

PAVING UPGRADES @  
LLOYD M. KNOWLTON ES  
RFCSP#2024-005

NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
BEXAR COUNTY, TEXAS

JANUARY 31, 2024

SCHOOL BOARD MEMBERS:

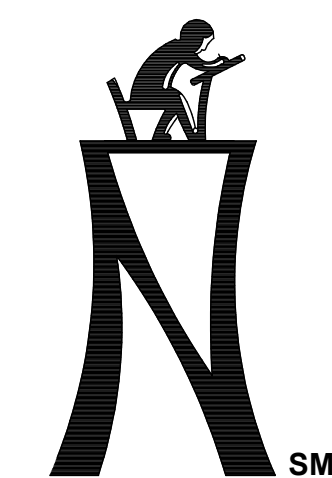
ROBERT BLOUNT, JR.	PRESIDENT
CORINNE SALDANA	VICE PRESIDENT
GERALD B. LOPEZ	SECRETARY
DAVID SALCIDO	TRUSTEE
DR. KARLA DURAN	TRUSTEE
CAROL HARLE, PH.D.	TRUSTEE
KAREN FREEMAN	TRUSTEE
DR. JOHN M. CRAFT	SUPERINTENDENT



LOCATION MAP  
N.T.S.

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KCI TECHNOLOGIES, INC.  
2808 W. BITTERS ROAD, SUITE 216  
SAN ANTONIO, TEXAS 78246  
PHONE: (210) 641-9899  
FAX: (210) 641-6440  
REGISTRATION #10573 / #101943-65



THE SEAL APPEARING ON  
THIS DOCUMENT WAS  
ISSUED TO:  
PAUL A. MARTIN, P.E.  
NO. #105075  
ON JANUARY 31, 2024  
DATE



PAVING UPGRADES AT LLOYD M.  
KNOWLTON ES  
RFCSP # 2024-005  
9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT  
SCHOOL DISTRICT  
5900 EVERS ROAD, BUILDING C  
SAN ANTONIO, TX 78238  
COVER SHEET

KCI JOB NO. 782203504  
DATE: 01-31-2024  
DRAWN BY: JAE  
CHECKED BY: PAM  
REVISIONS:

CONTRACTOR NOTES:

1. CONTRACTOR TO PROVIDE & INSTALL PROJECT SIGNAGE IN ACCORDANCE WITH ATTACHMENT J OF THE CONTRACT DOCUMENT.
2. CONTRACTOR TO PROVIDE AERIAL PHOTO OF THE SITE WITH EVERY PAY APPLICATION.
3. NO JOB TRAILER IS REQUIRED FOR THIS PROJECT.

C1.0

GENERAL NOTES:

- VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE COMMENCING ANY WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO THE ENGINEER IN A TIMELY MANNER. CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENT REQUIRE APPROVAL BY THE ENGINEER.
- CONTRACTOR SHALL CONTACT THE CITY INSPECTION DEPARTMENT AT LEAST 48 HOURS BEFORE BEGINNING ANY SITE WORK.
- ANY WORK IN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED TO THE STANDARDS OF THE GOVERNING AUTHORITY.
- THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES (2004) SHALL BE CONSIDERED PART OF THESE PLANS AND USED AS THE SPECIFICATIONS FOR ITEMS EXCEPT AS OTHERWISE SHOWN ON THE PLANS OR IN THE PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION SCHEDULE WITH THE OWNER PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL WASTE MATERIAL GENERATED DURING CONSTRUCTION. WASTE MATERIAL MUST BE REMOVED FROM THE WORK SITE AND DISPOSED OF IN SUCH A MANNER TO MEET ALL APPLICABLE REGULATIONS. (NO SEPARATE PAY ITEM.)
- CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY UPON COMPLETION OF JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED SECURITY TO PROTECT HIS OWN PROPERTY, EQUIPMENT, AND WORK IN PROCESS.
- TREES NOT NOTED FOR REMOVAL SHALL BE PROTECTED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE TEMPORARY FENCE AROUND PROTECTED TREES TO DRIP LINE OF TREE CANOPY. THE ARCHITECT SHALL BE NOTIFIED IN ADVANCE OF ANY TRIMMING OR LANDSCAPE WORK TO BE DONE IN THE AREA OF PROTECTED TREES.
- CONTRACTOR SHALL PROVIDE AND INSTALL PVC CONDUITS UNDER PAVEMENT/SIDEWALK AREAS FOR SITE IRRIGATION SYSTEM AND SITE LIGHTING PLANS AS SHOWN ON SITE UTILITY PLAN, MEP PLANS, AND LANDSCAPE IRRIGATION PLANS.
- THE GRADING PLAN INDICATES FINISHED GRADES. FINISHED GRADING SHALL BE HAND SMOOTHED, READY FOR SOD AND THE INSTALLATION OF OTHER LANDSCAPING FOR THE ENTIRE SITE, WITHIN THE "LIMITS OF WORK".
- THE TOP SOIL FINISH GRADE SHALL BE 2 INCHES BELOW THE TOP OF THE SIDEWALK. SOD, ONCE INSTALLED, SHALL BE FLUSH WITH THE TOP OF THE SIDEWALK.
- SLABS SHALL TYPICALLY HAVE AT LEAST A 6" EXPOSURE UNLESS SHOWN OTHERWISE.
- THE LIMITS FOR WORK ON THIS PROJECT ARE SHOWN ON THE PLANS.

TRAFFIC NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING TRAFFIC IN THE IMMEDIATE VICINITY OF CONSTRUCTION. ALL WORK SHALL BE PERFORMED IN SUCH A MANNER AND SEQUENCE AS TO PROVIDE MAXIMUM PROTECTION TO TRAFFIC AND PEDESTRIANS. CONTROLS SHALL BE CONSISTENT WITH THE TYPE OF WORK BEING PERFORMED.
- CONSTRUCTION WHICH BLOCKS TRAFFIC OF ANY STREET, ALLEY, OR DRIVEWAY IS SUBJECT TO APPROVAL OF AND RESTRICTION IMPOSED BY THE CITY TRAFFIC DIVISION.
- INGRESS AND EGRESS SHALL BE PROVIDED AT ALL TIMES FOR THE PROