%	10.00	10.00	41.50	7" CONC	N/A	COMMERCIAL
23	13+42.83	RT	17.50	N/A	N/A	29.50	35.14	N/A	N/A	35.80		N/A	N/A	N/A	5.5%	10.00	10.00	23.00	7" CONC	N/A	COMMERCIAL
24	14+20.18	RT	17.50	N/A	N/A	25.50	35.05	N/A	N/A	36.16	1.5"	N/A	N/A	N/A	13.9%	5.00	7.00	35.00	7" CONC	N/A	COMMERCIAL
25	14+64.24	RT	17.50	N/A	N/A	27.10	34.80	N/A	N/A	36.30	1.5"	N/A	N/A	N/A	15.6%	7.00	5.00	30.00	7" CONC	N/A	COMMERCIAL
26	15+45.14	RT	17.50	N/A	N/A	24.50	34.62	N/A	N/A	35.20		N/A	N/A	N/A	8.2%	5.00	10.00	31.00	7" CONC	N/A	COMMERCIAL
27	15+60.47	LT	17.50	N/A	N/A	24.50	34.59	N/A	N/A	35.25		N/A	N/A	N/A	9.4%	10.00	10.00	47.50	7" CONC	N/A	COMMERCIAL
28	15+89.59	RT	17.50	N/A	N/A	24.50	34.53	N/A	N/A	35.25		N/A	N/A	N/A	10.2%	10.00	5.00	31.50	7" CONC	N/A	COMMERCIAL
29	16+41.12	RT	17.50	N/A	N/A	24.50	34.43	N/A	N/A	35.13		N/A	N/A	N/A	9.9%	10.00	10.00	26.50	7" CONC	N/A	COMMERCIAL
30	16+60.83	LT	17.50	N/A	N/A	24.50	34.81	N/A	N/A	35.50		N/A	N/A	N/A	9.8%	10.00	7.00	19.50	7" CONC	N/A	COMMERCIAL
31	18+00.62	LT	17.55	N/A	N/A	25.10	34.88	N/A	N/A	35.70	1.5"	N/A	N/A	N/A	10.9%	10.00	10.00	35.00	7" CONC	N/A	COMMERCIAL
32	18+28.54	RT	17.45	N/A	N/A	24.90	34.68	N/A	N/A	35.38		N/A	N/A	N/A	9.3%	14.00	28.00	43.50	7" CONC	N/A	COMMERCIAL
33	18+62.88	LT	17.60	N/A	N/A	32.00	34.70	N/A	N/A	36.22	1.5"	N/A	N/A	N/A	10.6%	10.00	10.00	36.50	7" CONC	N/A	COMMERCIAL
34	19+21.19	RT	17.40	N/A	N/A	24.70	34.40	N/A	N/A	35.10		N/A	N/A	N/A	9.5%	10.00	10.00	15.00	7" CONC	N/A	COMMERCIAL
35	19+98.08	RT	17.30	24.50	27.50	29.50	34.29	35.55	35.60	35.90	1.5"	17.5%	1.7%	15.0%	N/A	12.00	12.00	41.00	7" CONC	3.0	COMMERCIAL
36	20+16.64	LT	17.70	N/A	N/A	29.70	34.23	N/A	N/A	36.25	1.5"	N/A	N/A	N/A	16.8%	10.00	7.00	28.00	7" CONC	N/A	COMMERCIAL
37	20+78.30	LT	17.75	N/A	N/A	25.60	34.05	N/A	N/A	34.90	1.5"	N/A	N/A	N/A	10.8%	10.00	10.00	24.00	7" CONC	N/A	COMMERCIAL
38	20+76.76	RT	17.25	N/A	N/A	24.40	33.93	N/A	N/A	34.70		N/A	N/A	N/A	10.7%	20.00	17.00	35.00	7" CONC	N/A	COMMERCIAL
39	21+41.83	RT	17.20	24.30	28.30	31.40	33.87	34.50	34.58	34.97	1.5"	8.9%	2.0%	12.6%	N/A	18.00	12.00	30.50	7" CONC	N/A	COMMERCIAL
40	22+07.11	LT	17.85	N/A	N/A	25.80	33.90	N/A	N/A	34.72	1.5"	N/A	N/A	N/A	10.3%	10.00	10.00	27.00	7" CONC	N/A	COMMERCIAL
41	23+72.28	RT	17.00	18.30	23.30	36.30	34.16	34.30	34.38	36.10	1.5"	10.8%	1.6%	13.2%	N/A	13.00	10.00	29.50	7" CONC	4.0	COMMERCIAL
42	23+85.23	LT	18.00	N/A	N/A	26.10	33.99	N/A	N/A	34.60		N/A	N/A	N/A	7.5%	10.00	10.00	34.00	7" CONC	N/A	COMMERCIAL
43	26+16.05	LT	18.20	N/A	N/A	29.80	33.83	N/A	N/A	34.90		N/A	N/A	N/A	9.2%	12.00	10.00	25.00	7" CONC	N/A	COMMERCIAL
44	26+72.25	RT	16.80	20.40	25.40	33.00	34.13	34.50	34.60	35.45	1.5"	10.4%	2.0%	11.2%	N/A	10.00	10.00	33.50	7" CONC	5.0	COMMERCIAL
45	27+95.01	LT	18.90	N/A	N/A	27.90	34.52	N/A	N/A	35.60	1.5"	N/A	N/A	N/A	12.0%	10.00	10.00	35.00	7" CONC	N/A	COMMERCIAL
46	29+57.81	LT	20.00	N/A	N/A	27.10	34.37	N/A	N/A	34.90		N/A	N/A	N/A	7.4%	7.00	10.00	24.50	7" CONC	N/A	COMMERCIAL
47	30+73.04	RT	19.00	22.30	27.30	36.50	34.12	34.40	34.50	35.60	1.5"	8.5%	2.0%	12.0%	N/A	10.00	10.00	31.00	7" CONC	5.0	COMMERCIAL
48	31+40.92	RT	19.00	N/A	N/A	27.60	33.95	N/A	N/A	35.30	1.5"	N/A	N/A	N/A	15.7%	3.00	8.00	41.00	7" CONC	N/A	COMMERCIAL
49	31+97.23	LT	22.65	N/A	N/A	34.65	33.78	N/A	N/A	35.50	1.5"	N/A	N/A	N/A	14.3%	10.00	10.00	22.50	7" CONC	N/A	COMMERCIAL
50	31+91.00	RT	19.00	N/A	N/A	27.50	33.68	N/A	N/A	35.50		N/A	N/A	N/A	21.4%	8.00	3.00	36.50	7" CONC	N/A	COMMERCIAL

BASE BID

NOTES

1. FOR PROPOSED DRIVEWAYS GREATER THAN 15-FOOT AT ROW, PROVIDE TRANSVERSE EXPANSION JOINTS AT MAX 7.5-FOOT SPACING. ALL EXPANSION JOINTS ARE INCIDENTAL TO DRIVEWAY PAY ITEM.

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
VOID
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY RD DRIVEWAY TABLE

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: **N.T.S.** VERT: **N.T.S.**
SHEET NO. **75** OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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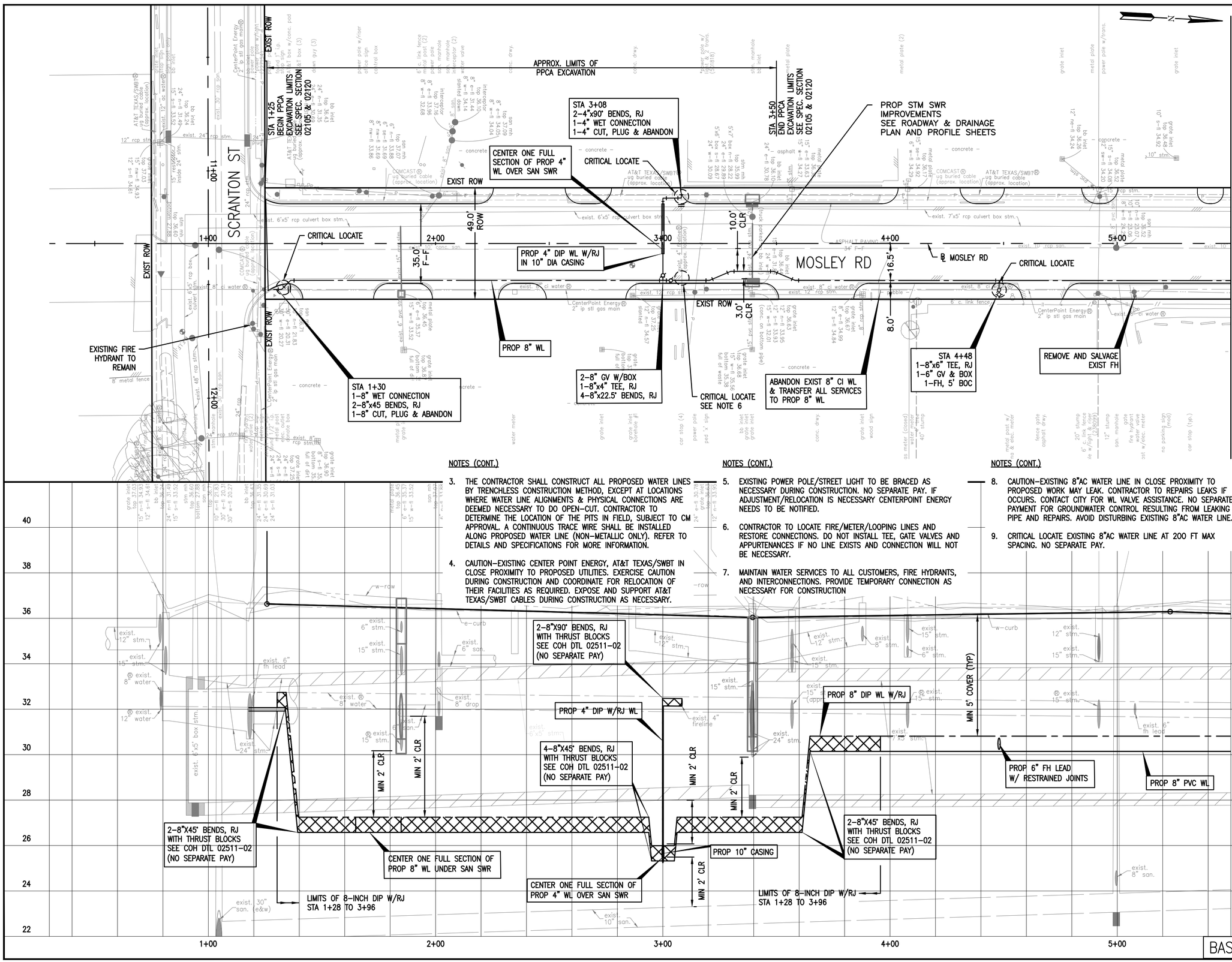

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

NOTES:

1. PROPOSED WATER DEPTH IS 5' MIN COVER FROM TOP OF CURB (TYP). ABSOLUTE MINIMUM DEPTH IS 3'.
2. ADJUST PROPOSED/EXISTING TO REMAIN WATER VALVE/METER BOXES TO NEW GRADE. REPLACE ALL MISSING OR DAMAGED WATER VALVE/METER BOXES AND COVERS.

NOTES (CONT.)

3. THE CONTRACTOR SHALL CONSTRUCT ALL PROPOSED WATER LINES BY TRENCHLESS CONSTRUCTION METHOD, EXCEPT AT LOCATIONS WHERE WATER LINE ALIGNMENTS & PHYSICAL CONNECTIONS ARE DEEMED NECESSARY TO DO OPEN-CUT. CONTRACTOR TO DETERMINE THE LOCATION OF THE PITS IN FIELD, SUBJECT TO CM APPROVAL. A CONTINUOUS TRACE WIRE SHALL BE INSTALLED ALONG PROPOSED WATER LINE (NON-METALLIC ONLY). REFER TO DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
4. CAUTION-EXISTING CENTER POINT ENERGY, AT&T TEXAS/SWBT IN CLOSE PROXIMITY TO PROPOSED UTILITIES. EXERCISE CAUTION DURING CONSTRUCTION AND COORDINATE FOR RELOCATION OF THEIR FACILITIES AS REQUIRED. EXPOSE AND SUPPORT AT&T TEXAS/SWBT CABLES DURING CONSTRUCTION AS NECESSARY.

NOTES (CONT.)

5. EXISTING POWER POLE/STREET LIGHT TO BE BRACED AS NECESSARY DURING CONSTRUCTION. NO SEPARATE PAY. IF ADJUSTMENT/RELOCATION IS NECESSARY CENTERPOINT ENERGY NEEDS TO BE NOTIFIED.
6. CONTRACTOR TO LOCATE FIRE/METER/LOOPING LINES AND RESTORE CONNECTIONS. DO NOT INSTALL TEE, GATE VALVES AND APPURTENANCES IF NO LINE EXISTS AND CONNECTION WILL NOT BE NECESSARY.
7. MAINTAIN WATER SERVICES TO ALL CUSTOMERS, FIRE HYDRANTS, AND INTERCONNECTIONS. PROVIDE TEMPORARY CONNECTION AS NECESSARY FOR CONSTRUCTION

NOTES (CONT.)

8. CAUTION-EXISTING 8"AC WATER LINE IN CLOSE PROXIMITY TO PROPOSED WORK MAY LEAK. CONTRACTOR TO REPAIRS LEAKS IF OCCURS. CONTACT CITY FOR WL VALVE ASSISTANCE. NO SEPARATE PAYMENT FOR GROUNDWATER CONTROL RESULTING FROM LEAKING PIPE AND REPAIRS. AVOID DISTURBING EXISTING 8"AC WATER LINE.
9. CRITICAL LOCATE EXISTING 8"AC WATER LINE AT 200 FT MAX SPACING. NO SEPARATE PAY.

0' 20' 40'
SCALE IN FEET

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

VERIFICATION OF PRIVATE UTILITY LINES

Mike Brower Date: 07-24-23
CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
Signature valid for six months.

Mike Brower Date: 07-24-23
CenterPoint Energy/UNDERGROUND Electrical facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification)
Signature valid for six months.

Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only. Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-62.34

STATE OF TEXAS MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
BEGIN STA TO STA 5+50

SHEET 1 OF 9

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 76 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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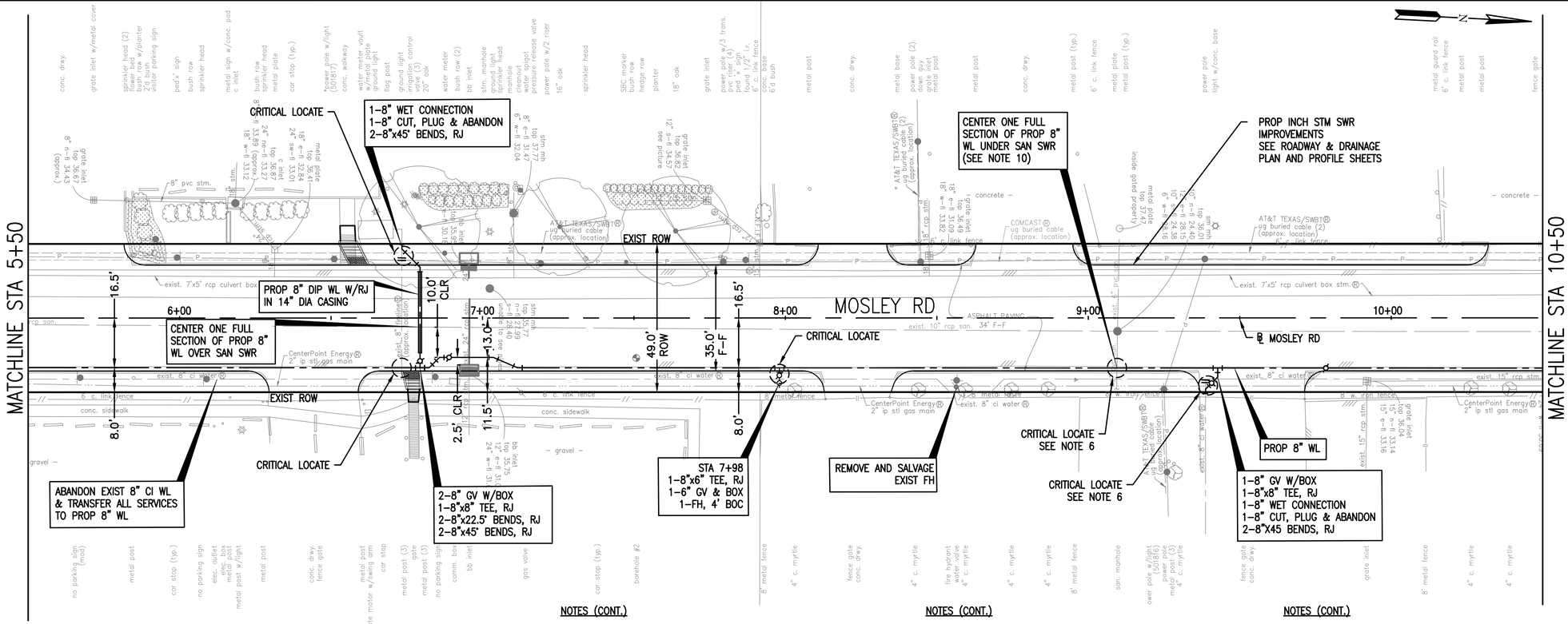

BENCHMARK:

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ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

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No.	Date	Revisions	App'd

0' 20' 40'
SCALE IN FEET

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VERIFICATION OF PRIVATE UTILITY LINES

Mike Brower Date: 07-24-23
CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
Signature valid for six months.

Mike Brower Date: 07-24-23
CenterPoint Energy/UNDERGROUND Electrical facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification)
Signature valid for six months.

Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only. Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS MARC WOOD WARD 96672 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
STA 5+50 TO STA 10+50

SHEET 2 OF 9

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=20'
VERT: 1"=2'
SHEET NO. 77 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

NOTES (CONT.)

3. THE CONTRACTOR SHALL CONSTRUCT ALL PROPOSED WATER LINES BY TRENCHLESS CONSTRUCTION METHOD, EXCEPT AT LOCATIONS WHERE WATER LINE ALIGNMENTS & PHYSICAL CONNECTIONS ARE DEEMED NECESSARY TO DO OPEN-CUT. CONTRACTOR TO DETERMINE THE LOCATION OF THE PITS IN FIELD, SUBJECT TO CM APPROVAL. A CONTINUOUS TRACE WIRE SHALL BE INSTALLED ALONG PROPOSED WATER LINE (NON-METALLIC ONLY). REFER TO DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
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NOTES (CONT.)

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NOTES (CONT.)

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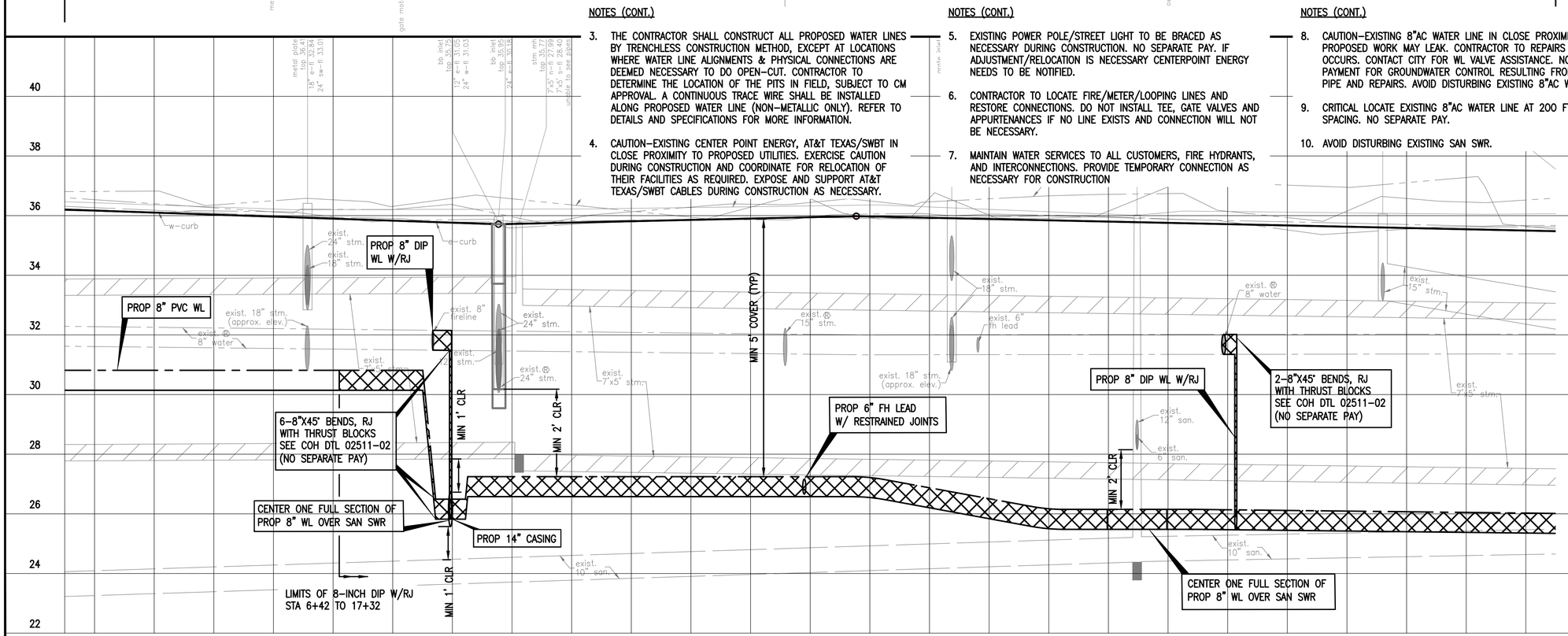

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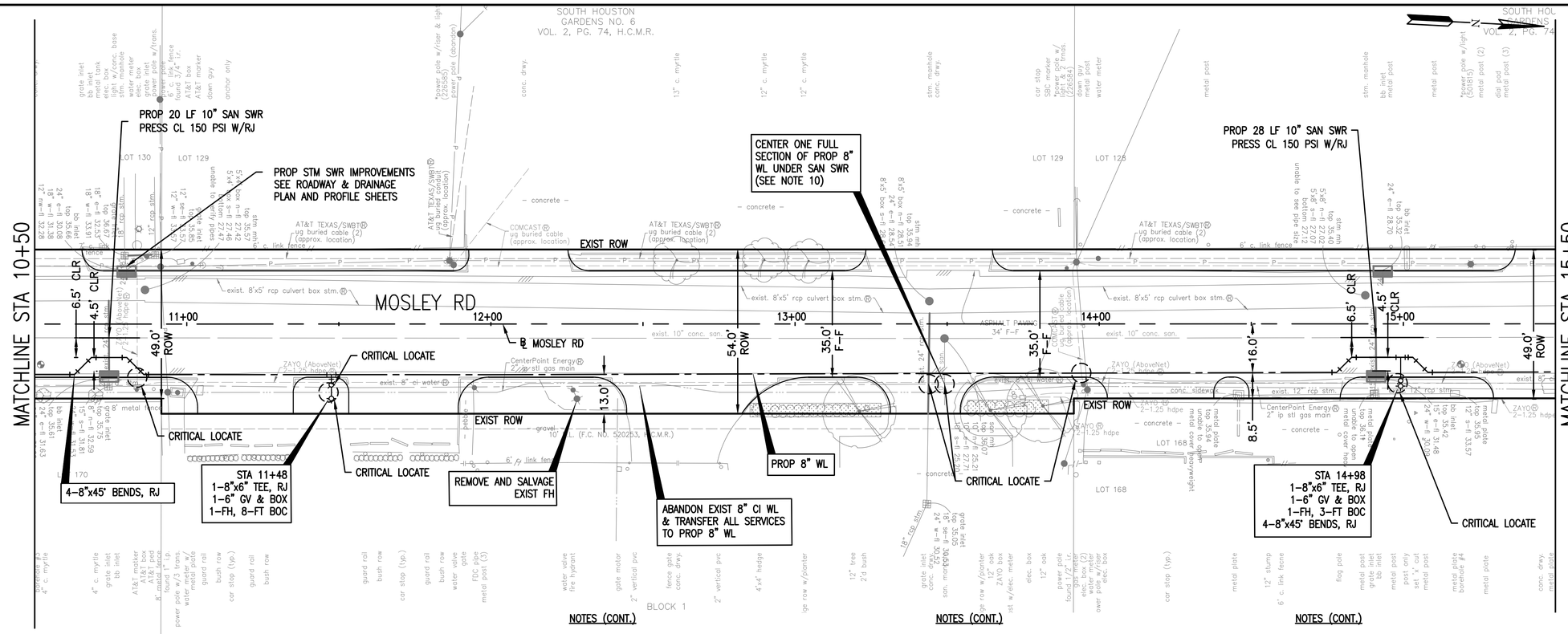

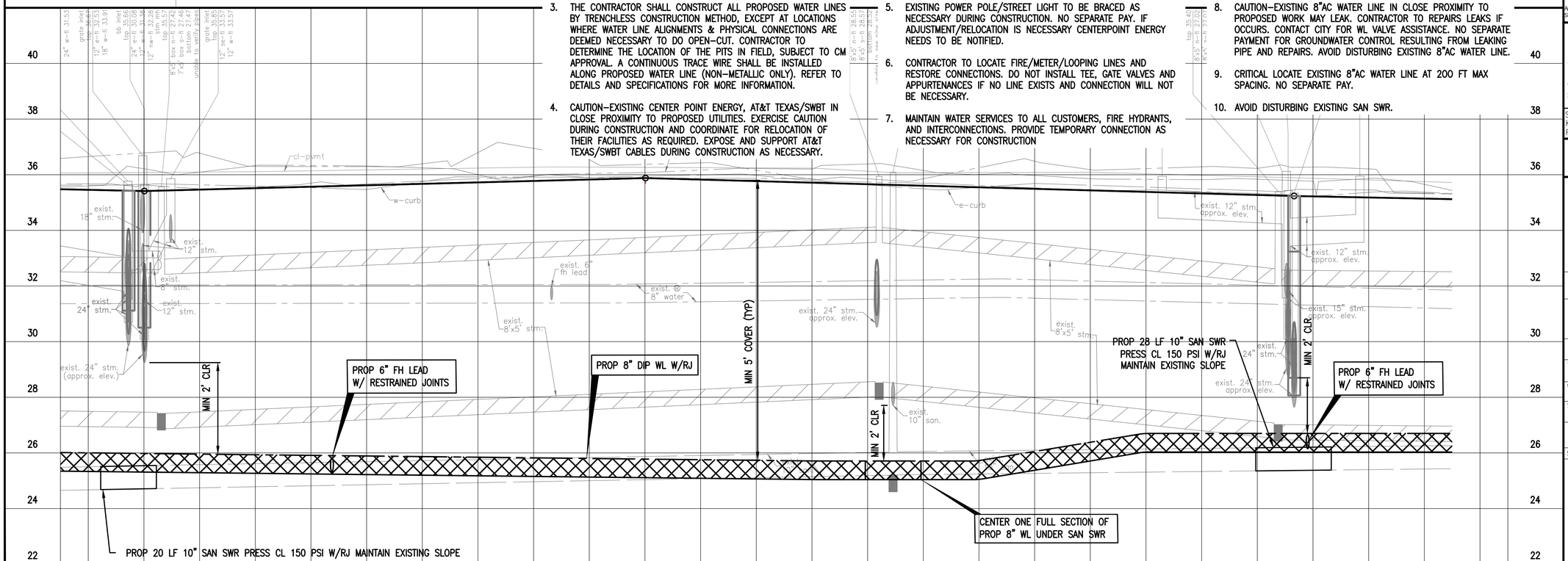

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BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

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No.	Date	Revisions	App'd

0' 20' 40'
SCALE IN FEET

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SURVEYED BY: KUO & ASSOCIATES FB NO. P-6234

STATE OF TEXAS — MARK WOODWARD 96072 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023
Lockwood, Andrews & Newnam, Inc. Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD WATER LINE PLAN & PROFILE STA 10+50 TO STA 15+50

SHEET 3 OF 9

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 78 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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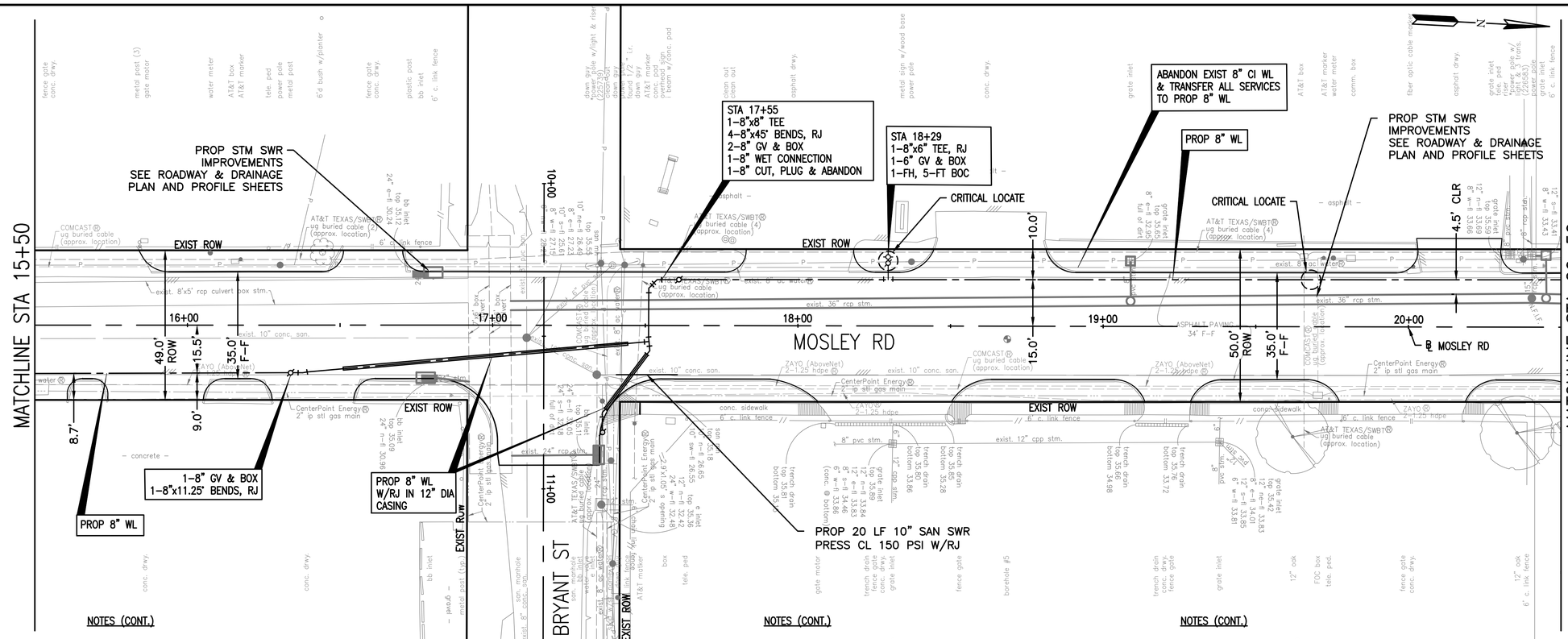

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ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

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No.	Date	Revisions	App.

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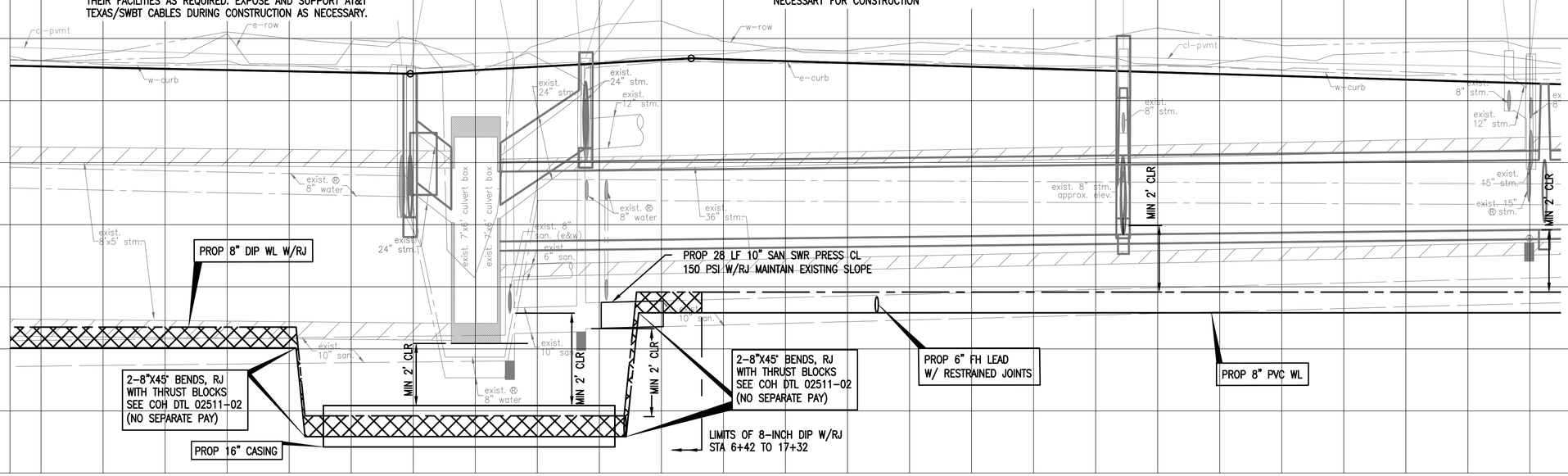

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A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77002
SURVEYED BY: KUO & ASSOCIATES FB NO. P-6234
Lockwood, Andrews & Newnam, Inc. Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
STA 15+50 TO STA 20+50

SHEET 4 OF 9

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.
HORZ: 1"=20'
VERT: 1"=2'
SHEET NO. 79 OF 111
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

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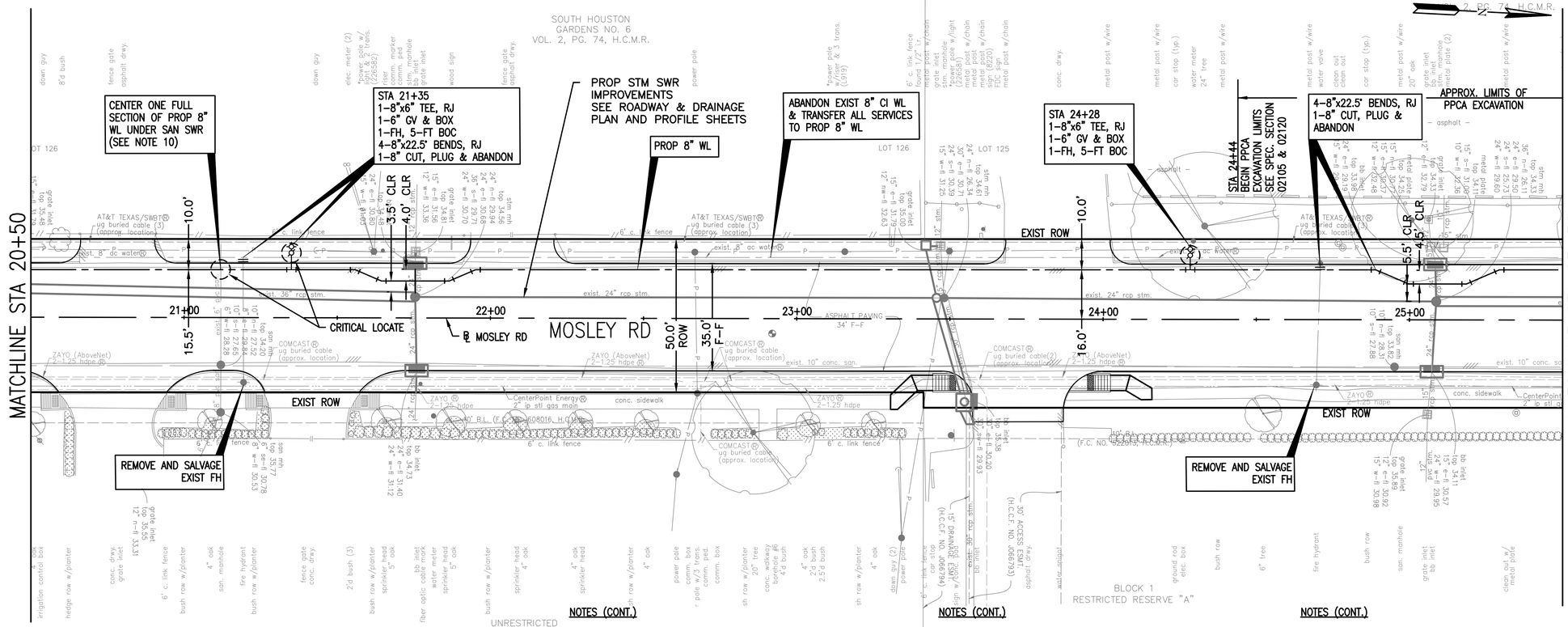

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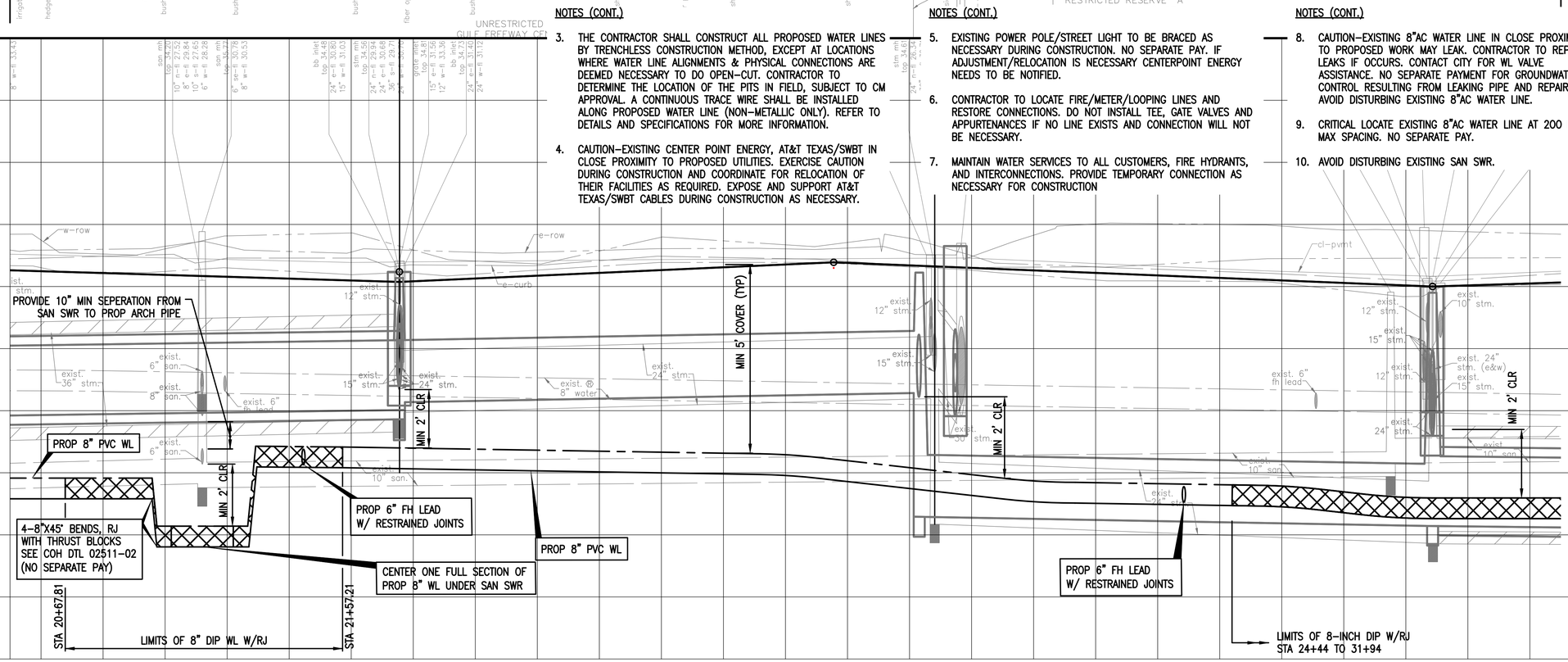

BASE BID

BENCHMARK:

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No.	Date	Revisions	App.

0' 20' 40'
SCALE IN FEET

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STATE OF TEXAS MARC WOOD WARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
STA 20+50 TO STA 25+50

SHEET 5 OF 9

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
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FILE NO.
HORZ: 1"=20'
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SHEET NO. 80 OF 111
DRAWING SCALE
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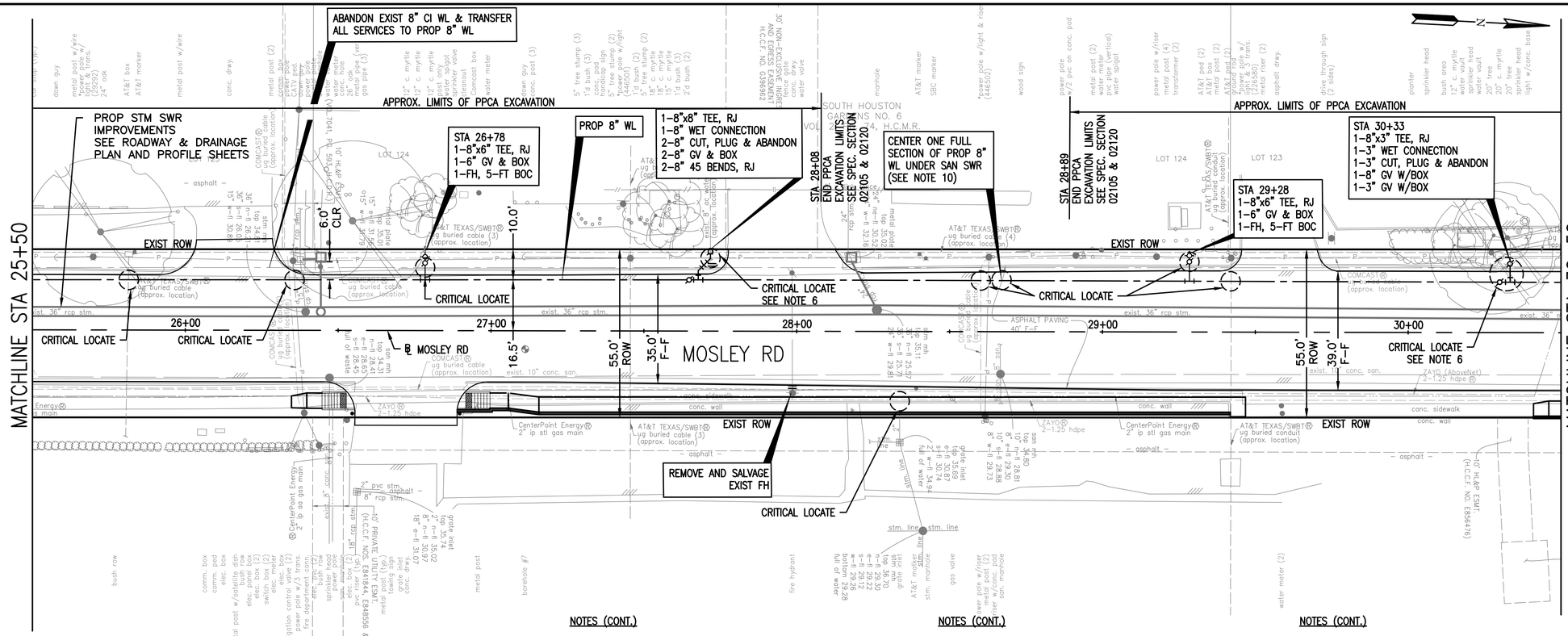

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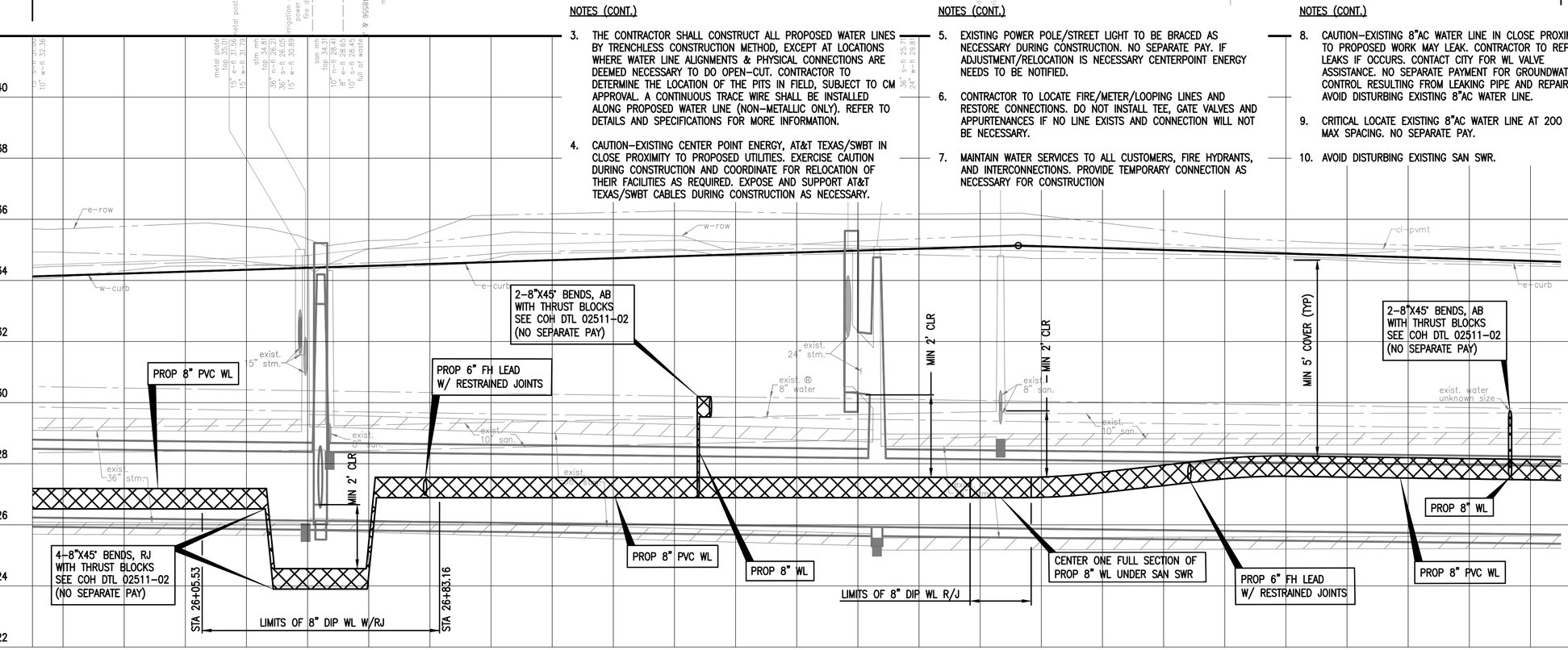

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GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
STA 25+50 TO STA 30+50

SHEET 6 OF 9

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HOUSTON PUBLIC WORKS

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WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
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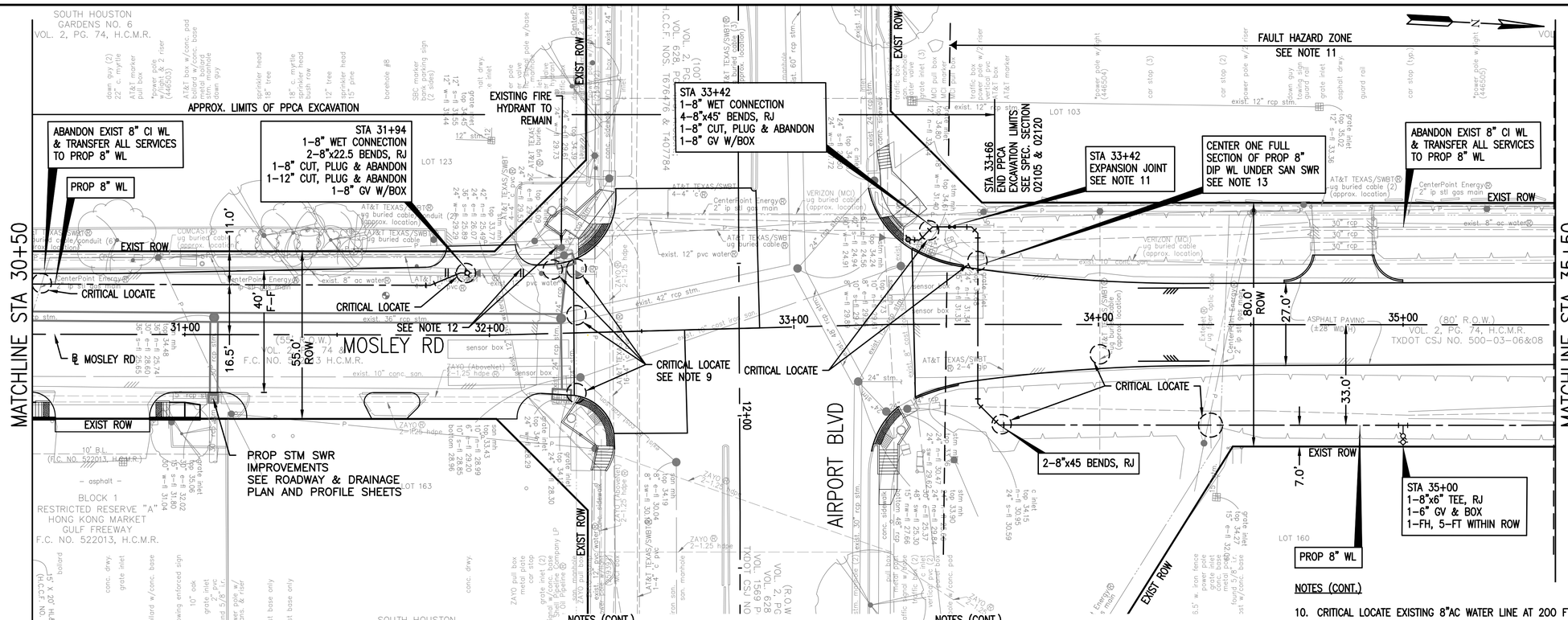

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CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

NOTES:

1. PROPOSED WATER DEPTH IS 6' MIN COVER FROM MEAN ELEVATION OF DITCH BOTTOM AND ROW ELEVATION (TYP). ABSOLUTE MINIMUM DEPTH IS 3'.
2. ADJUST PROPOSED/EXISTING TO REMAIN WATER VALVE/METER BOXES TO NEW GRADE. REPLACE ALL MISSING OR DAMAGED WATER VALVE/METER BOXES AND COVERS.
3. MAINTAIN WATER SERVICES TO ALL CUSTOMERS, FIRE HYDRANTS, AND INTERCONNECTIONS. PROVIDE TEMPORARY CONNECTION AS NECESSARY FOR CONSTRUCTION
4. CAUTION-EXISTING 8"AC WATER LINE IN CLOSE PROXIMITY TO PROPOSED WORK MAY LEAK. CONTRACTOR TO REPAIRS LEAKS IF OCCURS. CONTACT CITY FOR WL VALVE ASSISTANCE. NO SEPARATE PAYMENT FOR GROUNDWATER CONTROL RESULTING FROM LEAKING PIPE AND REPAIRS. AVOID DISTURBING EXISTING 8"AC WATER LINE.

0' 20' 40'
SCALE IN FEET

NOTES (CONT.)

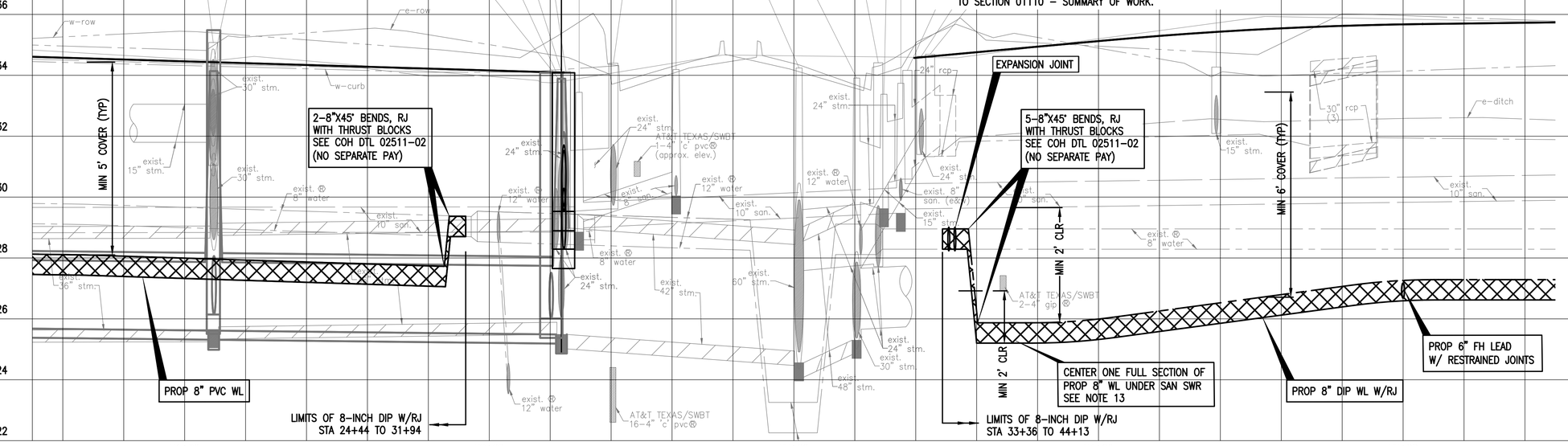
5. THE CONTRACTOR SHALL CONSTRUCT ALL PROPOSED WATER LINES BY TRENCHLESS CONSTRUCTION METHOD, EXCEPT AT LOCATIONS WHERE WATER LINE ALIGNMENTS & PHYSICAL CONNECTIONS ARE DEEMED NECESSARY TO DO OPEN-CUT. CONTRACTOR TO DETERMINE THE LOCATION OF THE PITS IN FIELD, SUBJECT TO CM APPROVAL. A CONTINUOUS TRACE WIRE SHALL BE INSTALLED ALONG PROPOSED WATER LINE (NON-METALLIC ONLY). REFER TO DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
6. CAUTION-EXISTING CENTER POINT ENERGY, AT&T TEXAS/SWBT IN CLOSE PROXIMITY TO PROPOSED UTILITIES. EXERCISE CAUTION DURING CONSTRUCTION AND COORDINATE FOR RELOCATION OF THEIR FACILITIES AS REQUIRED. EXPOSE AND SUPPORT AT&T TEXAS/SWBT CABLES DURING CONSTRUCTION AS NECESSARY.

NOTES (CONT.)

7. EXISTING POWER POLE/STREET LIGHT TO BE BRACED AS NECESSARY DURING CONSTRUCTION. NO SEPARATE PAY. IF ADJUSTMENT/RELOCATION IS NECESSARY CENTERPOINT ENERGY NEEDS TO BE NOTIFIED.
8. CONTRACTOR TO LOCATE FIRE/METER/LOOPING LINES AND RESTORE CONNECTIONS. DO NOT INSTALL TEE, GATE VALVES AND APPURTENANCES IF NO LINE EXISTS AND CONNECTION WILL NOT BE NECESSARY.
9. CAUTION EXISTING PIPELINE FACILITIES IN CLOSE PROXIMITY TO PROPOSED 8" WATERLINE. FIELD LOCATE ALL PIPELINES PRIOR TO BEGINNING WORK. EXERCISE EXTREME CAUTION DURING CONSTRUCTION AND COORDINATE WITH PIPELINE OWNERS. REFER TO SECTION 01110 - SUMMARY OF WORK.

NOTES (CONT.)

10. CRITICAL LOCATE EXISTING 8"AC WATER LINE AT 200 FT MAX SPACING. NO SEPARATE PAY.
11. INSTALL 8-INCH WATER LINE BETWEEN THE PROPOSED EXPANSION JOINTS AT STATIONS 33+42 TO 35+60 USING DUCTILE IRON PIPE PRESSURE CLASS 350 PSI, WITH INTEGRAL RESTRAINED JOINTS. PROVIDE EBAA IRON DOUBLE-BALL FLEX-TEND FORCE BALANCE EXPANSION JOINTS OR APPROVED EQUAL. INSTALL TWO WRAPS OF 4-INCH MIL HDPE WRAP AROUND EXPANSION JOINTS IN ACCORDANCE WITH AWWA C105. NO SEPARATE PAY FOR EXPANSION JOINTS.
12. PRIOR TO INSTALL 12" CUT, PLUG AND ABANDON, ENSURE CUT IF MADE TO KEEP EXIST F.H. IN SERVICE.
13. AVOID DISTURBING EXISTING 10" SAN SWR.



BASE BID

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

VERIFICATION OF PRIVATE UTILITY LINES

Mike Brower Date: 07-24-23
CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
Signature valid for six months.

Mike Brower Date: 07-24-23
CenterPoint Energy/UNDERGROUND Electrical facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification)
Signature valid for six months.

Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only.
Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARC WOOD WARD
96672
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
STA 30+50 TO STA 35+50

SHEET 7 OF 9

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 82 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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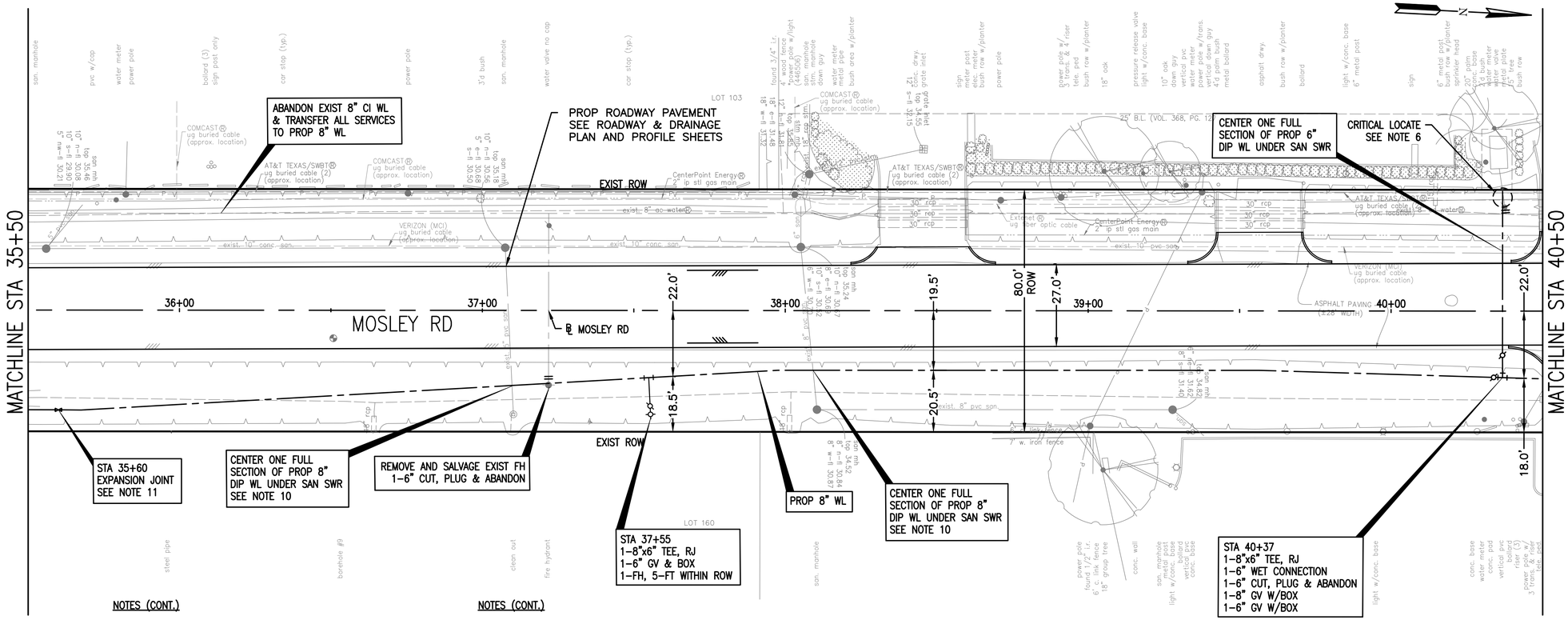

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

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NOTES (CONT.)

3. THE CONTRACTOR SHALL CONSTRUCT ALL PROPOSED WATER LINES BY TRENCHLESS CONSTRUCTION METHOD, EXCEPT AT LOCATIONS WHERE WATER LINE ALIGNMENTS & PHYSICAL CONNECTIONS ARE DEEMED NECESSARY TO DO OPEN-CUT. CONTRACTOR TO DETERMINE THE LOCATION OF THE PITS IN FIELD, SUBJECT TO CM APPROVAL. A CONTINUOUS TRACE WIRE SHALL BE INSTALLED ALONG PROPOSED WATER LINE (NON-METALLIC ONLY). REFER TO DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
4. CAUTION-EXISTING CENTER POINT ENERGY, AT&T TEXAS/SWBT IN CLOSE PROXIMITY TO PROPOSED UTILITIES. EXERCISE CAUTION DURING CONSTRUCTION AND COORDINATE FOR RELOCATION OF THEIR FACILITIES AS REQUIRED. EXPOSE AND SUPPORT AT&T TEXAS/SWBT CABLES DURING CONSTRUCTION AS NECESSARY.

NOTES (CONT.)

5. EXISTING POWER POLE/STREET LIGHT TO BE BRACED AS NECESSARY DURING CONSTRUCTION. NO SEPARATE PAY. IF ADJUSTMENT/RELOCATION IS NECESSARY CENTERPOINT ENERGY NEEDS TO BE NOTIFIED.
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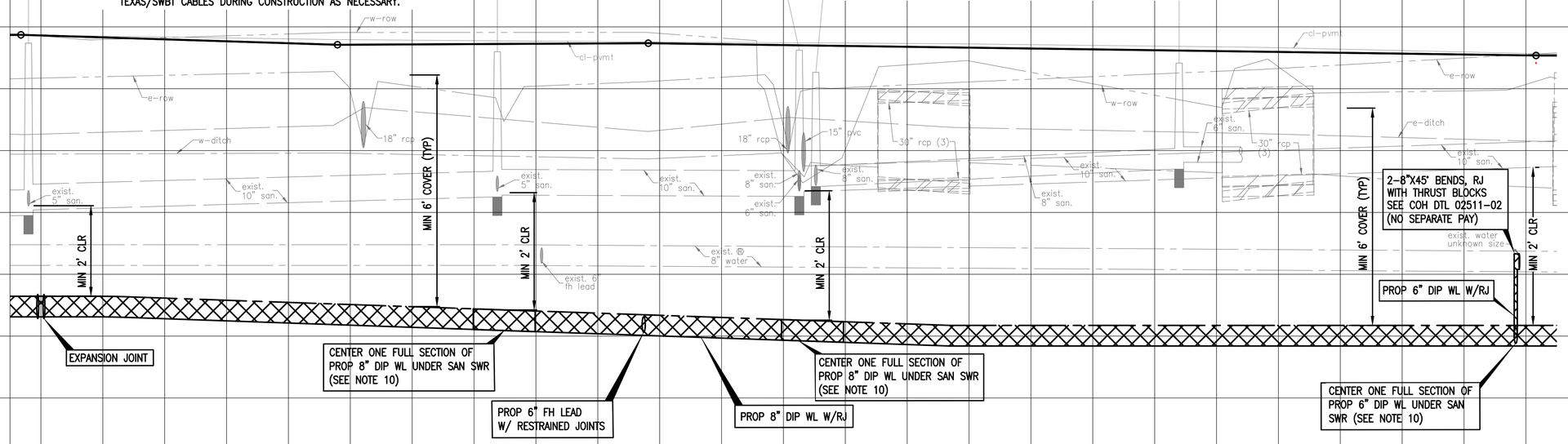
7. MAINTAIN WATER SERVICES TO ALL CUSTOMERS, FIRE HYDRANTS, AND INTERCONNECTIONS. PROVIDE TEMPORARY CONNECTION AS NECESSARY FOR CONSTRUCTION

NOTES (CONT.)

8. CAUTION-EXISTING 8"AC WATER LINE IN CLOSE PROXIMITY TO PROPOSED WORK MAY LEAK. CONTRACTOR TO REPAIRS LEAKS IF OCCURS. CONTACT CITY FOR WL VALVE ASSISTANCE. NO SEPARATE PAYMENT FOR GROUNDWATER CONTROL RESULTING FROM LEAKING PIPE AND REPAIRS. AVOID DISTURBING EXISTING 8"AC WATER LINE.
9. CRITICAL LOCATE EXISTING 8"AC WATER LINE AT 200 FT MAX SPACING. NO SEPARATE PAY.
10. AVOID DISTURBING EXISTING SAN SWR.

NOTES (CONT.)

11. INSTALL 8-INCH WATER LINE BETWEEN THE PROPOSED EXPANSION JOINTS AT STATIONS 33+42 TO 35+60 USING DUCTILE IRON PIPE PRESSURE CLASS 350 PSI, WITH INTEGRAL RESTRAINED JOINTS. PROVIDE EBAA IRON DOUBLE-BALL FLEX-TEND FORCE BALANCE EXPANSION JOINTS OR APPROVED EQUAL. INSTALL TWO WRAPS OF 4-INCH MIL HDPE WRAP AROUND EXPANSION JOINTS IN ACCORDANCE WITH AWWA C105. NO SEPARATE PAY FOR EXPANSION JOINTS.



BASE BID

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CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
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Marc Johnson Date: 7/21/23
Approved for AT&T underground conduit facilities only. Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY: KUO & ASSOCIATES FB NO. P-6234
STATE OF TEXAS MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc. Texas Registered Engineering Firm F-2014

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
STA 35+50 TO STA 40+50

SHEET 8 OF 10

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 83 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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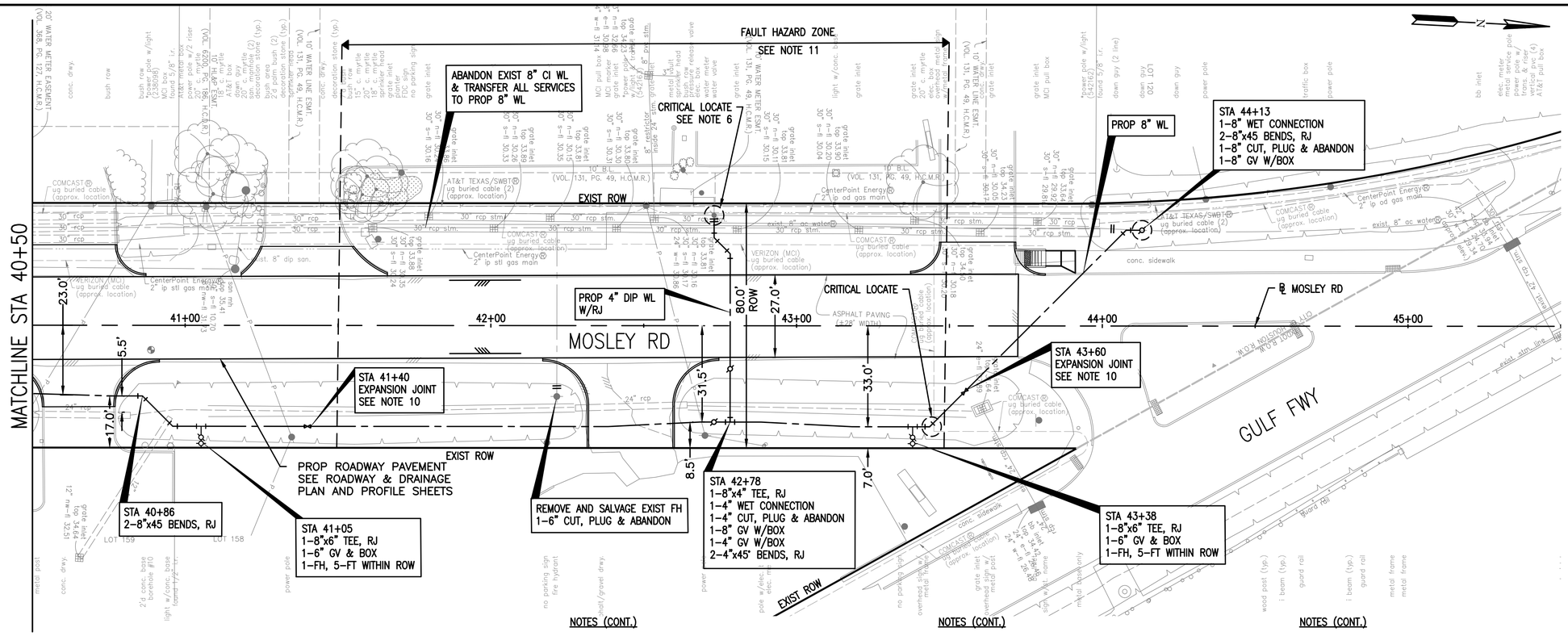

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

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0' 20' 40'
SCALE IN FEET

NOTES (CONT.)

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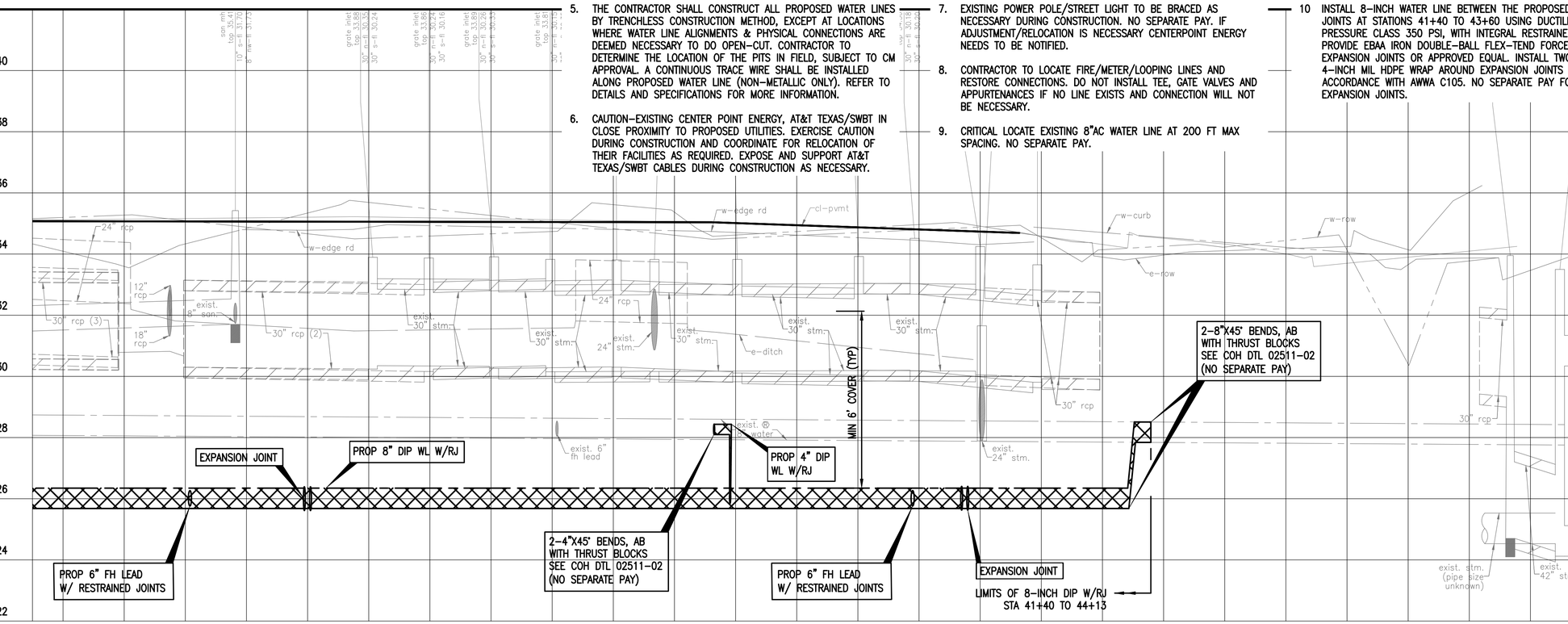
NOTES (CONT.)

10 INSTALL 8-INCH WATER LINE BETWEEN THE PROPOSED EXPANSION JOINTS AT STATIONS 41+40 TO 43+60 USING DUCTILE IRON PIPE PRESSURE CLASS 350 PSI, WITH INTEGRAL RESTRAINED JOINTS. PROVIDE EBAA IRON DOUBLE-BALL FLEX-TEND FORCE BALANCE EXPANSION JOINTS OR APPROVED EQUAL. INSTALL TWO WRAPS OF 4-INCH MIL HDPE WRAP AROUND EXPANSION JOINTS IN ACCORDANCE WITH AWWA C105. NO SEPARATE PAY FOR EXPANSION JOINTS.



BASE BID

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VERIFICATION OF PRIVATE UTILITY LINES

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Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234
STATE OF TEXAS MARK WOODWARD 96072 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
WATER LINE PLAN & PROFILE
STA 40+50 TO END STA

SHEET 9 OF 9

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 84 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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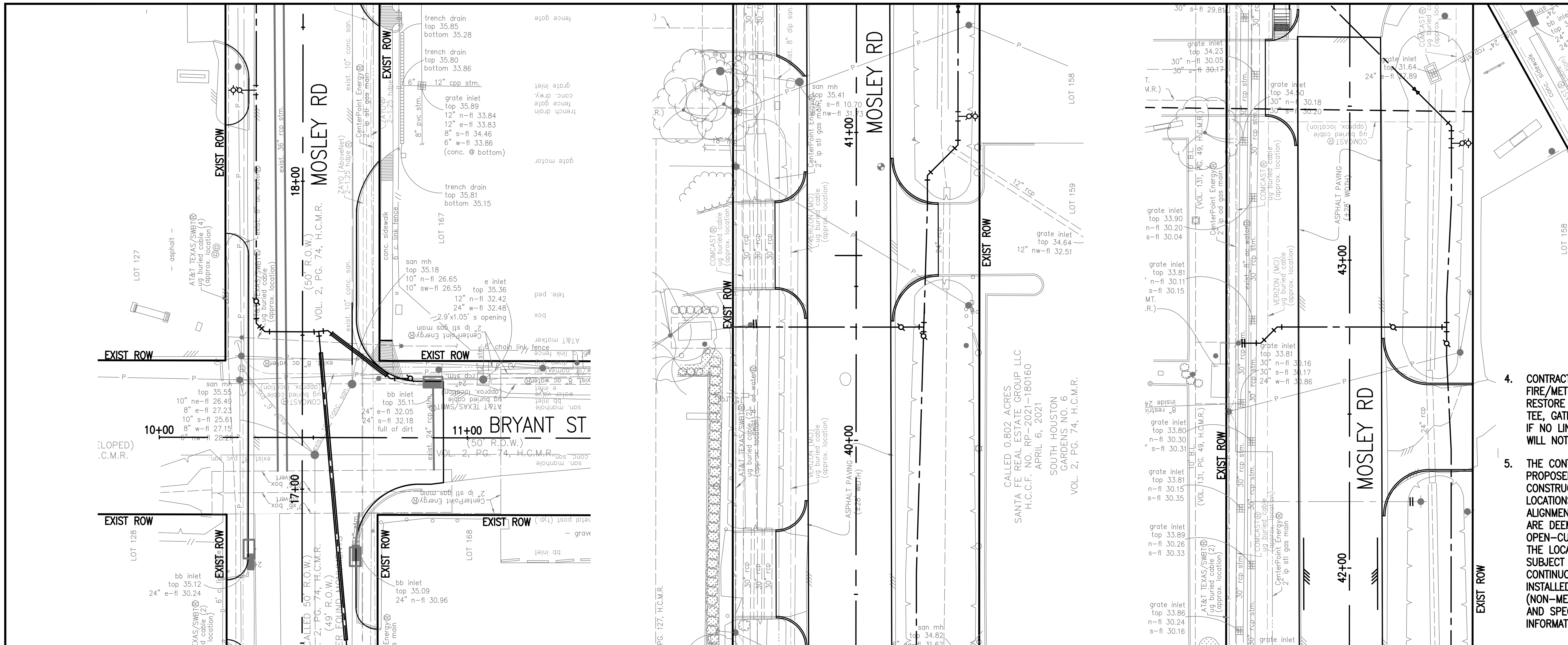

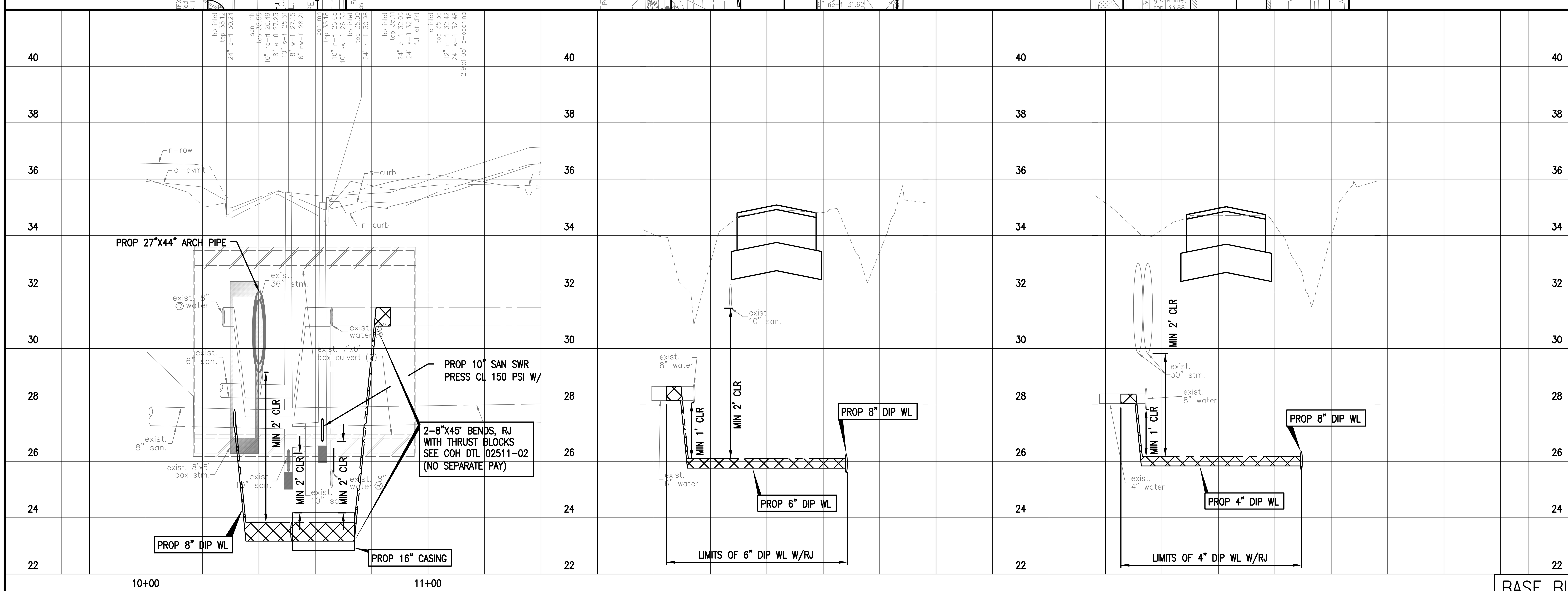

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BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

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0' 20' 40'
SCALE IN FEET

Revisions			
No.	Date		App.

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LAN
Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

STATE OF TEXAS
MARK WOODWARD
96672
LICENSED PROFESSIONAL ENGINEER
VOID
07/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY RD
WATER LINE CROSSING

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 85 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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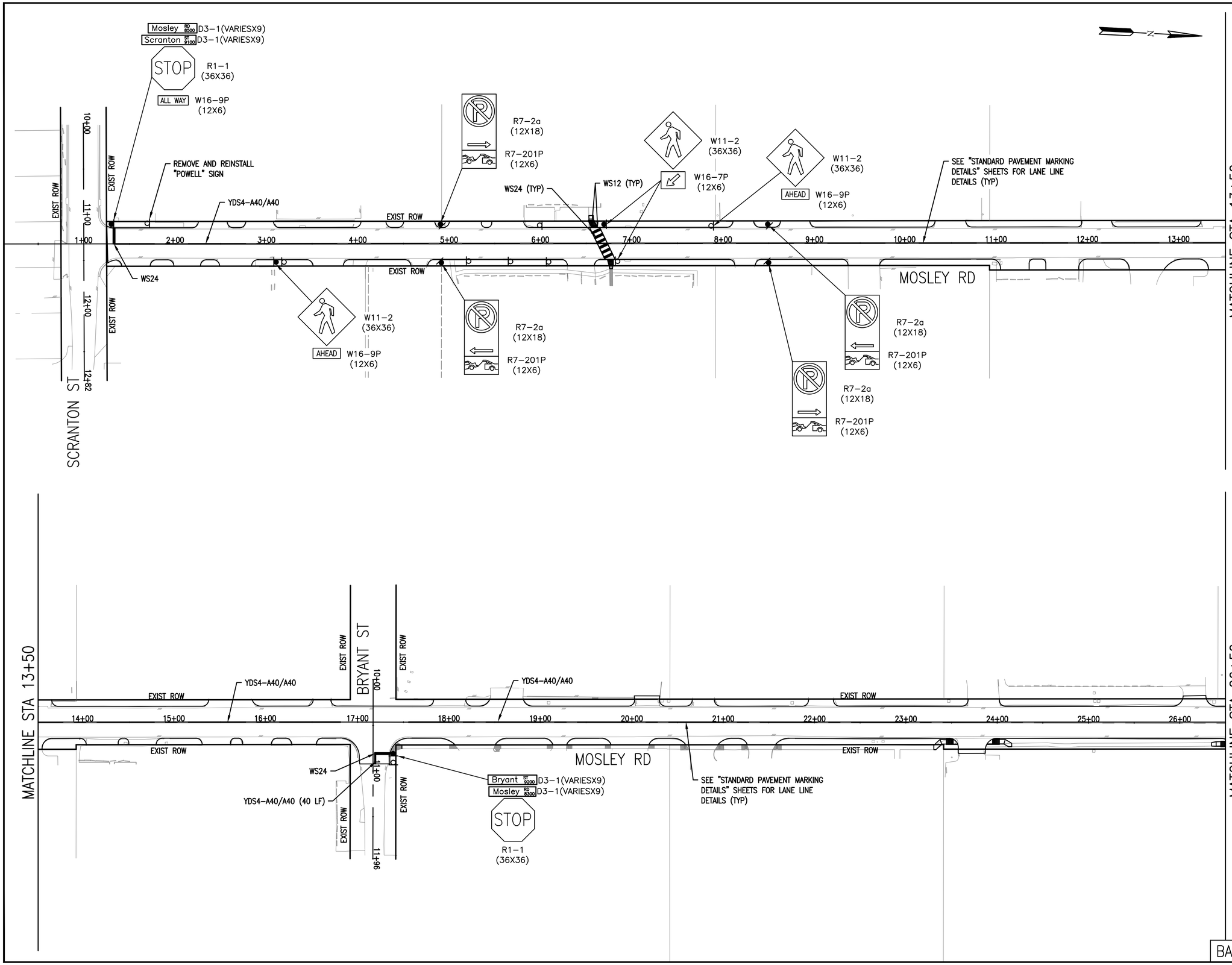

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2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96072
LICENSED PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
SIGNING & PAVEMENT MARKING
BEGIN STA TO STA 26+50

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 86 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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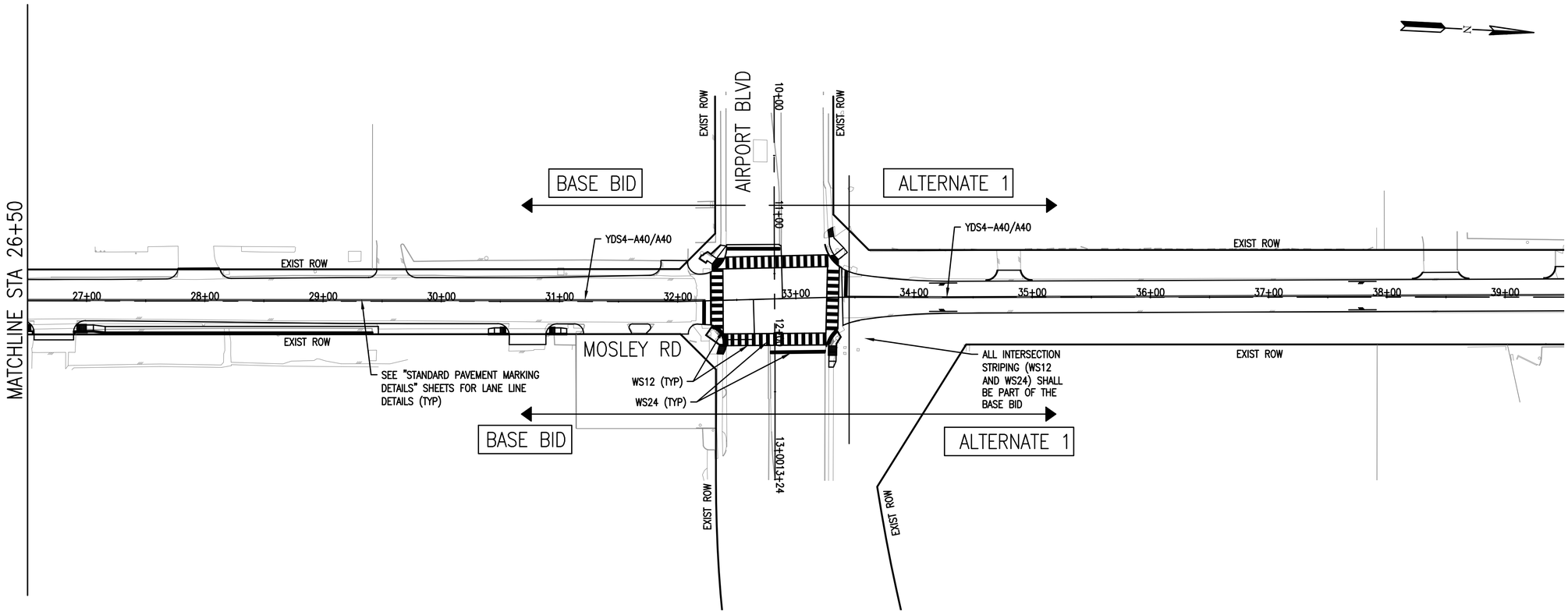

LEGEND

- PROPOSED SIGN
- EXISTING SIGN

NOTE

1. FOR ADDITIONAL SIGNING AND PAVEMENT MARKING INFORMATION REFER TO "STANDARD PAVEMENT MARKING DETAILS".
2. ALL SIGNS AND PAVEMENT MARKING TO BE PER T.M.U.T.C.D. AND CITY OF HOUSTON, SIGNING AND PAVEMENT MARKING STANDARD DETAIL SHEETS.
3. ALL EXISTING SPECIAL SIGNS, SUCH AS NEIGHBORHOOD WATCH PROGRAM SIGNS, SHALL BE PROTECTED DURING CONSTRUCTION AND/OR REMOVED AND REINSTALLED AFTER CONSTRUCTION IS COMPLETED (NOT A SEPARATE PAY ITEM, INCIDENTAL TO PRICE OF PAVEMENT MARKING AND SIGNING.
4. BLOCK NUMBERS ON STREET NAME SIGNS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF SIGN PANELS.
5. ALL SIGNS (ALL TYPES) TO REMAIN UNLESS NOTED IN DEMOLITION SHEETS.
6. REMOVE EXISTING SIGN WITH POST. PROPOSED SIGN TO BE INSTALLED ON NEW SIGN POST.

0' 50' 100'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
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FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
SIGNING & PAVEMENT MARKING
STA 26+50 TO END STA

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 87 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

BASE BID

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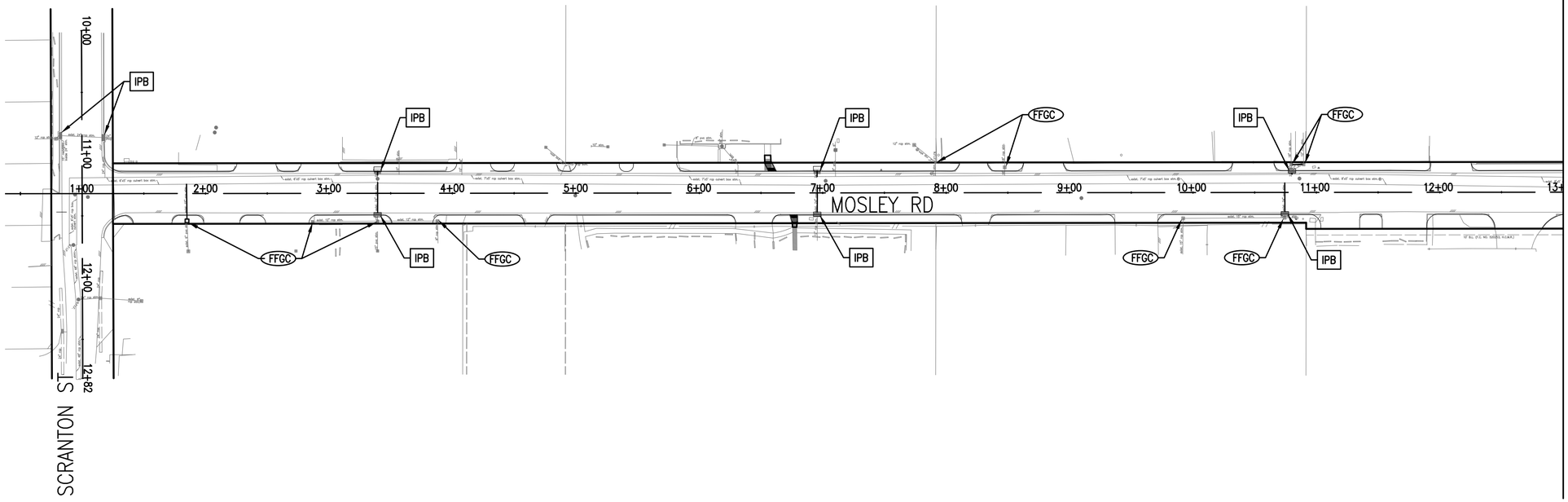


MATCHLINE STA 13+00

LEGEND

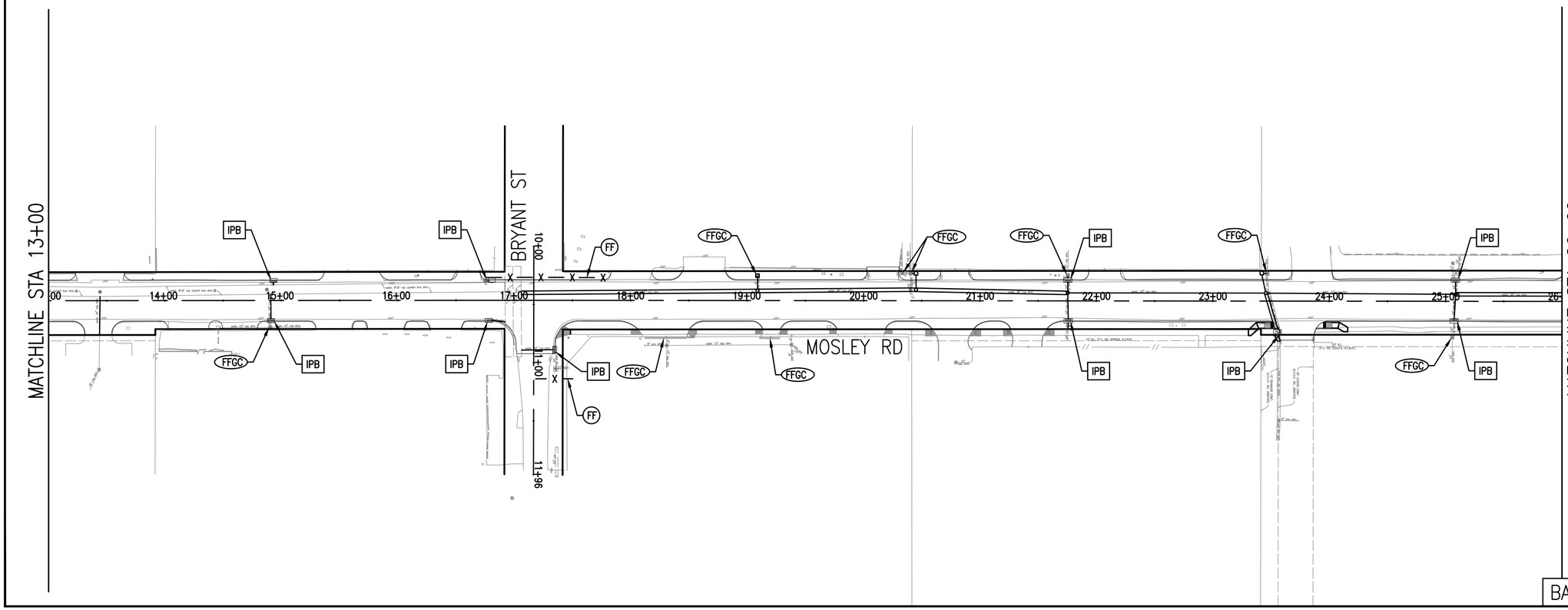
- IPB — INLET PROTECTION BARRIER
- X — FILTER FABRIC FENCE
- RFB — REINFORCED FILTER FABRIC BARRIER
- FFGC — FILTER FABRIC GRATE COVER

NOTES:

1. CONTRACTOR SHALL PROVIDE CONCRETE TRUCK WASH AREA AS DIRECTED BY THE CM/ENGINEER PRIOR TO BEGIN CONSTRUCTION.
2. PLACE REINFORCED FILTER FABRIC BARRIER ON ALL ROAD SIDE DITCHES AT EVERY UPSTREAM DRIVEWAY CULVERT.
3. INLET PROTECTION BARRIER SHALL NOT IMPEDE TRAFFIC FLOW.
4. MAINTENANCE AND INSPECTION OF EROSION/ SEDIMENT CONTROL DEVICES SHALL BE PROVIDED AS DIRECTED BY THE CM/ENGINEER.
5. BLOCK SOD SHALL BE PLACED BETWEEN SIDEWALK AND CURB (ALL TYPES) AND BETWEEN SIDEWALK AND ROW AND ALONG ROADWAY DITCH BERM.
6. REFER TO STORM WATER POLLUTION PREVENTION PLAN DETAIL SHEET FOR ADDITIONAL INFORMATION.

No.	Date	Revisions	App.

0' 50' 100'
SCALE IN FEET



MATCHLINE STA 26+00

BASE BID

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD STORM WATER POLLUTION PREVENTION PLAN BEGIN STA TO STA 26+00

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 88 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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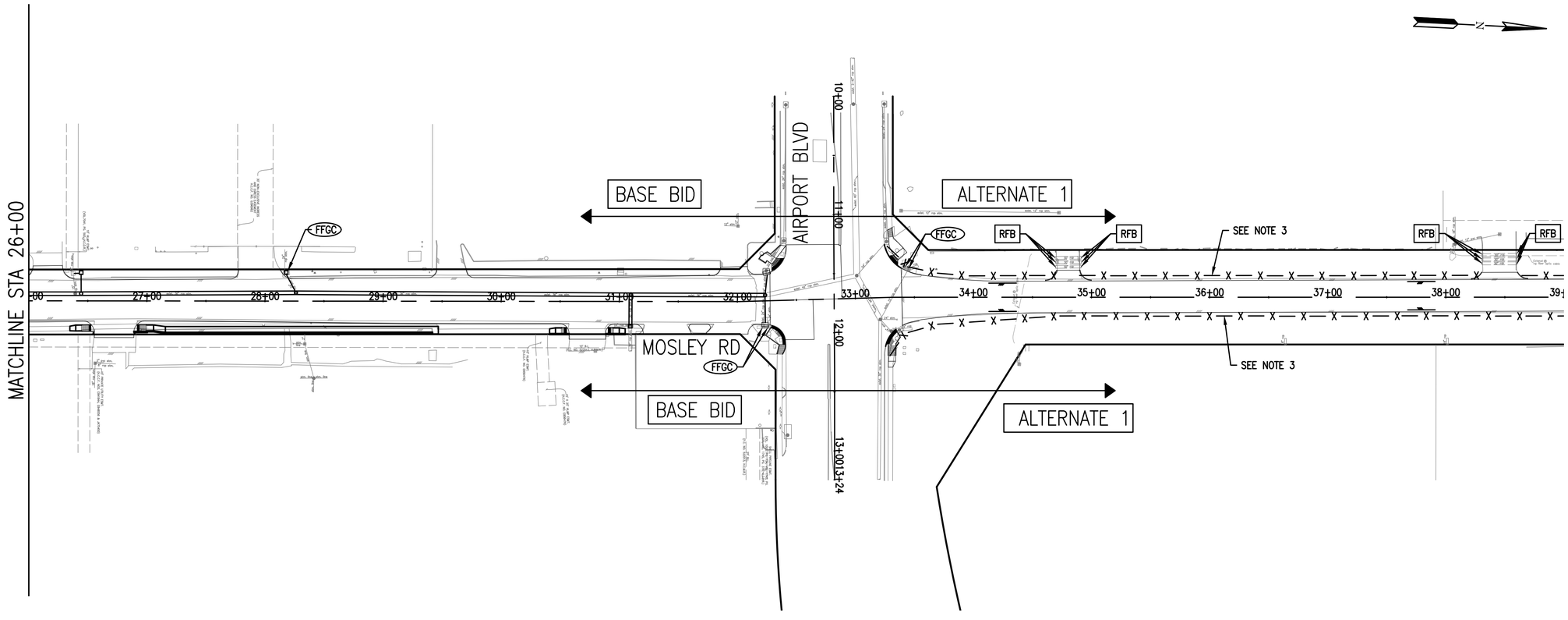

LEGEND

IPB	INLET PROTECTION BARRIER
X	FILTER FABRIC FENCE
RFB	REINFORCED FILTER FABRIC BARRIER
FFGC	FILTER FABRIC GRATE COVER

NOTES:

1. CONTRACTOR SHALL PROVIDE CONCRETE TRUCK WASH AREA AS DIRECTED BY THE CM/ENGINEER PRIOR TO BEGIN CONSTRUCTION.
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6. REFER TO STORM WATER POLLUTION PREVENTION PLAN DETAIL SHEET FOR ADDITIONAL INFORMATION.

No.	Date	Revisions	App.

0' 50' 100'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
STORM WATER POLLUTION
PREVENTION PLAN
STA 26+00 TO END STA

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 89 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

BASE BID

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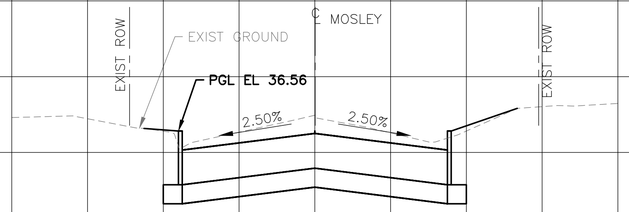

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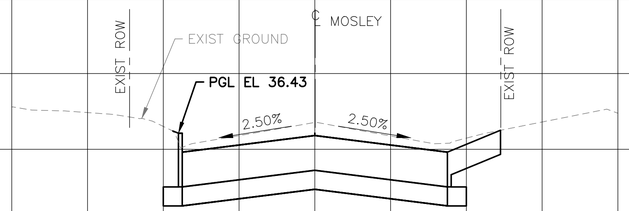
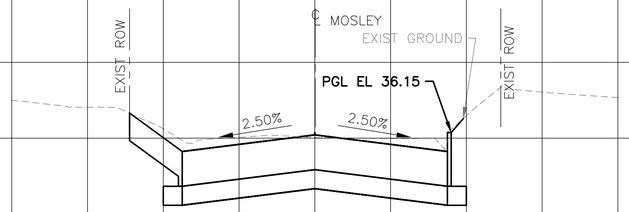


STA 2+00



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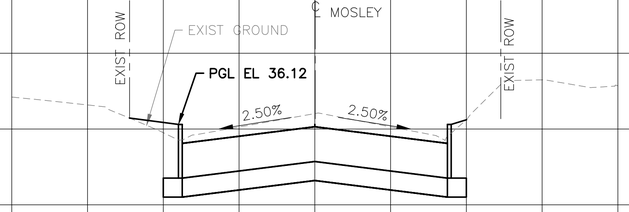
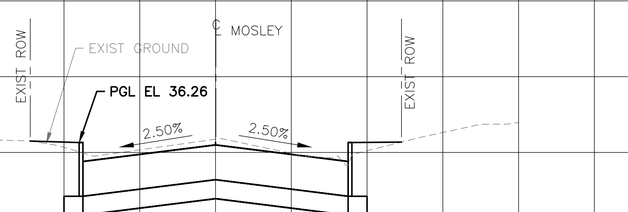


STA 4+00



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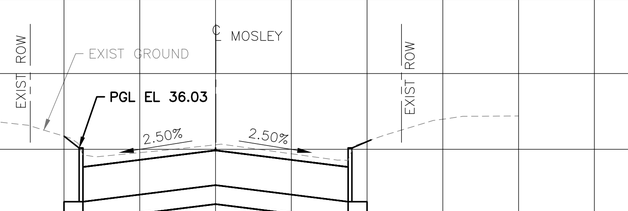

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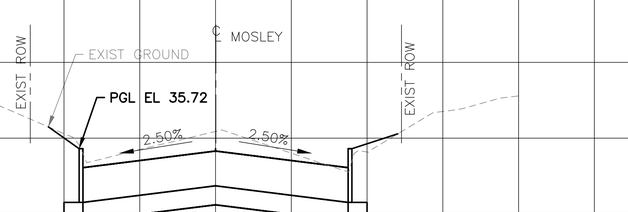

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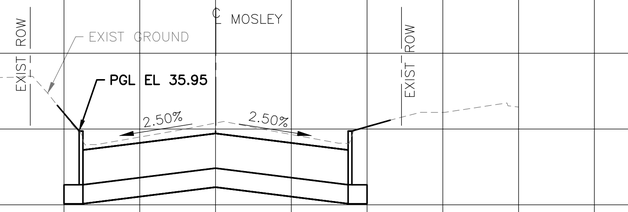

STA 8+00

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BASE BID

LEGEND

EXISTING SECTION

PROPOSED SECTION

0' 10' 20'

SCALE IN FEET

No.	Date	Revisions	App

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

VOID

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
CROSS SECTIONS

SHEET 1 OF 6

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=10' VERT: 1"=2'
SHEET NO. 90 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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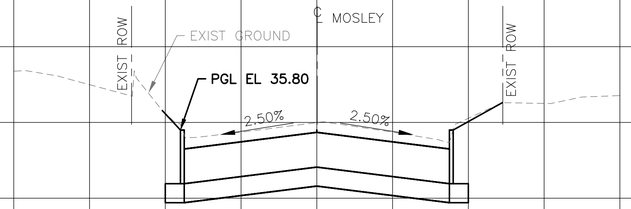

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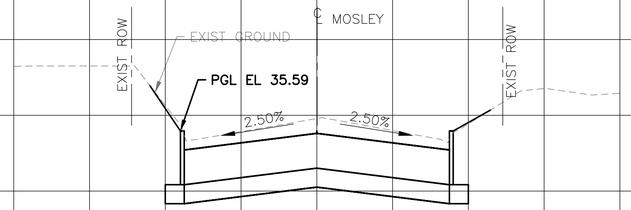

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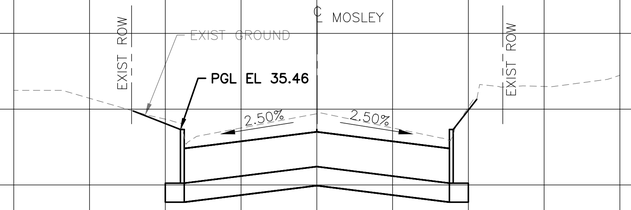

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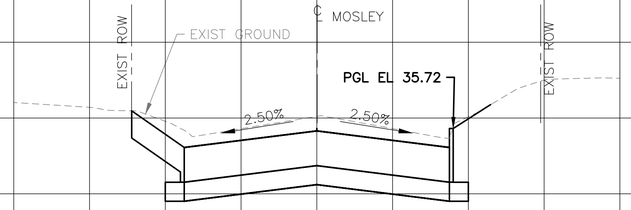

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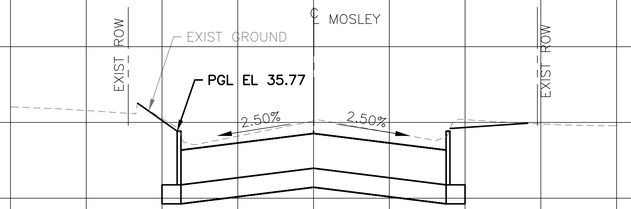

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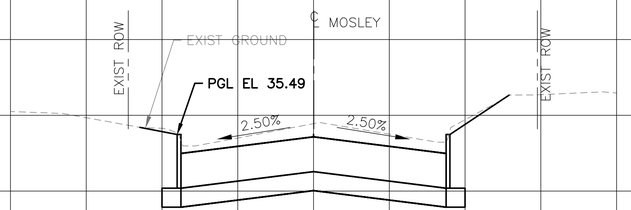

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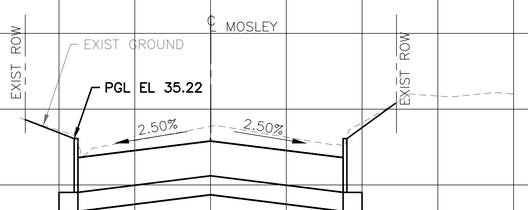

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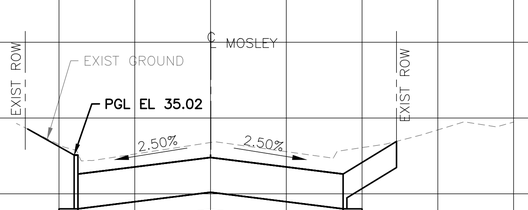

STA 16+00

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BASE BID

No.	Date	Revisions	App.

LEGEND

EXISTING SECTION

PROPOSED SECTION

0' 10' 20'

SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96672
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
CROSS SECTIONS

SHEET 2 OF 6

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=10' VERT: 1"=2'
SHEET NO. 91 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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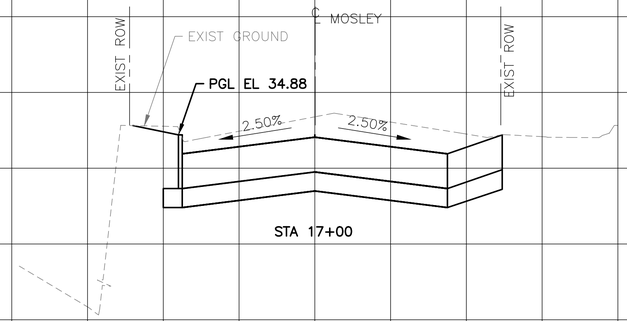

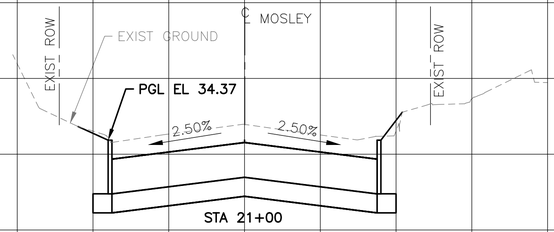

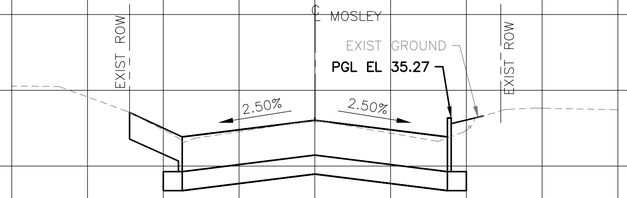

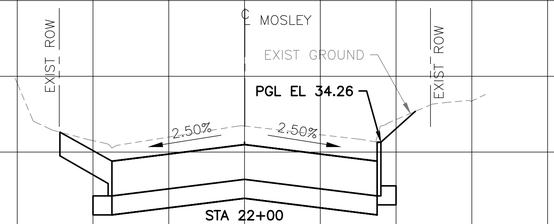

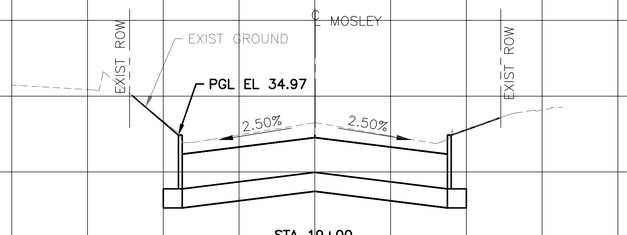

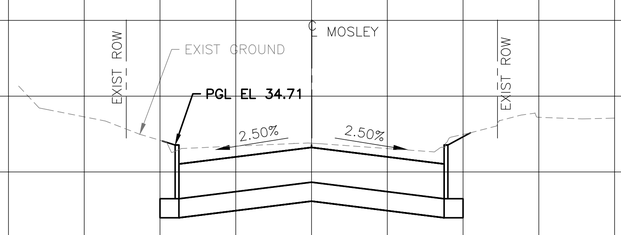

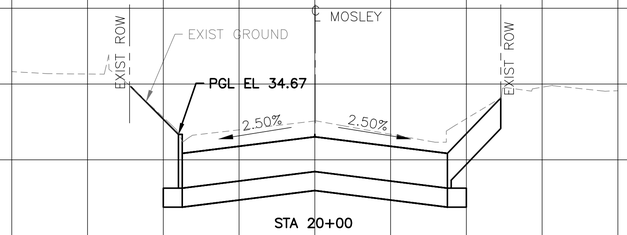

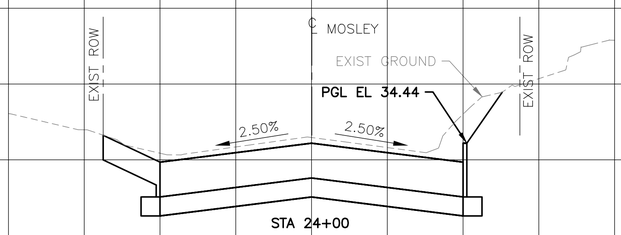

40 30 20 10 0 10 20 30 40

BASE BID

LEGEND

EXISTING SECTION

PROPOSED SECTION

0' 10' 20'

SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96672
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
CROSS SECTIONS

SHEET 3 OF 6

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=10' VERT: 1"=2'
SHEET NO. 92 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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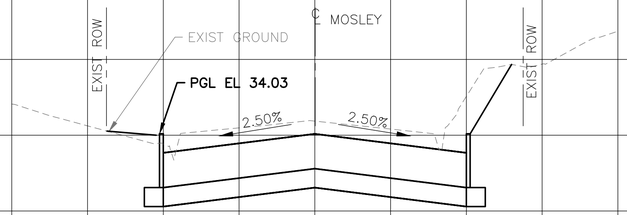

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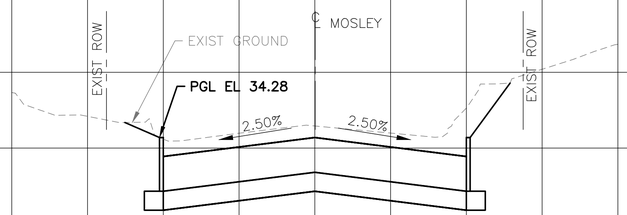

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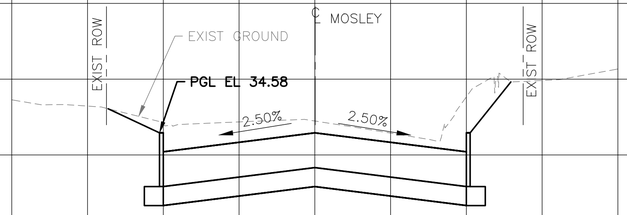

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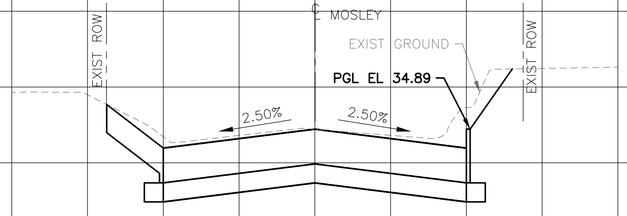

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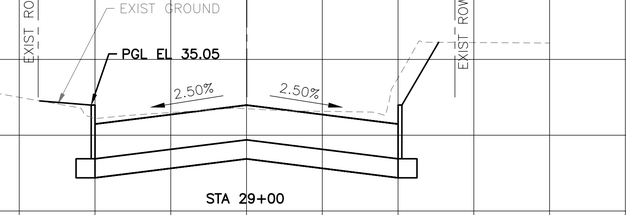

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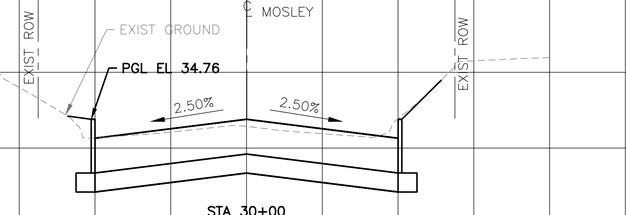

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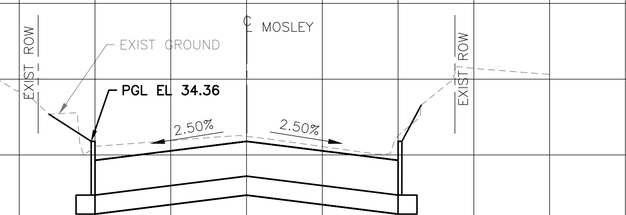

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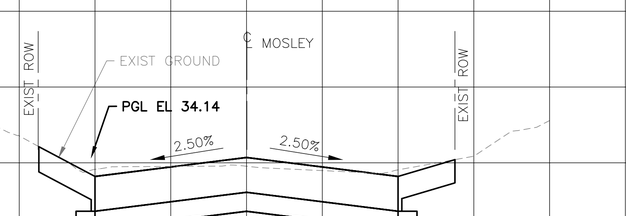

STA 32+00

38 36 34 32

40 30 20 10 0 10 20 30 40

BASE BID

No.	Date	Revisions	App.

LEGEND

EXISTING SECTION

PROPOSED SECTION

0' 10' 20'

SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
CROSS SECTIONS

SHEET 4 OF 6

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=10' VERT: 1"=2'
SHEET NO. 93 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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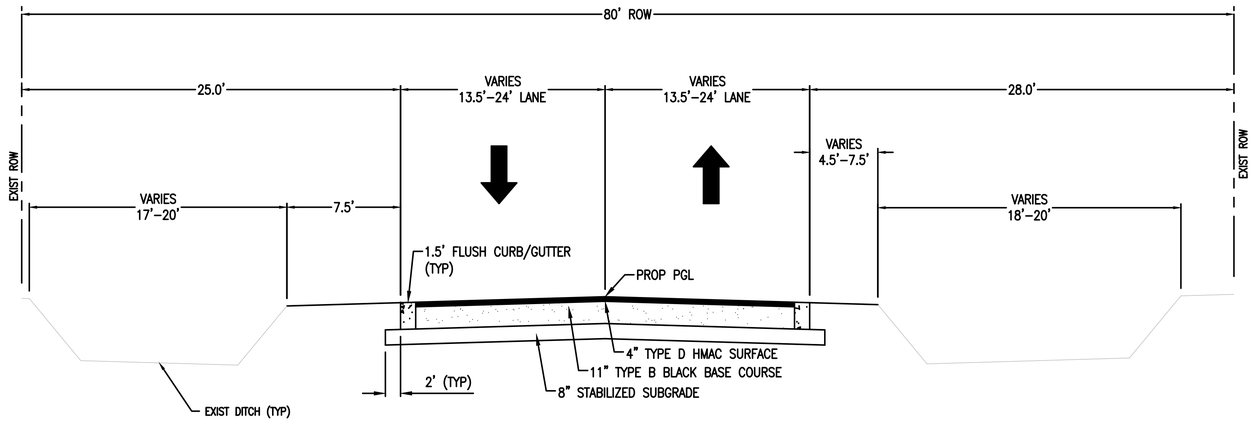
LEGEND

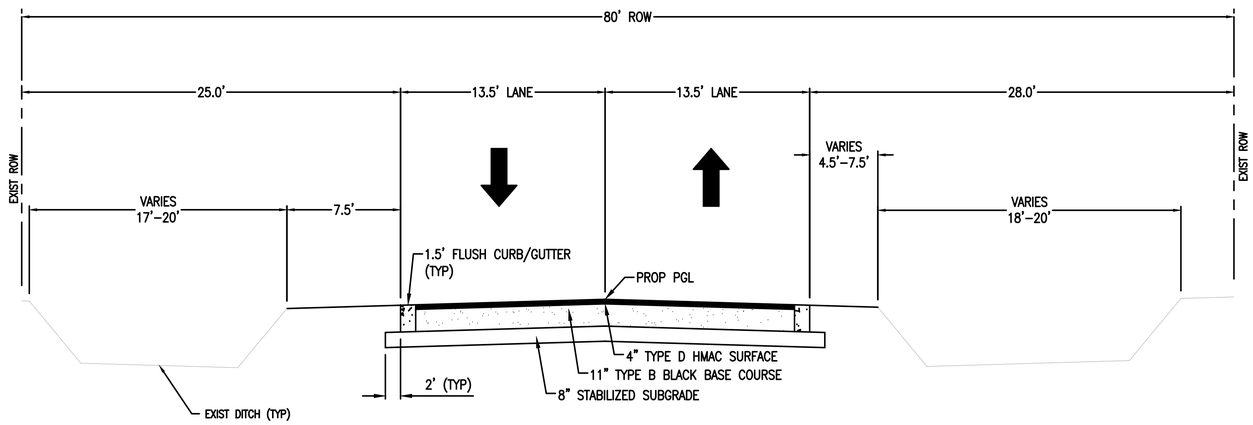
DIRECTION OF TRAFFIC

NOTE:

1. MAXIMUM EXPANSION JOINT SPACING AT FLUSH CURB/GUTTER AND CURB & GUTTER = 80'.
2. MAXIMUM TRANSVERSE CONTROL JOINT SPACING AT FLUSH CURB/GUTTER AND CURB & GUTTER = 15'.



MOSLEY RD
STA 33+39.00 TO STA 34+29.00



MOSLEY RD
STA 34+29.00 TO STA 43+73.00

ALT 1

POSTED SPEED LIMIT = 30 MPH

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOLDOW
90012
LICENSED
PROFESSIONAL
ENGINEER
7/20/2023

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED TYPICAL SECTIONS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: NTS VERT: NTS
SHEET NO. 94 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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PLOTED: 7/20/2023 5:05 PM
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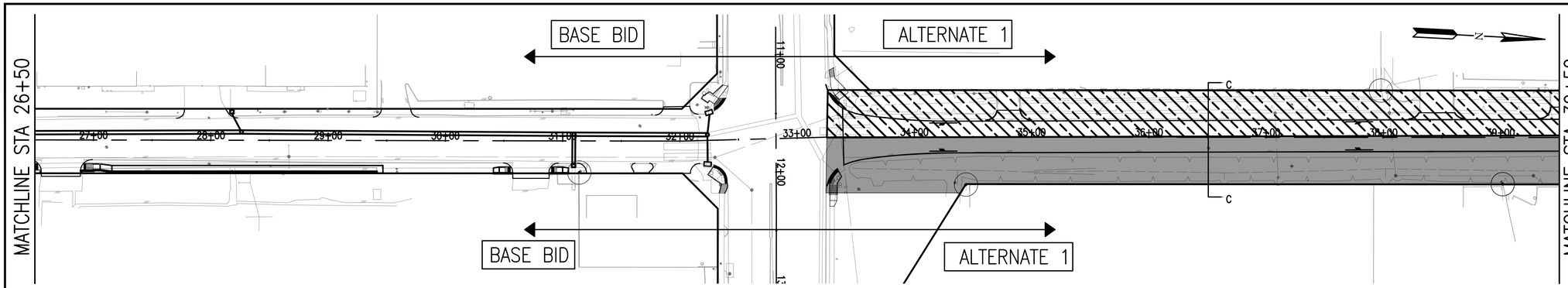


LEGEND

- ALTERNATE 1 (PHASE I STEP I)
- ALTERNATE 1 (PHASE I STEP II)
- WORK ZONE

No.	Date	Revisions	App.

SEQUENCE OF CONTRUCTION

PHASE I STEP I
MAINTAIN MINIMUM 1~11-FT WIDE SOUTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE I STEP I TCP AND DETOURS. CONSTRUCT ALL EASTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP FLUSH/CURB GUTTER, ASPHALT PAVEMENT, DITCH REGARDING AND APPURTENANCES).

IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND OTHER IMPROVEMENTS.

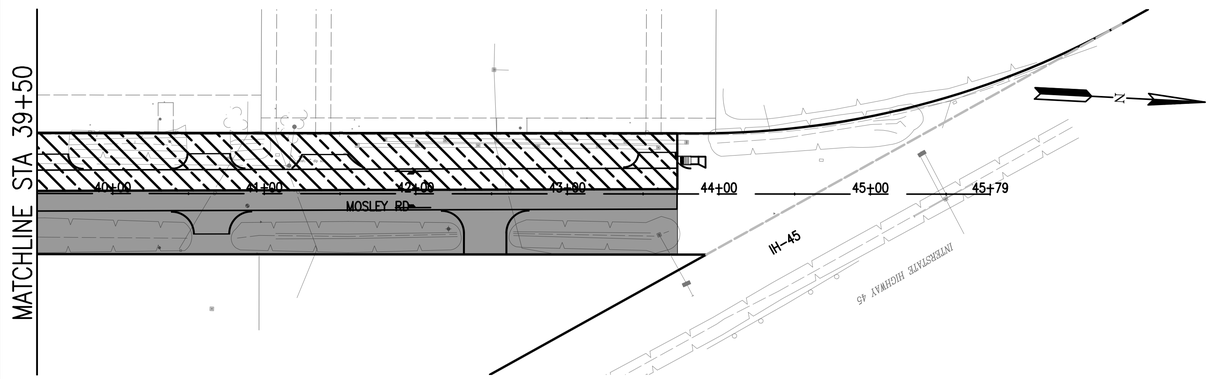
MAINTAIN DRAINAGE AT ALL TIMES. DO NOT BEGIN PHASE I STEP II UNTIL THIS PHASE IS COMPLETE.

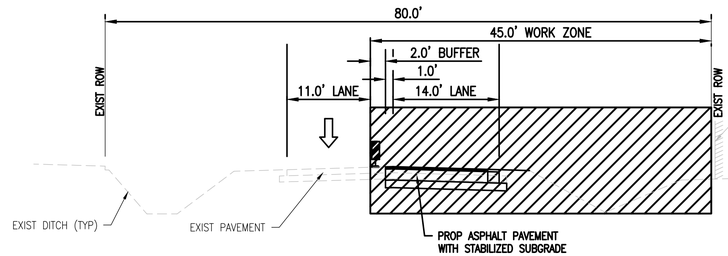
PHASE I STEP II
MAINTAIN MINIMUM 1~11-FT WIDE NORTHBOUND LANE AT ALL TIMES BY IMPLEMENTING PHASE I STEP II TCP AND DETOURS. CONSTRUCT ALL WESTERN IMPROVEMENTS OF PROPOSED BASELINE (PROP FLUSH/CURB GUTTER, ASPHALT PAVEMENT, DRIVEWAYS, DITCH REGARDING AND APPURTENANCES).

IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND OTHER IMPROVEMENTS.

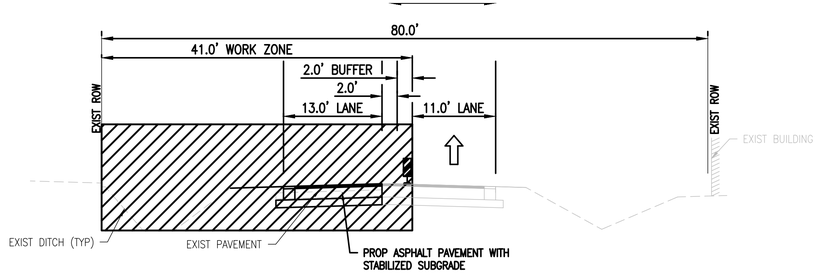
NOTES
1. CONTRACTOR TO IMPLEMENT PEDESTRIAN DETOURS USING COH STD DTL 02893-18.

0' 50' 100'
SCALE IN FEET





ALTERNATE 1
PHASE I STEP I
TYPICAL SECTION C-C
N.T.S



ALTERNATE 1
PHASE I STEP II
TYPICAL SECTION C-C
N.T.S

ALT 1

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96672
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 95 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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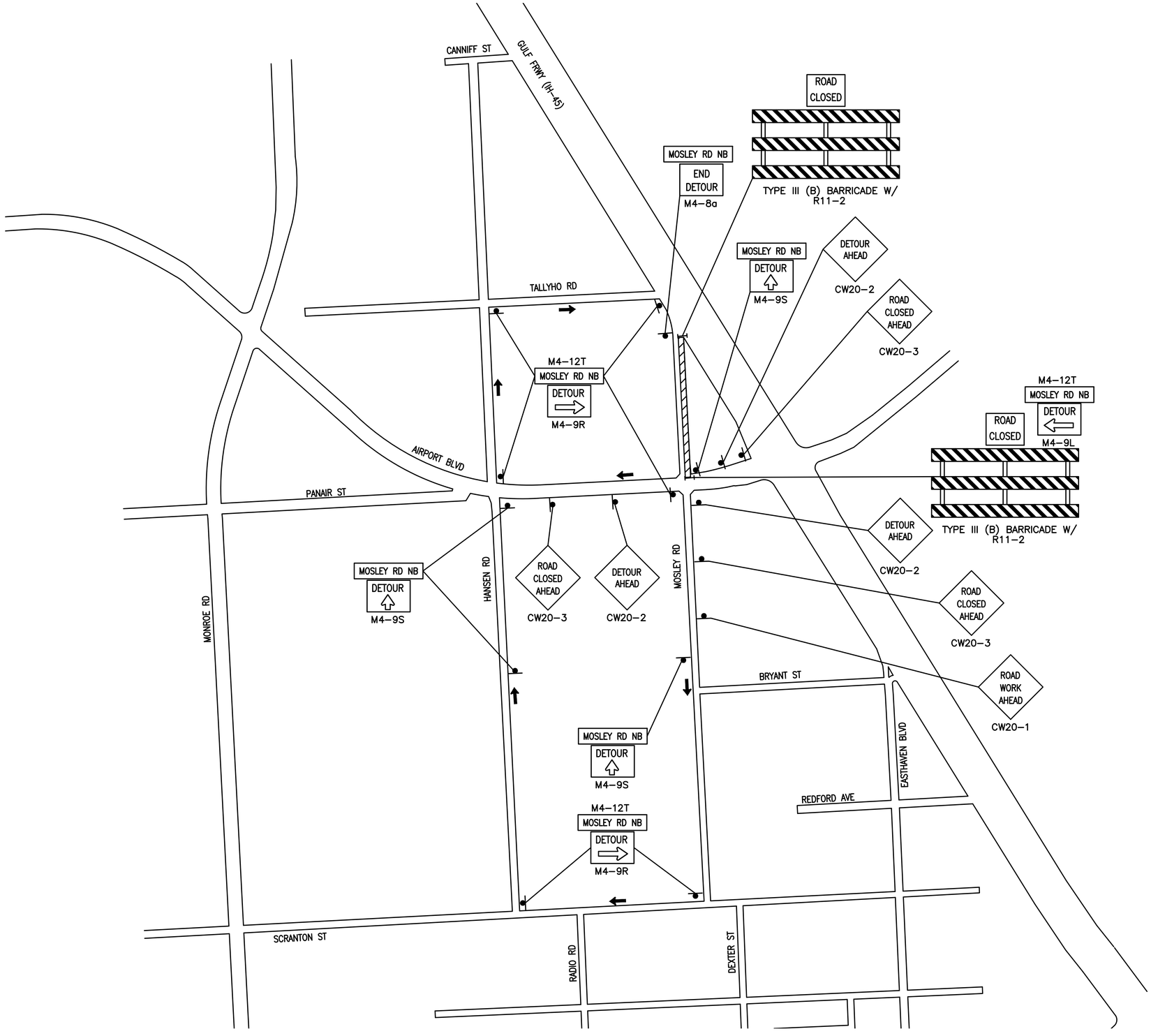

LEGEND

- WORK ZONE
- TRAFFIC FLOW
- SIGN
- TYPE III BARRICADE W/ ROAD CLOSED SIGN (R11-2)

No.	Date	Revisions	App.

N

0' 400' 800'

SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN
PHASE I STEP I DETOUR

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=400' VERT: N/A
SHEET NO. 96 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

DWG FILE: P:\120\120-12106-013\4-0-PRODUCTION-WORKING\4-1-BIM-CAD\TCP\TCP-DETR-ALL-PHASES.DWG

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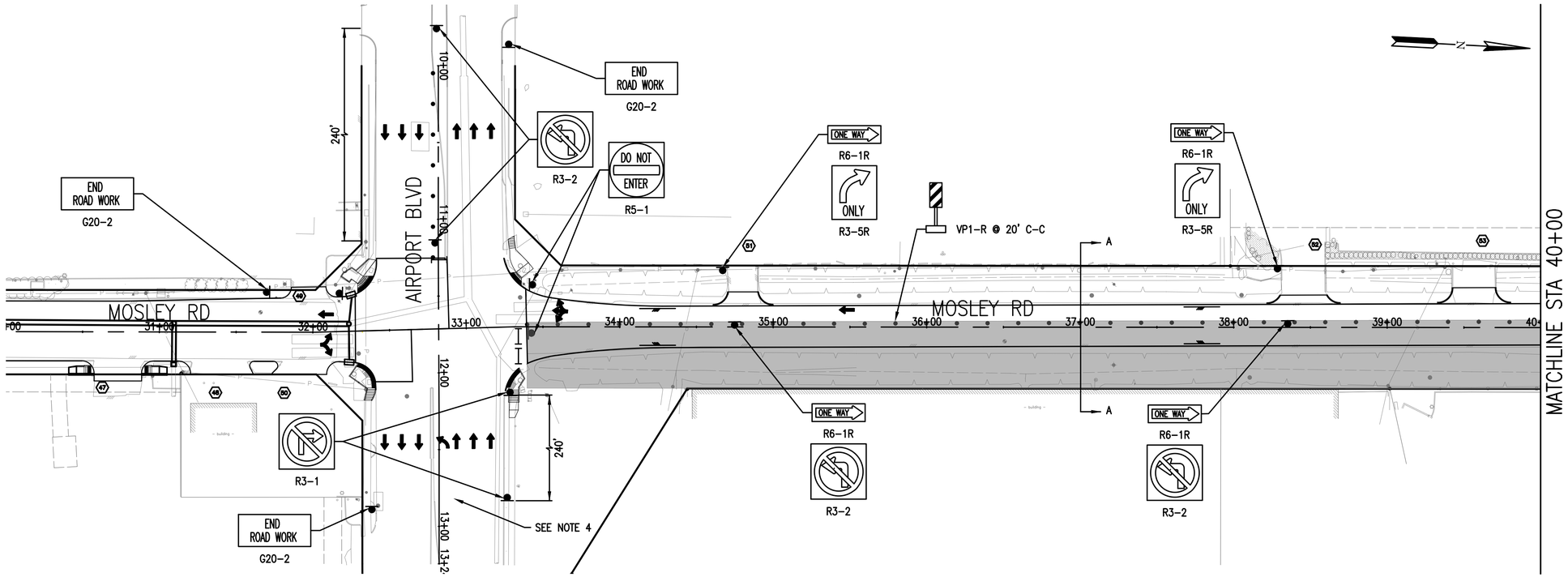

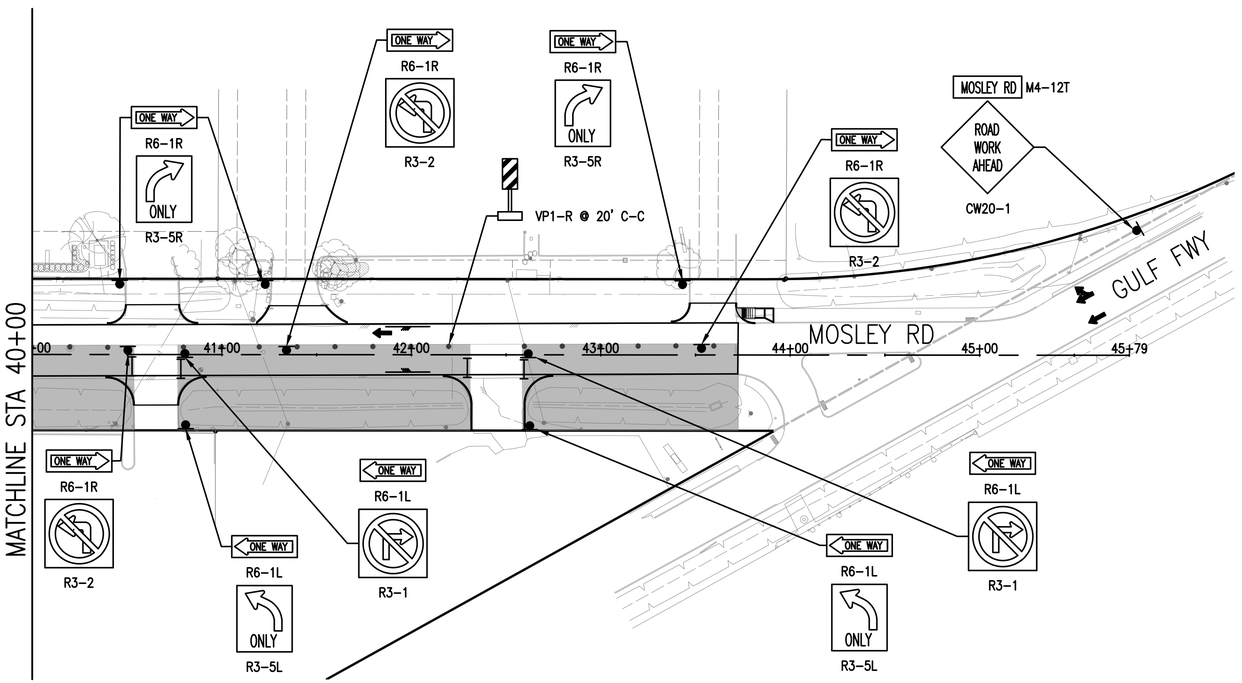

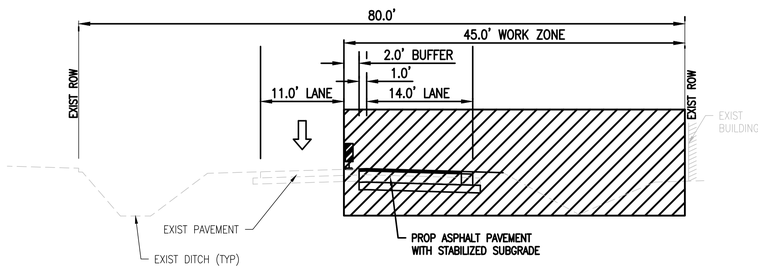

PHASE I STEP I
TYPICAL SECTION A-A
N.T.S

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
3. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
4. IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND OTHER IMPROVEMENTS.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE I STEP I

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 97 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

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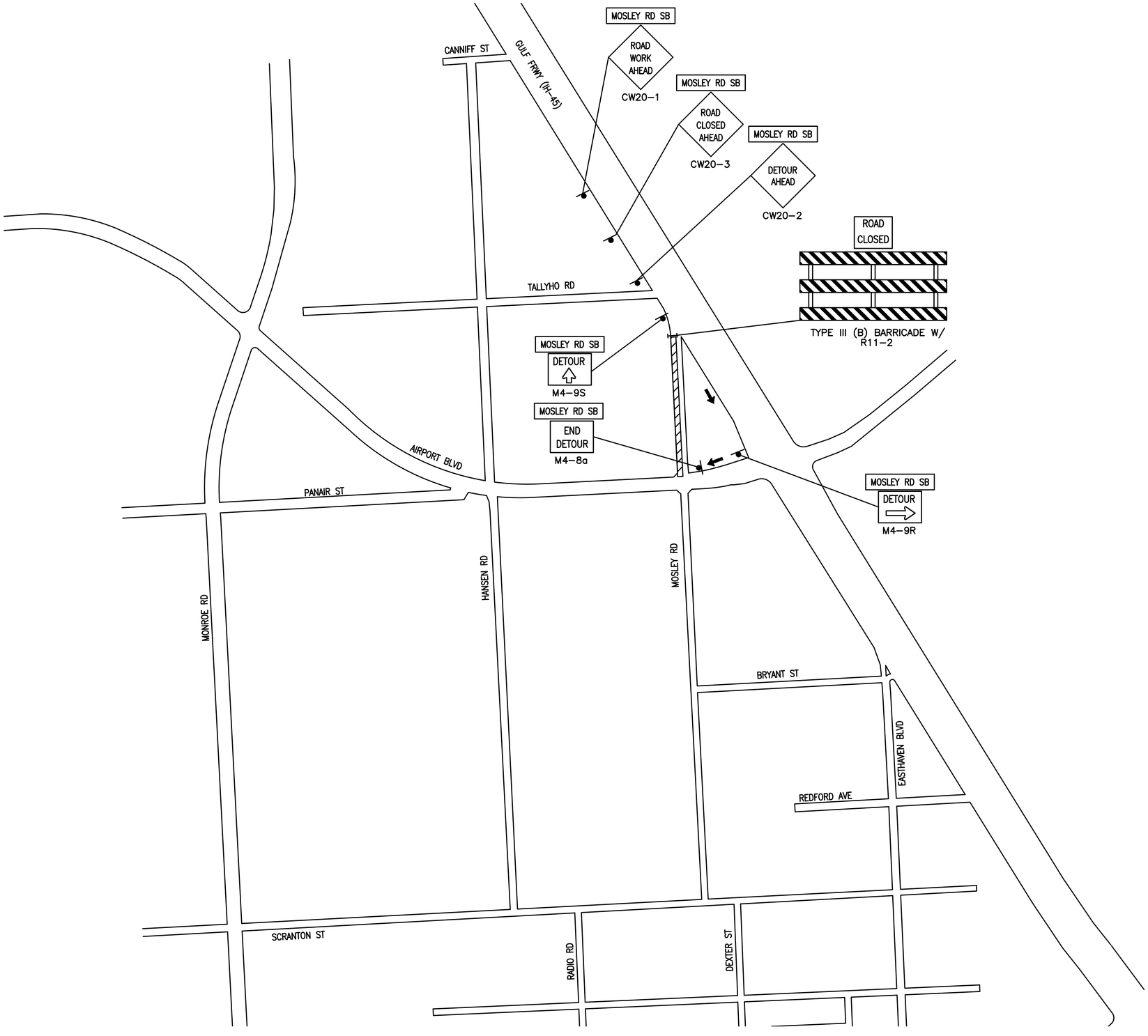

LEGEND

- WORK ZONE
- TRAFFIC FLOW
- SIGN
- TYPE III BARRICADE W/ ROAD CLOSED SIGN (R11-2)

N

0' 400' 800'

SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD 96012 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TRAFFIC CONTROL PLAN PHASE I STEP II DETOUR

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=400' VERT: N/A
SHEET NO. 98 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

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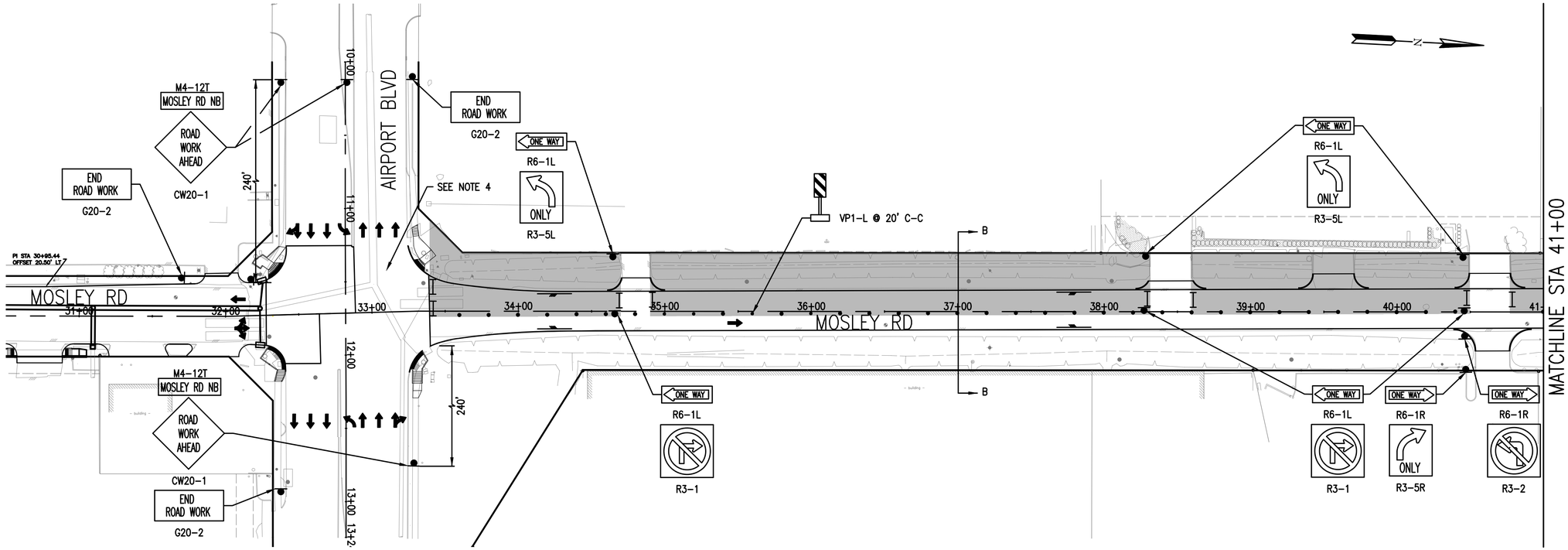

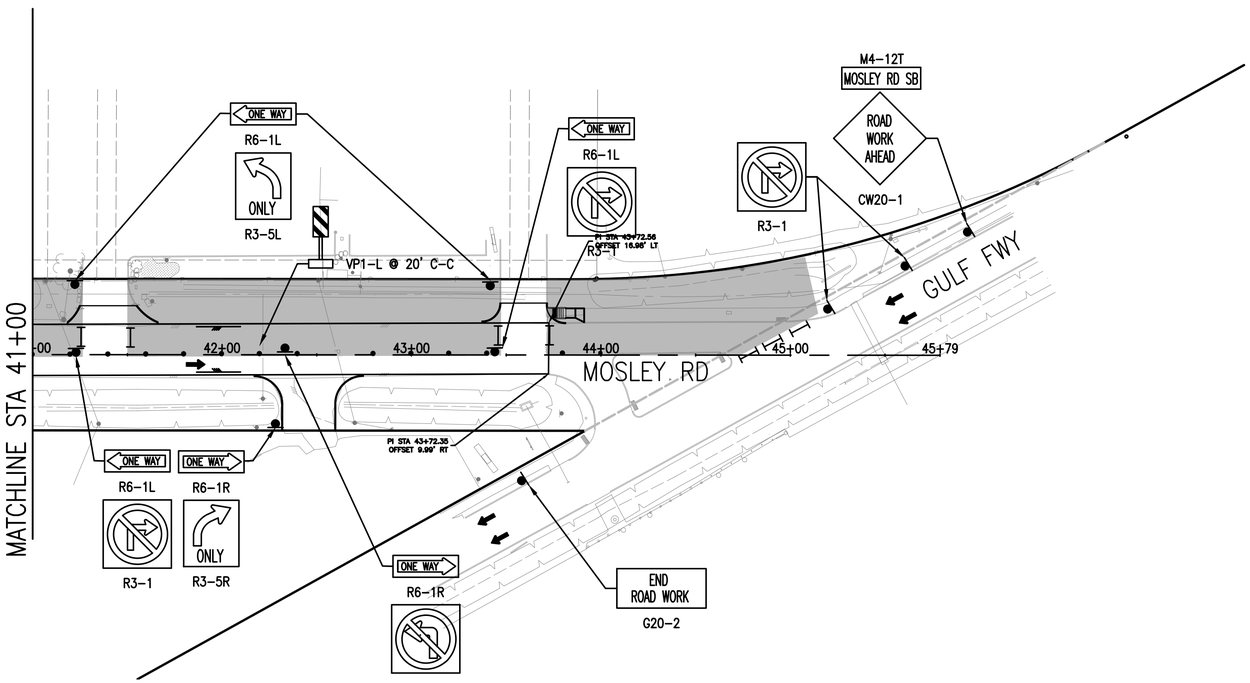

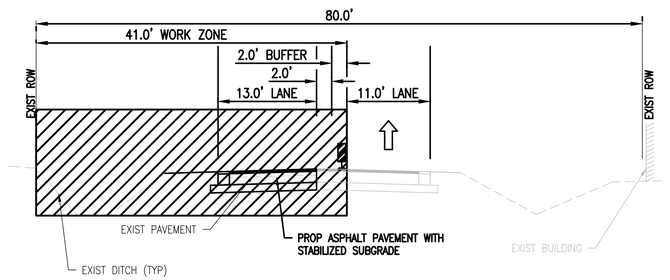

PHASE I STEP II
TYPICAL SECTION B-B
N.T.S

ALT 1

LEGEND

- WORK ZONE
- TYPE III BARRICADE W/ ROAD CLOSED SIGN
- CHANNELIZING DEVICE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

No.	Date	Revisions	App.

NOTES:

1. PRIOR TO CONSTRUCTION ACROSS DRIVEWAY COORDINATE WITH CM. CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENTS AT ALL TIMES. CONSTRUCT PAVEMENT ACROSS DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
3. REFER TO DETOUR SHEETS ADDITIONAL DETAILS AND SIGNAGE.
4. IMPLEMENT TYPICAL ONE-LANE CLOSURE ALONG AIRPORT BLVD AS REQUIRED FOR TIE-IN TO EXISTING CONCRETE AND OTHER IMPROVEMENTS.

0' 40' 80'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS — MARK WOODWARD — 96072 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

TCP PHASE I STEP II

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=40' VERT: N/A
SHEET NO. 99 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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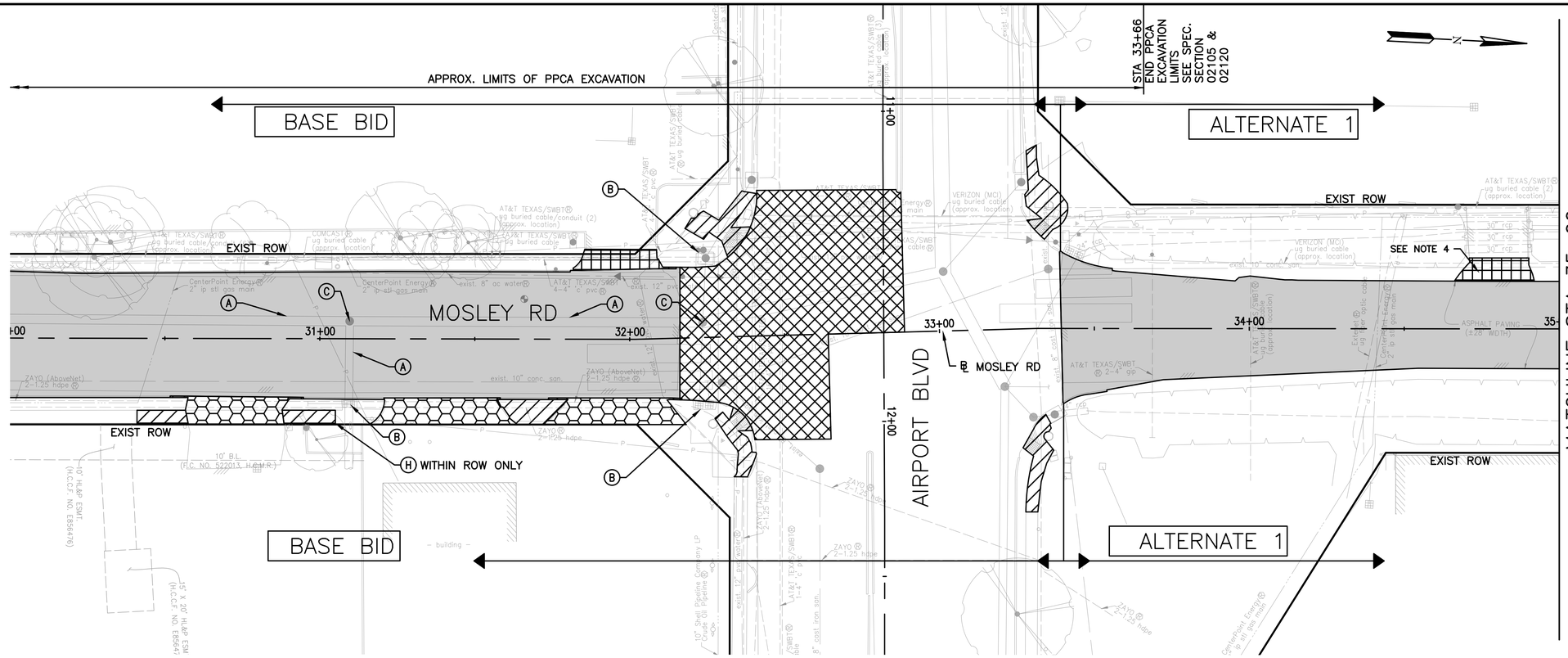

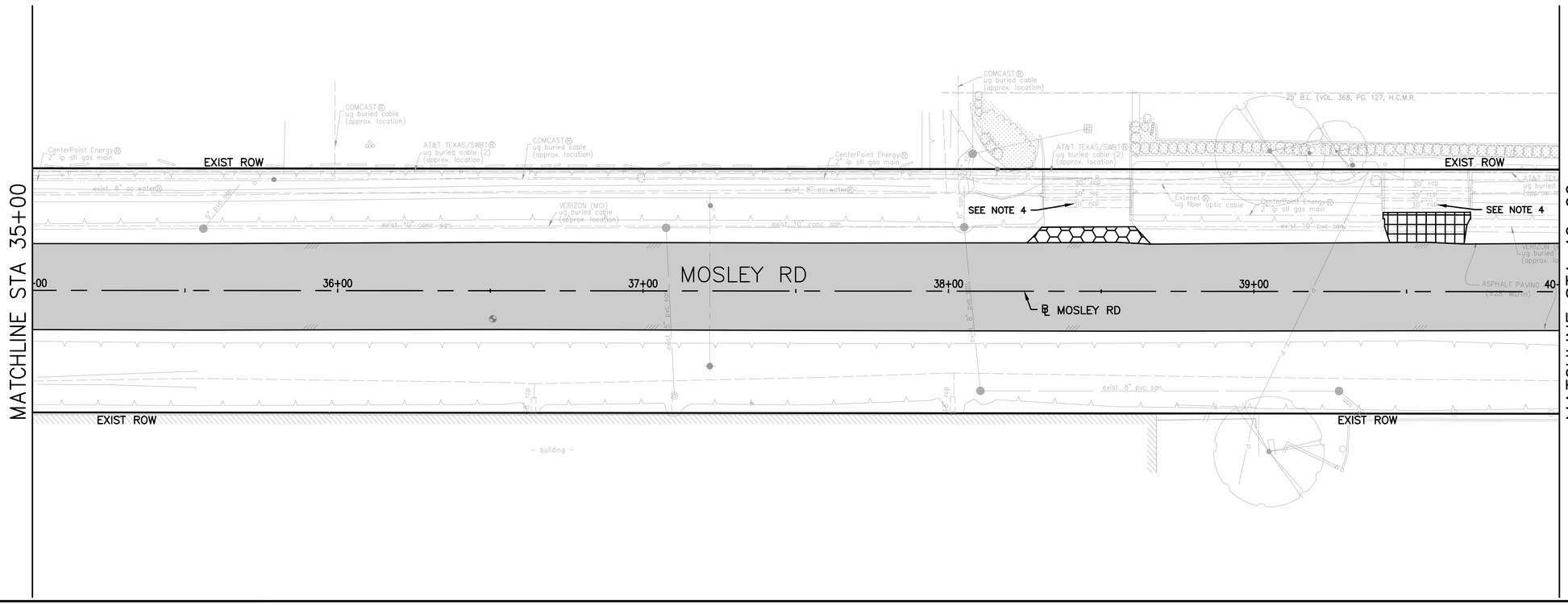

LEGEND:

- (A) REMOVE PIPE (RCP OR CMP)
- (B) REMOVE INLET
- (C) REMOVE MH
- (D) REMOVE CURB
- (E) REMOVE SMALL STRUCTURES
- (F) REMOVE SIGNS
- (G) REMOVE INLET STAGE II SECTION ONLY
- (H) REMOVE, STORE AND RE-INSTALL SIGNS
- REMOVE ASPH PAV & BASE
- REMOVE CONC DRWY
- REMOVE CONC SIDEWALK
- REMOVE ASPH DRWY
- REMOVE CONC PAV

NOTES:

1. REFER TO TREE PROTECTION STANDARD DETAILS FOR MORE INFORMATION.
2. COORDINATE WITH PROPERTY OWNER PRIOR TO DEMOLITION IMPACTS TO EXISTING FENCES, BOLLARDS, RETAINING WALLS AND MAILBOXES.
3. REMOVE AND REPLACE DISTURBED LANDSCAPE/SHRUBS IN KIND PER SITE RESTORATION PAY ITEM.
4. AVOID DISTURBING EXISTING CULVERT.
5. DURING DRIVEWAY DEMOLITION, AVOID DISTURBING FENCES, BOLLARDS/POST, RETAINING WALLS AND MAINTAIN SAME ELEVATION AT FENCE LOCATION TIE-IN. CONTRACTOR TO REPAIR ANY DAMAGE TO FENCES, BOLLARDS/POST, AND RETAINING WALLS. NO SEPARATE PAY.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

DEMOLITION PLANS

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 100 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

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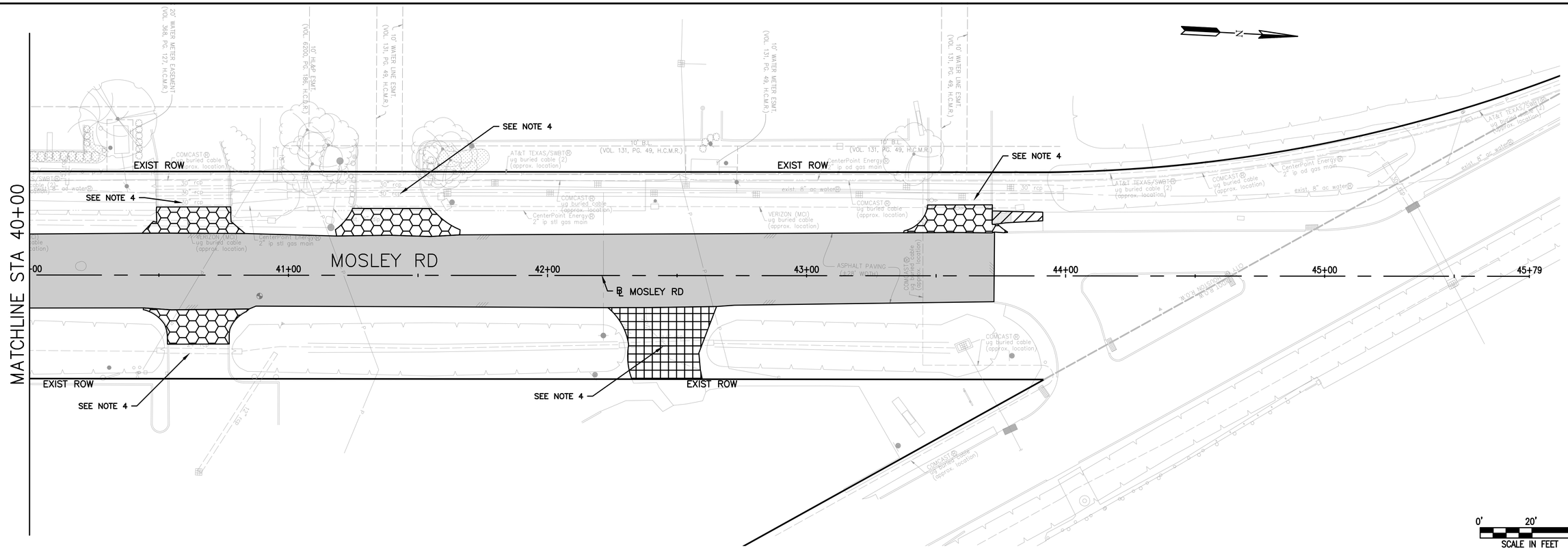

LEGEND:

- (A) REMOVE PIPE (RCP OR CMP)
- (B) REMOVE INLET
- (C) REMOVE MH
- (D) REMOVE CURB
- (E) REMOVE SMALL STRUCTURES
- (F) REMOVE SIGNS
- (G) REMOVE INLET STAGE II SECTION ONLY
- (H) REMOVE, STORE AND RE-INSTALL SIGNS
- REMOVE ASPH PAV & BASE
- REMOVE CONC DRWY
- REMOVE CONC SIDEWALK
- REMOVE ASPH DRWY
- REMOVE CONC PAV

NOTES:

1. REFER TO TREE PROTECTION STANDARD DETAILS FOR MORE INFORMATION.
2. COORDINATE WITH PROPERTY OWNER PRIOR TO DEMOLITION IMPACTS TO EXISTING FENCES, BOLLARDS, RETAINING WALLS AND MAILBOXES.
3. REMOVE AND REPLACE DISTURBED LANDSCAPE/SHRUBS IN KIND PER SITE RESTORATION PAY ITEM.
4. AVOID DISTURBING EXISTING CULVERT.
5. DURING DRIVEWAY DEMOLITION, AVOID DISTURBING FENCES, BOLLARDS/POST, RETAINING WALLS AND MAINTAIN SAME ELEVATION AT FENCE LOCATION TIE-IN. CONTRACTOR TO REPAIR ANY DAMAGE TO FENCES, BOLLARDS/POST, AND RETAINING WALLS. NO SEPARATE PAY.

ALT 1

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

DEMOLITION PLANS

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 101 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App.

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PLOTED: 7/20/2023 5:09 PM
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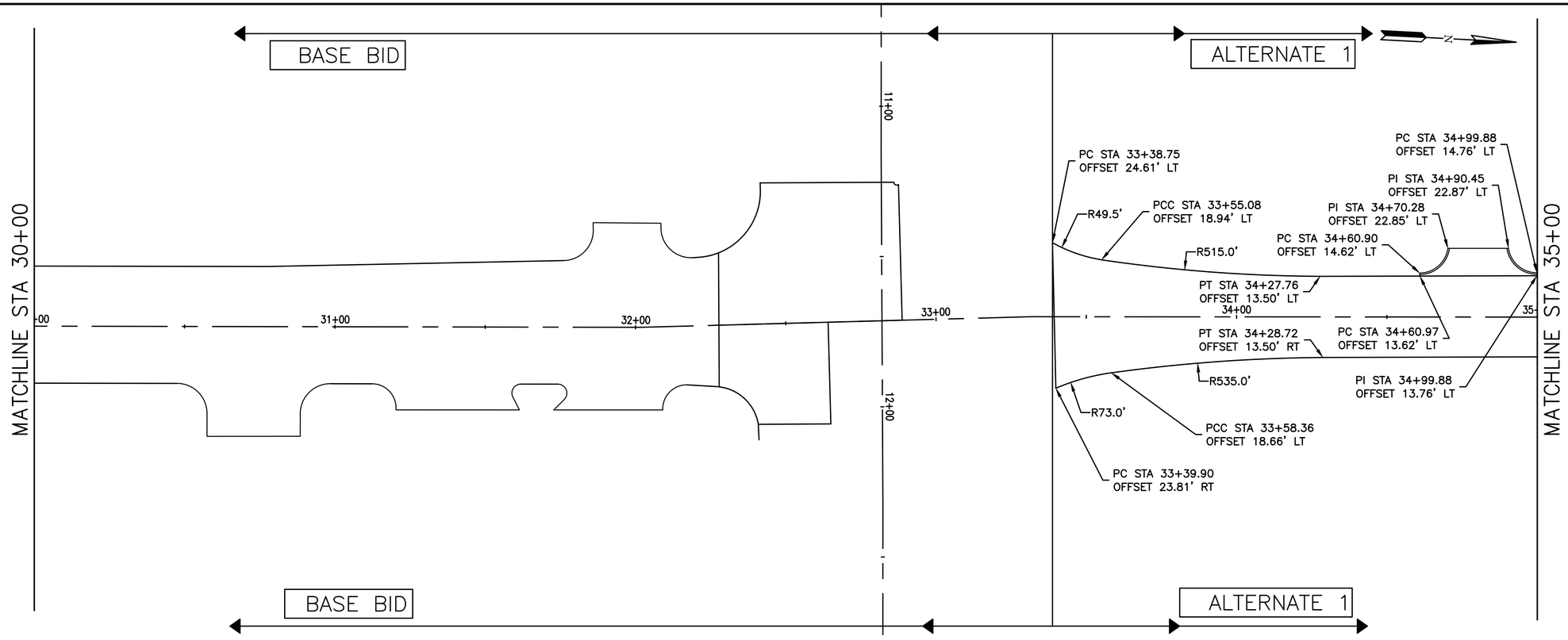

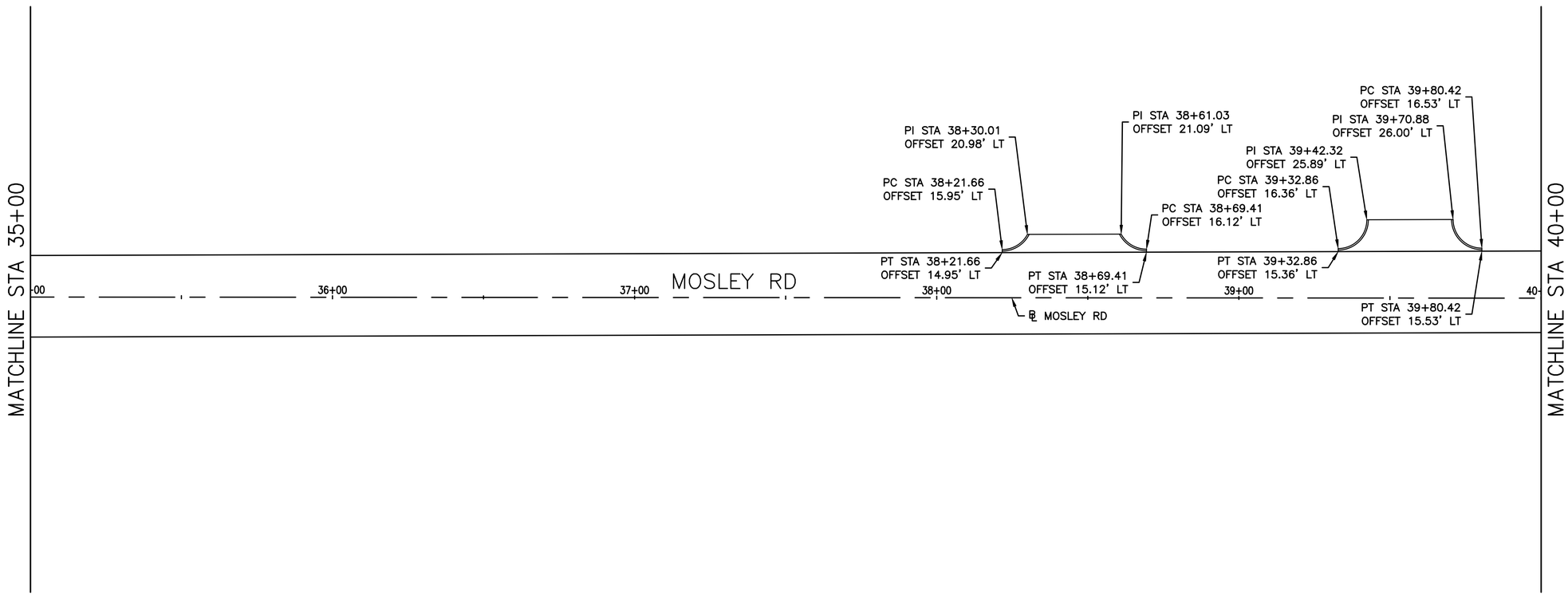

NOTE

1. DIMENSIONS/OFFSETS WITHIN CONCRETE SECTIONS ARE MEASURED TO FACE OF CURB.
2. DIMENSIONS/OFFSETS WITHIN ASPHALT WITH FLUSH CURB/GUTTER SECTION ARE MEASURED TO BACK OF CURB.

No.	Date	Revisions	App.

0' 20' 40'
SCALE IN FEET

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96072
LICENSED
PROFESSIONAL ENGINEER
7/28/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED
HORIZONTAL
GEOMETRY LAYOUT

SHEET 1 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 102 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

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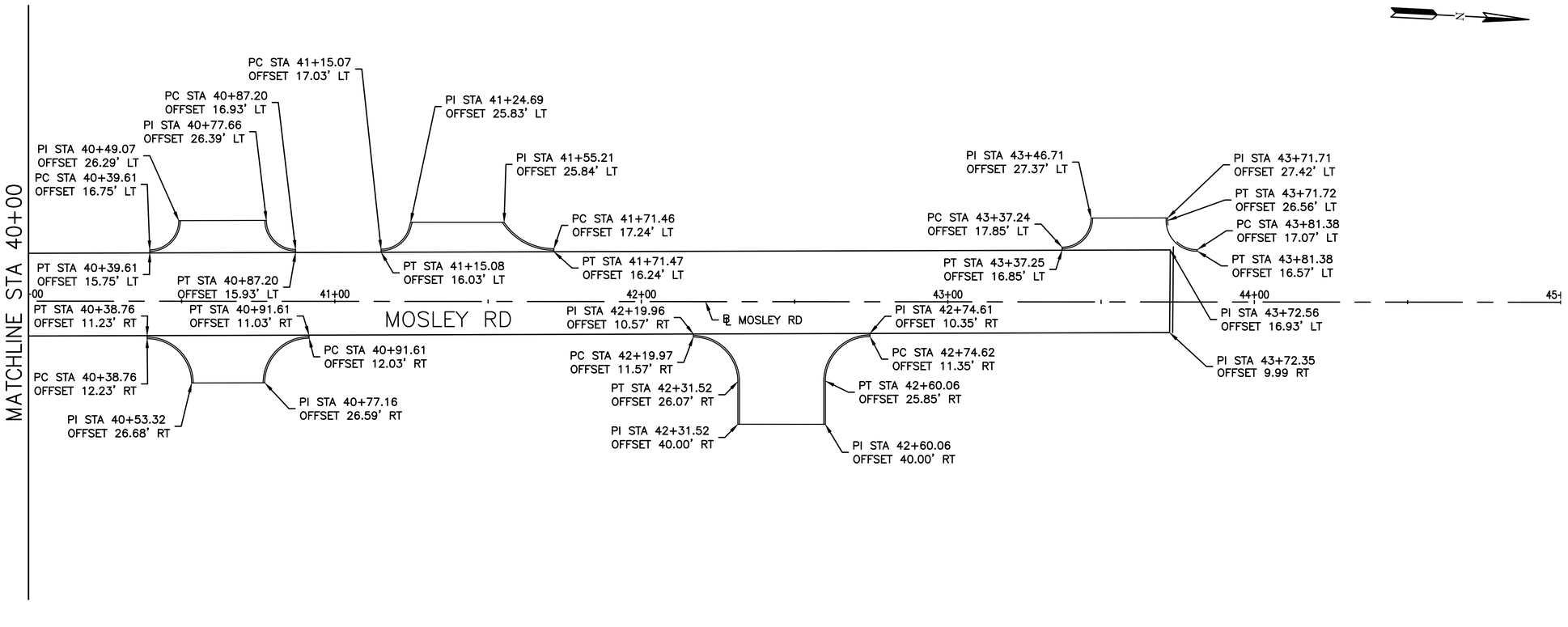

NOTE

1. DIMENSIONS/OFFSETS WITHIN CONCRETE SECTIONS ARE MEASURED TO FACE OF CURB.
2. DIMENSIONS/OFFSETS WITHIN ASPHALT WITH FLUSH CURB/GUTTER SECTION ARE MEASURED TO BACK OF CURB.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS
MARK WOODWARD
96612
LICENSED
PROFESSIONAL ENGINEER
VOID
7/28/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

PROPOSED
HORIZONTAL
GEOMETRY LAYOUT

SHEET 2 OF 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO.	HORZ: 1"=20' VERT: N/A
SHEET NO. 103 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

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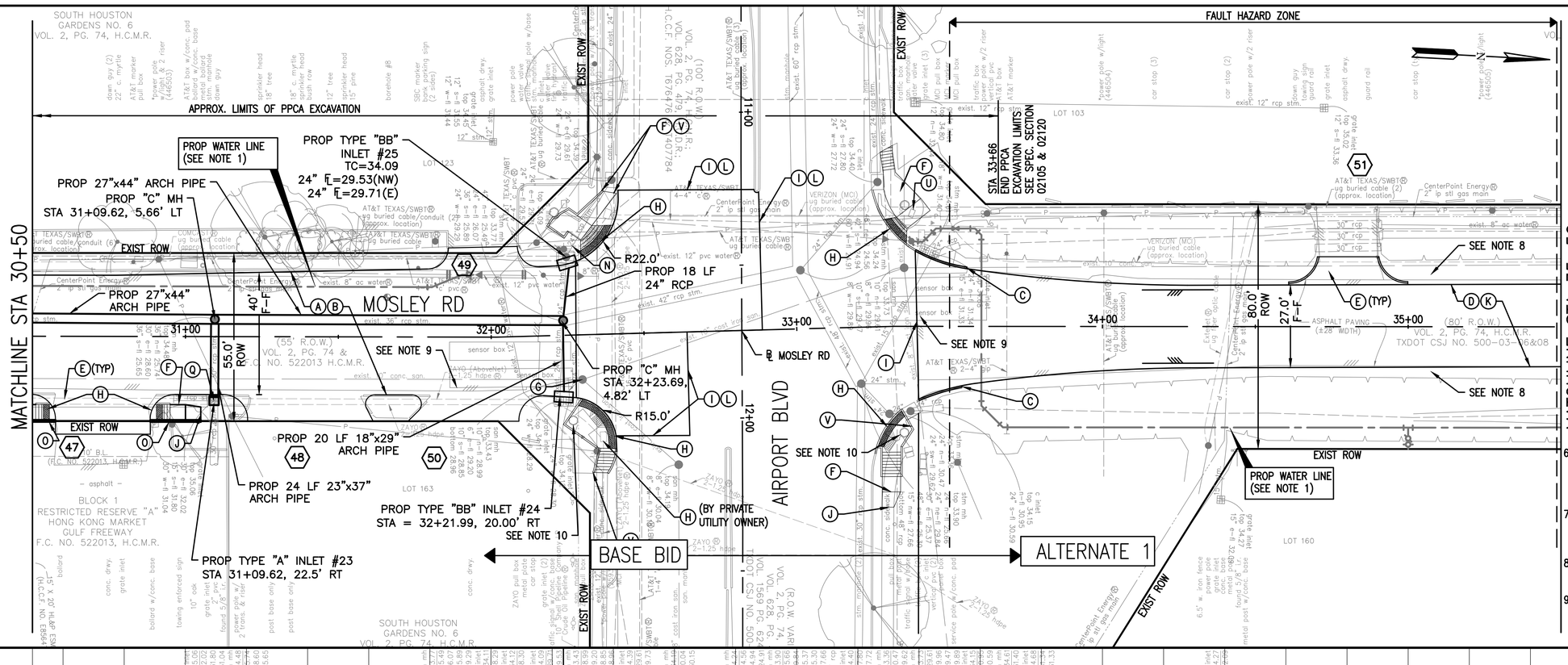

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

NOTES:

1. REFER TO DEMOLITION, ROADWAY HORIZONTAL GEOMETRY, WATER LINE, SIGNING & PAVEMENT MARKINGS, CROSS-SECTIONS, AND SWPPP SHEETS FOR ADDITIONAL INFORMATION.
2. CONTRACTOR TO MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL BRACE AND SUPPORT WOOD POLES DURING CONSTRUCTION AS NECESSARY AT NO COST TO OWNER.
4. DIMENSIONS FOR FLUSH CURB/GUTTER SECTIONS ARE TO BACK OF CURB. DIMENSIONS FOR MONOLITHIC CURB AND GUTTER AND DOWELED CURB ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
5. ALL EXISTING WATER METER BOXES, IRRIGATION BOXES, WATER VALVES AND ENCOUNTERED OBJECTS TO REMAIN ARE TO BE REPLACED AND ADJUSTED TO FINAL GRADE. REPLACE METER BOXES WITH CONCRETE TYPE. ITEMS INCIDENTAL TO ROADWAY WORK. NO SEPARATE PAY.
6. CONTRACTOR SHALL CONTACT PRIVATE UTILITIES COMPANIES FOR ANY PULLBOX ADJUSTMENTS.
7. PERFORM CRITICAL LOCATES AT ALL PROPOSED INLET LOCATIONS.
8. REPAIR DITCH BERM TO FINAL PAVEMENT GRADE.
9. REPAIR INTERSECTION TRAFFIC SIGNAL LOOPING SYSTEM PER CITY SPECS.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App'd

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

VERIFICATION OF PRIVATE UTILITY LINES

Mike Brower — Date: 07-24-23
CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
Signature valid for six months.

Mike Brower — Date: 07-24-23
CenterPoint Energy/UNDERGROUND Electrical facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification)
Signature valid for six months.

Marc Johnson — Date: 7/21/23
Approved for AT&T underground conduit facilities only. Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

STATE OF TEXAS — MARK WOODWARD — 96072 — LICENSED PROFESSIONAL ENGINEER — 7/20/2023
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2014

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 30+50 TO STA 35+50

SHEET 1 OF 3

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 104 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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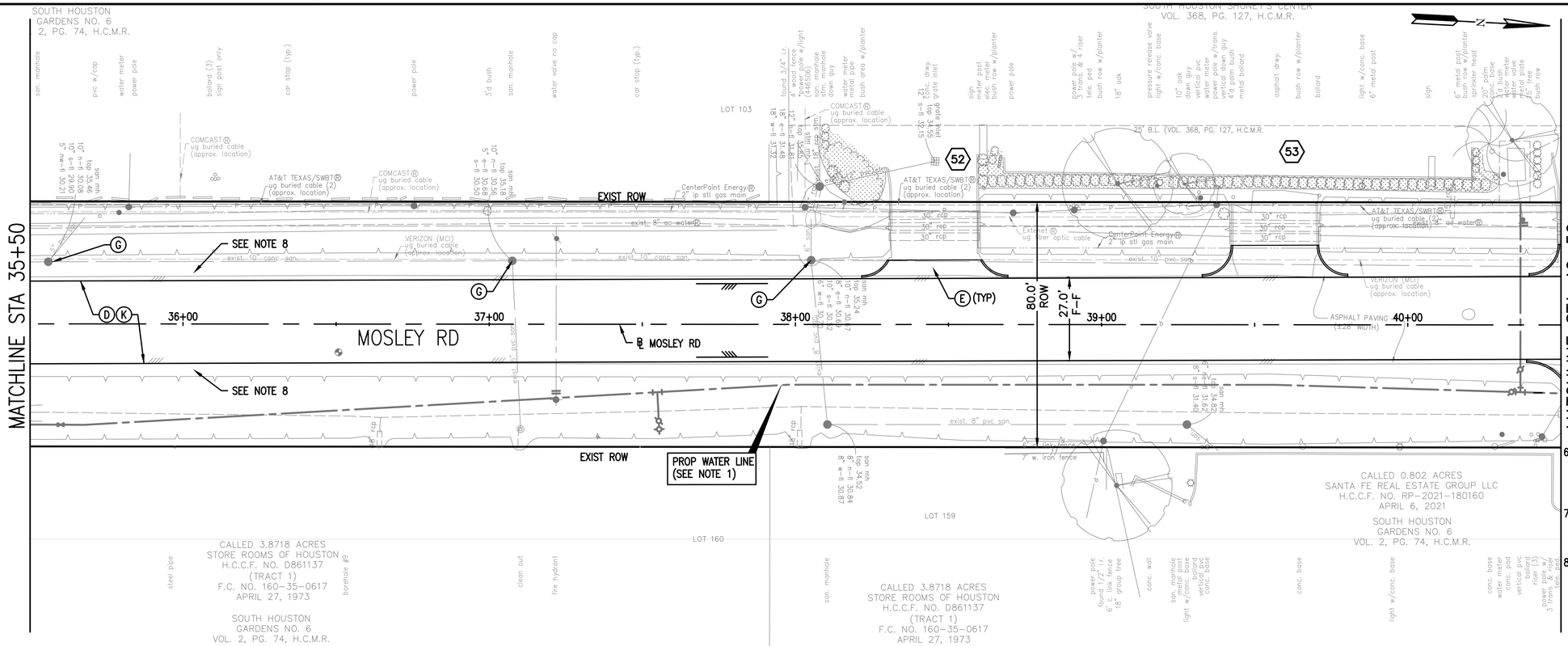

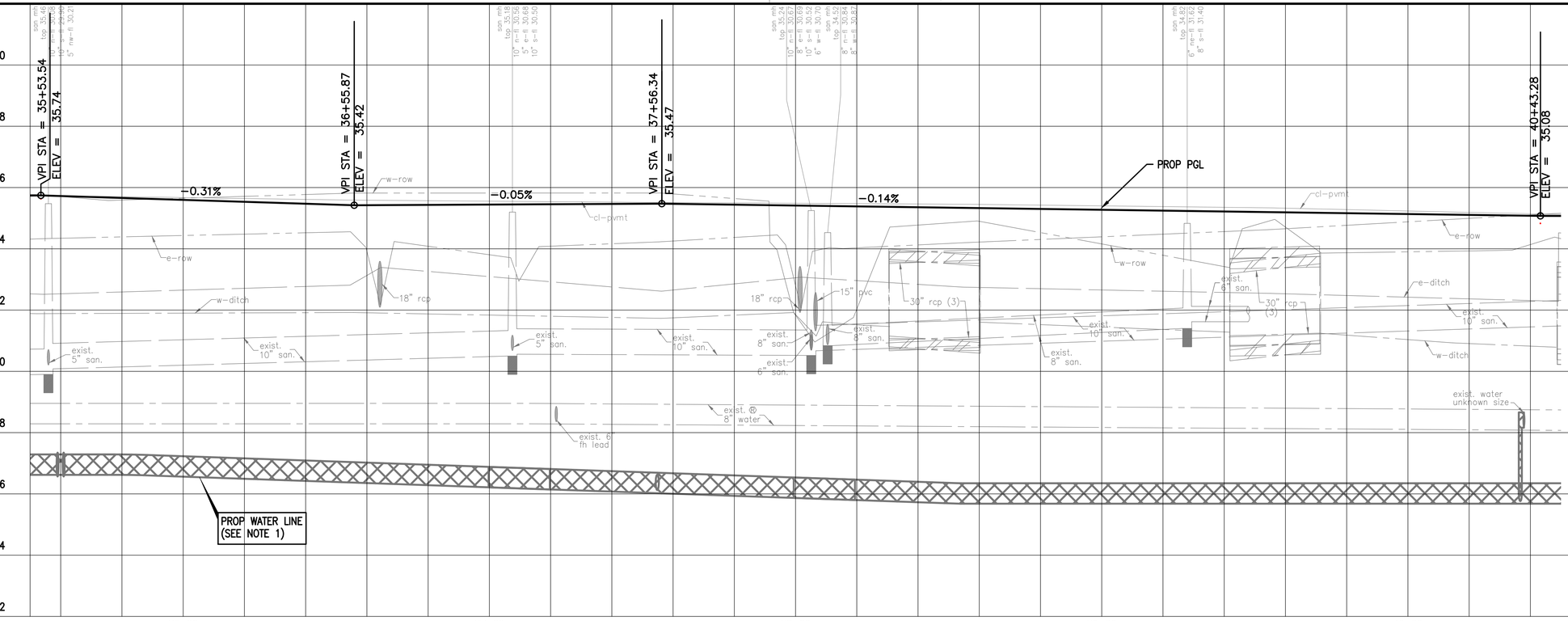

BENCHMARK:

CITY OF HOUSTON MONUMENT 5653-8502, A BRASS DISK IN CONCRETE, LOCATED AT THE EAST SIDE OF MOSLEY ROAD APPROXIMATELY 625 FEET NORTH FROM THE INTERSECTION OF BRYANT STREET.

ELEV. 35.12 FEET NAVD 1988 (GEOID '18)*

* OBSERVED BY GPS SURVEYING AND PROCESSED IN REFERENCE TO THE CORS DATED JULY 21, 2021.

NOTES:

1. REFER TO DEMOLITION, ROADWAY HORIZONTAL GEOMETRY, WATER LINE, SIGNING & PAVEMENT MARKINGS, CROSS-SECTIONS, AND SWPPP SHEETS FOR ADDITIONAL INFORMATION.
2. CONTRACTOR TO MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL BRACE AND SUPPORT WOOD POLES DURING CONSTRUCTION AS NECESSARY AT NO COST TO OWNER.
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6. CONTRACTOR SHALL CONTACT PRIVATE UTILITIES COMPANIES FOR ANY PULLBOX ADJUSTMENTS.
7. PERFORM CRITICAL LOCATES AT ALL PROPOSED INLET LOCATIONS.
8. REPAIR DITCH BERM TO FINAL PAVEMENT GRADE.

0' 20' 40'
SCALE IN FEET

No.	Date	Revisions	App'd

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Mike Brower Date: 07-24-23
CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown) This signature not be used for conflict verification.
Signature valid for six months.

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Signature valid for six months.

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Approved for AT&T underground conduit facilities only. Signature valid for one year.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY: KUO & ASSOCIATES FB NO. P-6234
STATE OF TEXAS MARK WOODWARD 96672 LICENSED PROFESSIONAL ENGINEER 7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc. Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 35+50 TO STA 40+50

SHEET 2 OF 3

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 105 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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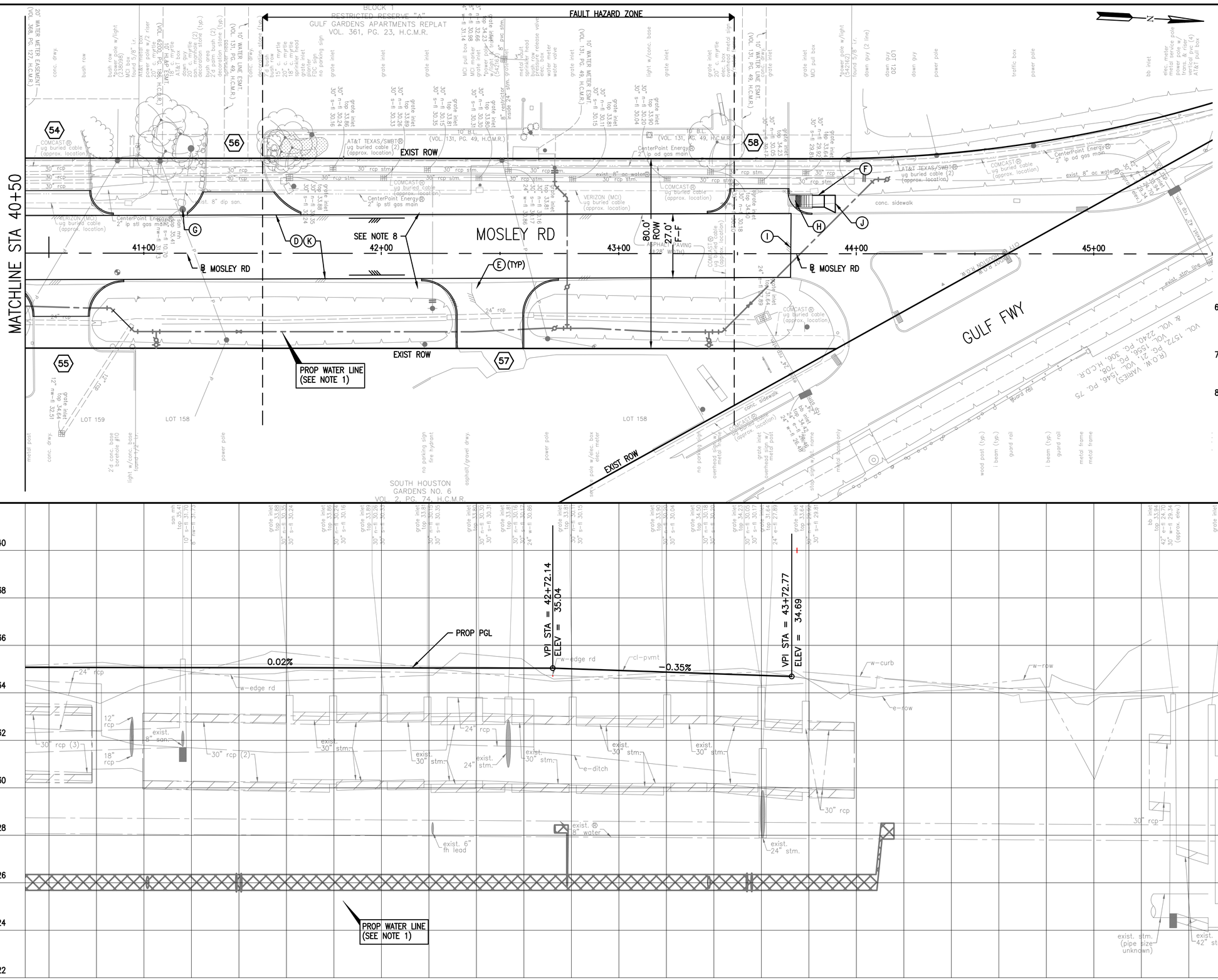

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0' 20' 40'
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A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042
SURVEYED BY: KUO & ASSOCIATES FB NO. P-6234

STATE OF TEXAS MARC WOOD WARD 96672 LICENSED PROFESSIONAL ENGINEER 7/20/2023
Lockwood, Andrews & Newnam, Inc. Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
PLAN & PROFILE
STA 40+50 TO END STA

SHEET 3 OF 3

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=20' VERT: 1"=2'
SHEET NO. 106 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

No.	Date	Revisions	App'd

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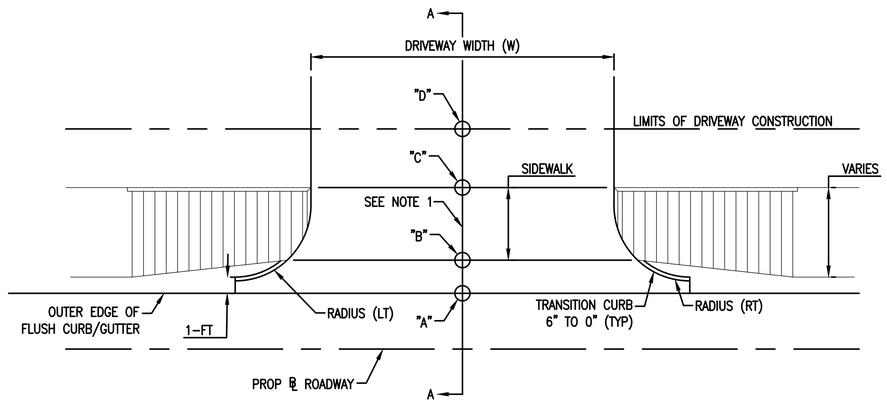
Mosley Road																				
DRIVEWAY NO.	DRIVEWAY CL STATION	OFFSET *					ELEVATION				VERTICAL LIP HEIGHT AT POINT "A" (INCHES)***	SLOPE				RADIUS		DRIVEWAY WIDTH (W)	DRIVEWAY CONCRETE THICKNESS	SIDEWALK WIDTH THRU DRIVEWAY	DRIVEWAY TYPE
		LT/RT	POINT "A"	POINT "B"	POINT "C"	POINT "D"	POINT "A"	POINT "B"	POINT "C"	POINT "D"		*A-B*	*B-C*	*C-D*	*A-D*	LT	RT				
51	34+80.36	LT	13.70	N/A	N/A	22.70	35.36	N/A	N/A	35.55		N/A	N/A	N/A	2.1%	10.00	10.00	19.00	7" CONC	N/A	COMMERCIAL
52	38+45.52	LT	15.00	N/A	N/A	21.00	35.00	N/A	N/A	34.87		N/A	N/A	N/A	-2.2%	10.00	10.00	30.00	7" CONC	N/A	COMMERCIAL
53	39+56.60	LT	15.45	N/A	N/A	26.00	34.93	N/A	N/A	34.60		N/A	N/A	N/A	-3.1%	10.00	10.00	27.50	7" CONC	N/A	COMMERCIAL
54	40+63.36	LT	15.85	N/A	N/A	26.30	34.81	N/A	N/A	34.48		N/A	N/A	N/A	-3.2%	10.00	10.00	27.50	7" CONC	N/A	COMMERCIAL
55	40+65.24	RT	11.10	N/A	N/A	26.60	34.81	N/A	N/A	35.12		N/A	N/A	N/A	2.0%	15.00	15.00	23.00	7" CONC	N/A	COMMERCIAL
56	41+39.95	LT	16.10	N/A	N/A	25.80	34.81	N/A	N/A	35.18		N/A	N/A	N/A	3.8%	10.00	20.00	29.50	7" CONC	N/A	COMMERCIAL
57	42+45.79	RT	10.45	N/A	N/A	40.00	34.53	N/A	N/A	36.00		N/A	N/A	N/A	5.0%	15.00	15.00	27.50	7" CONC	N/A	COMMERCIAL
58	43+59.21	LT	16.90	19.60	24.60	27.40	34.47	34.30	34.28	34.28		N/A	N/A	N/A	-1.8%	10.00	10.00	24.00	7" CONC	5.0	COMMERCIAL

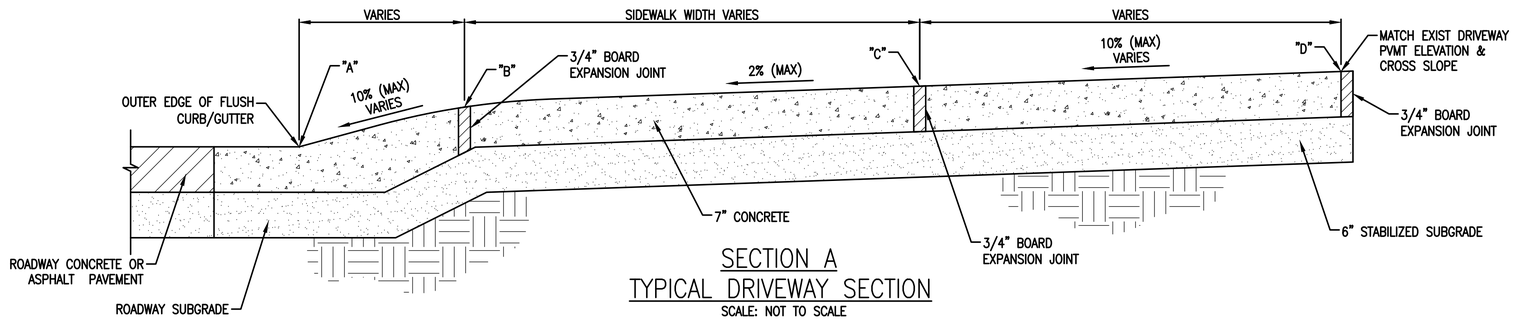
NOTES

1. FOR PROPOSED DRIVEWAYS GREATER THAN 15-FOOT AT ROW, PROVIDE TRANSVERSE EXPANSION JOINTS AT MAX 7.5-FOOT SPACING.



TYPICAL DRIVEWAY LAYOUT ON ASPHALT ROADWAY

SCALE: NOT TO SCALE



SECTION A

TYPICAL DRIVEWAY SECTION

SCALE: NOT TO SCALE

ALT 1

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
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Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2814

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY RD DRIVEWAY TABLE

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: **N.T.S.** VERT: **N.T.S.**
SHEET NO. **107** OF 111	DRAWING SCALE

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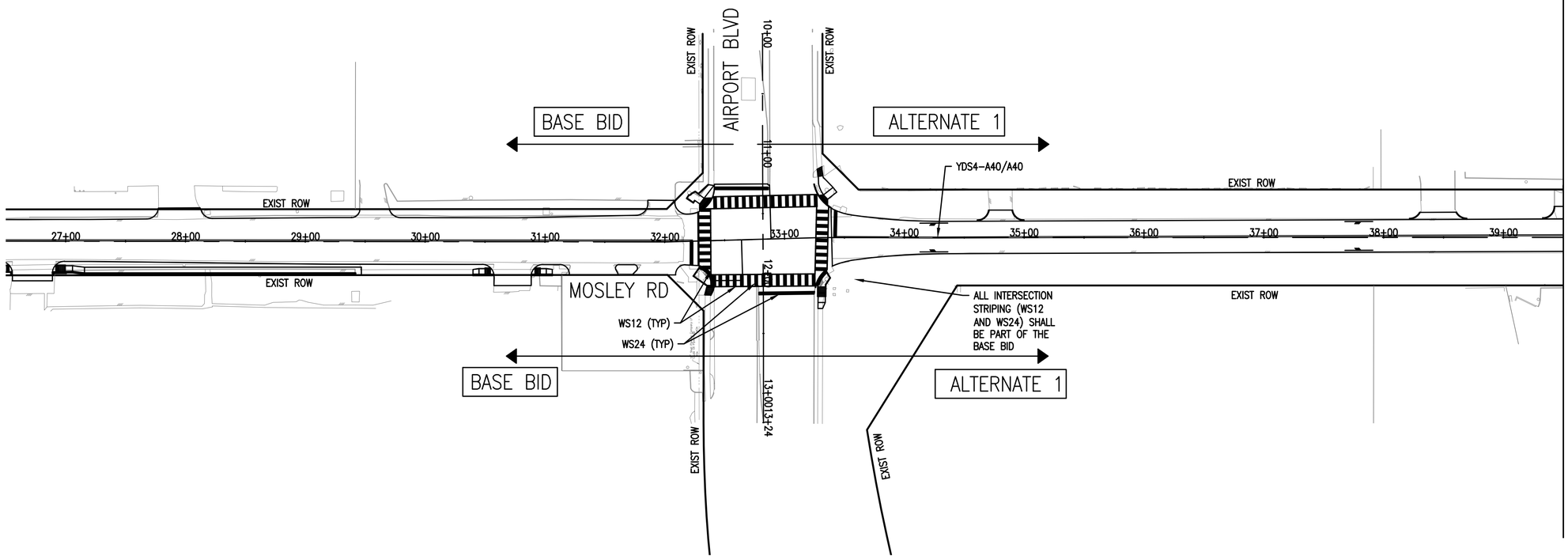

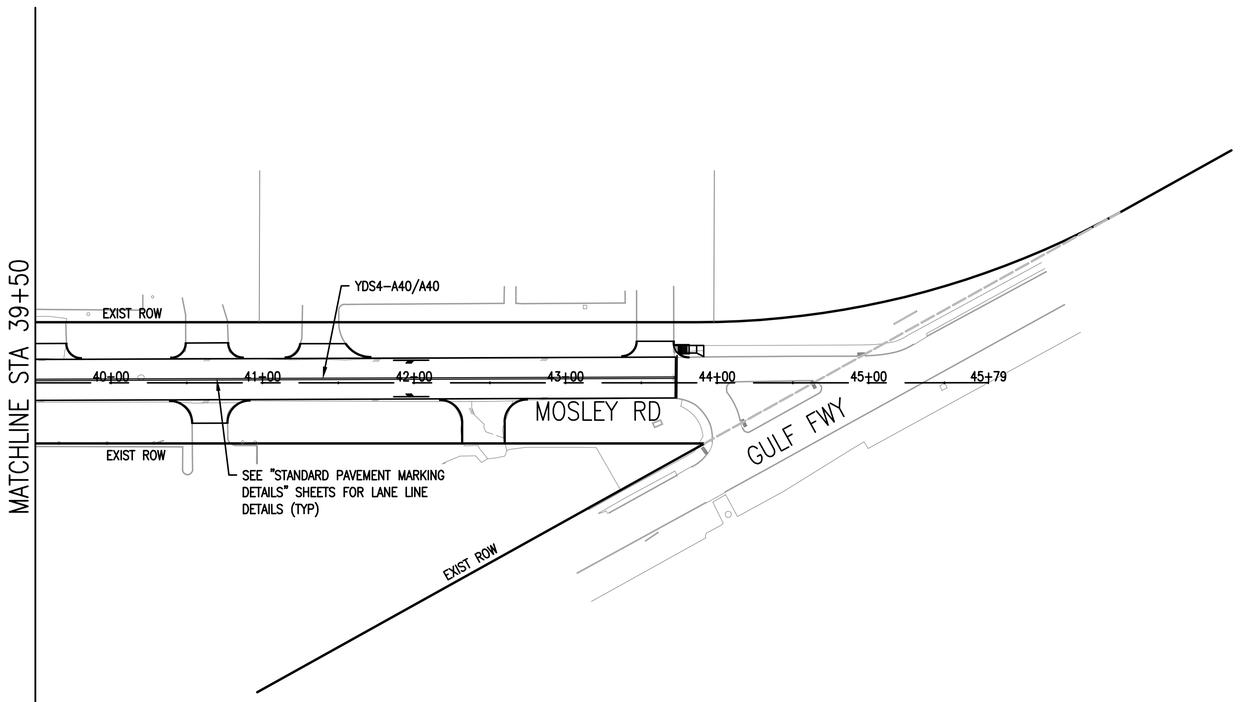

LEGEND

- PROPOSED SIGN
- EXISTING SIGN

MATCHLINE STA 39+50

NOTE

1. FOR ADDITIONAL SIGNING AND PAVEMENT MARKING INFORMATION REFER TO "STANDARD PAVEMENT MARKING DETAILS".
2. ALL SIGNS AND PAVEMENT MARKING TO BE PER T.M.U.T.C.D. AND CITY OF HOUSTON, SIGNING AND PAVEMENT MARKING STANDARD DETAIL SHEETS.
3. ALL EXISTING SPECIAL SIGNS, SUCH AS NEIGHBORHOOD WATCH PROGRAM SIGNS, SHALL BE PROTECTED DURING CONSTRUCTION AND/OR REMOVED AND REINSTALLED AFTER CONSTRUCTION IS COMPLETED (NOT A SEPARATE PAY ITEM, INCIDENTAL TO PRICE OF PAVEMENT MARKING AND SIGNING.
4. BLOCK NUMBERS ON STREET NAME SIGNS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF SIGN PANELS.
5. ALL SIGNS (ALL TYPES) TO REMAIN UNLESS NOTED IN DEMOLITION SHEETS.
6. REMOVE EXISTING SIGN WITH POST. PROPOSED SIGN TO BE INSTALLED ON NEW SIGN POST.

0' 50' 100'
SCALE IN FEET

No.	Date	Revisions	App.

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GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
SIGNING & PAVEMENT MARKING
STA 26+50 TO END STA

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 108 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

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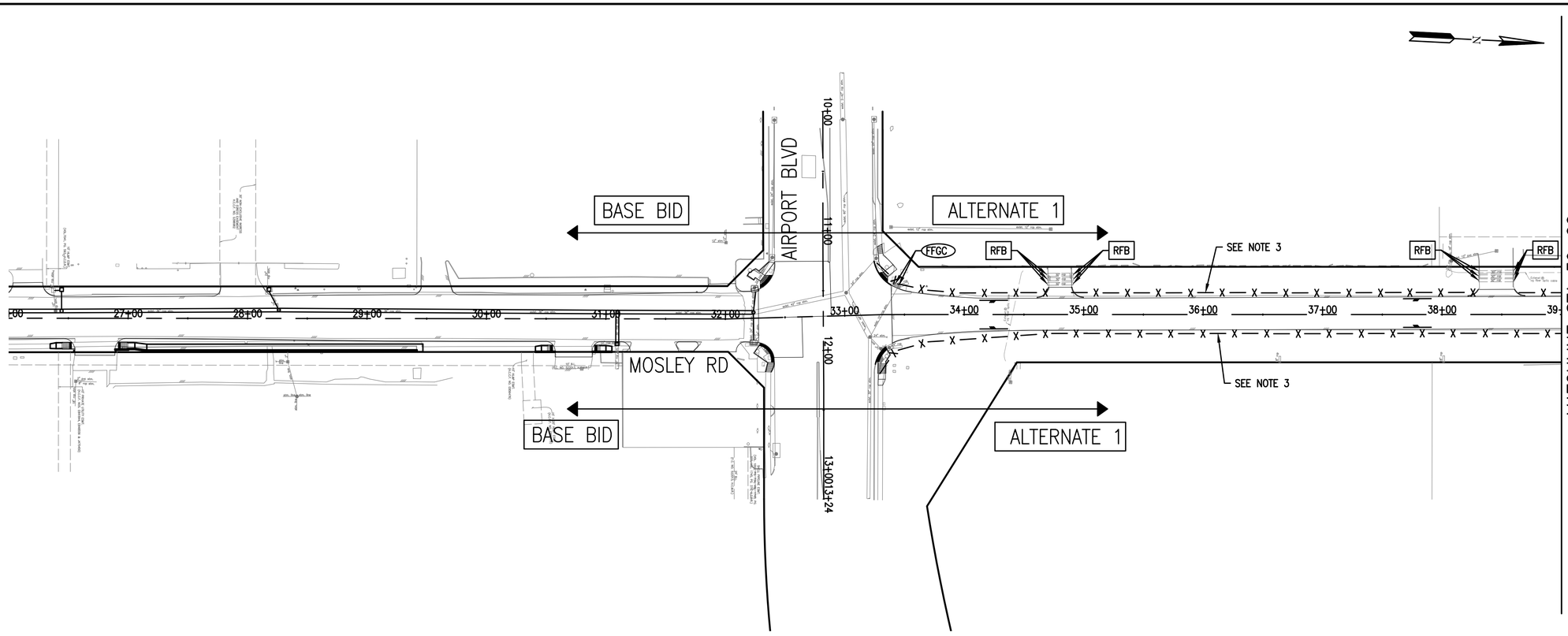
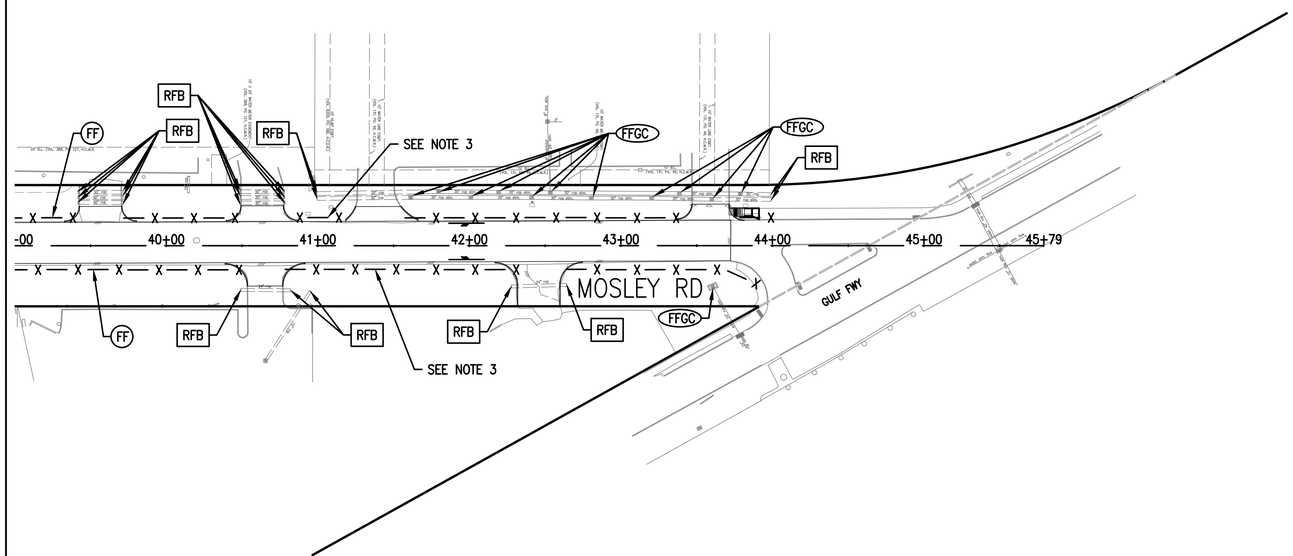


MATCHLINE STA 39+00



MATCHLINE STA 39+00

LEGEND

IPB	INLET PROTECTION BARRIER
X	FILTER FABRIC FENCE
RFB	REINFORCED FILTER FABRIC BARRIER
FFGC	FILTER FABRIC GRATE COVER

NOTES:

1. CONTRACTOR SHALL PROVIDE CONCRETE TRUCK WASH AREA AS DIRECTED BY THE CM/ENGINEER PRIOR TO BEGIN CONSTRUCTION.
2. PLACE REINFORCED FILTER FABRIC BARRIER ON ALL ROAD SIDE DITCHES AT EVERY UPSTREAM DRIVEWAY CULVERT.
3. INLET PROTECTION BARRIER SHALL NOT IMPEDE TRAFFIC FLOW.
4. MAINTENANCE AND INSPECTION OF EROSION/ SEDIMENT CONTROL DEVICES SHALL BE PROVIDED AS DIRECTED BY THE CM/ENGINEER.
5. BLOCK SOD SHALL BE PLACED BETWEEN SIDEWALK AND CURB (ALL TYPES) AND BETWEEN SIDEWALK AND ROW AND ALONG ROADWAY DITCH BERM.
6. REFER TO STORM WATER POLLUTION PREVENTION PLAN DETAIL SHEET FOR ADDITIONAL INFORMATION.

0' 50' 100'
SCALE IN FEET

No.	Date	Revisions	App.

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive Houston, TX 77042

SURVEYED BY:
KUO & ASSOCIATES
FB NO. P-6234

MARK WOODWARD
96072
LICENSED PROFESSIONAL ENGINEER
7/20/2023
VOID
Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
STORM WATER POLLUTION
PREVENTION PLAN
STA 26+00 TO END STA

SHEET 1 OF 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=50' VERT: N/A
SHEET NO. 109 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

ALT 1

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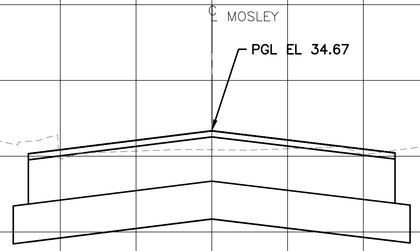

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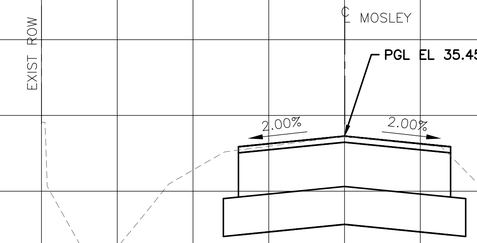

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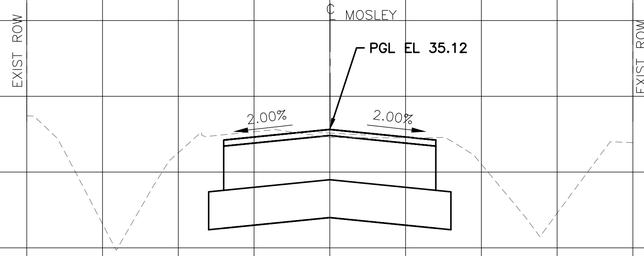

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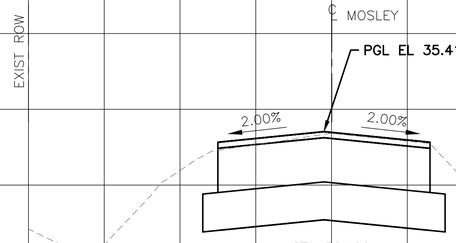

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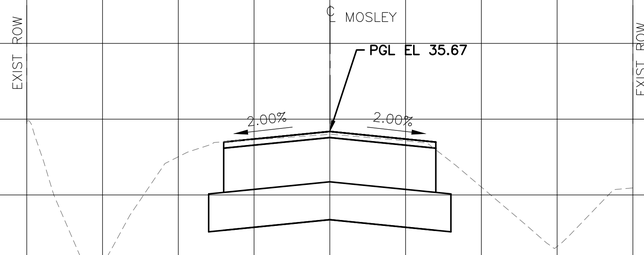

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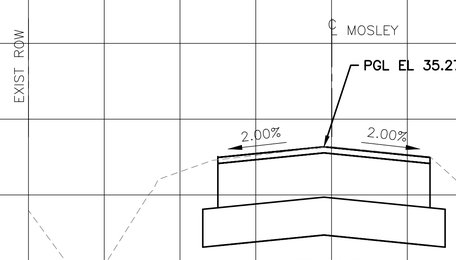

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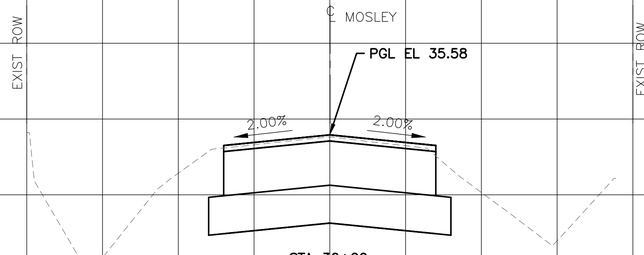

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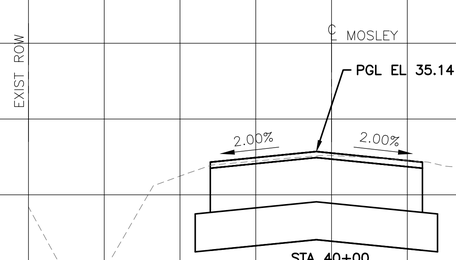

STA 40+00

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ALT 1

LEGEND

EXISTING SECTION

PROPOSED SECTION

0' 10' 20'

SCALE IN FEET

No.	Date	Revisions	App.

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GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD
CROSS SECTIONS

SHEET 5 OF 6

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=10' VERT: 1"=2'
SHEET NO. 110 OF 111	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

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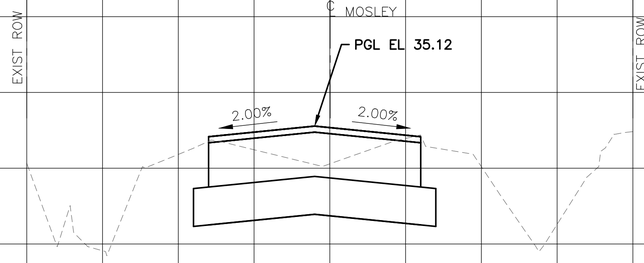

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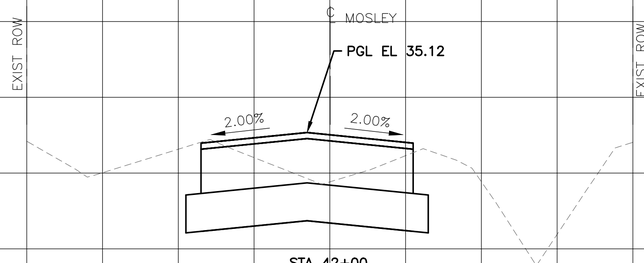

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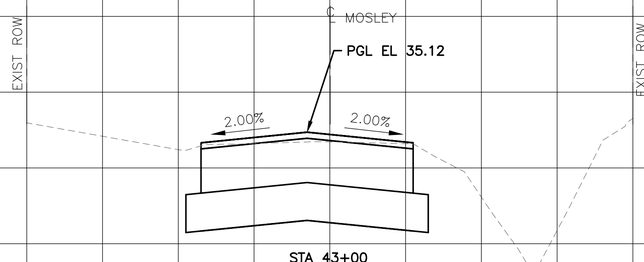

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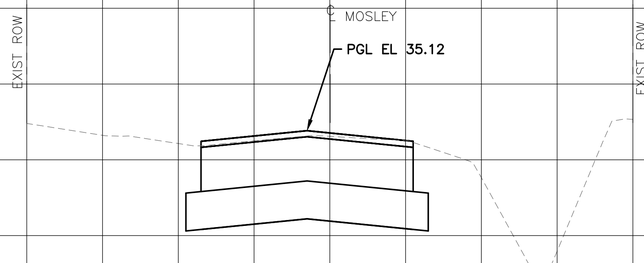

STA 43+72

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ALT 1

No.	Date	Revisions	App.

LEGEND

EXISTING SECTION

PROPOSED SECTION

0' 10' 20'

SCALE IN FEET

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GULFGATE REDEVELOPMENT AUTHORITY

MOSLEY RD STREET REHABILITATION

MOSLEY ROAD CROSS SECTIONS

SHEET 6 OF 6

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORZ: 1"=10' VERT: 1"=2'
SHEET NO. 111 OF 111	DRAWING SCALE

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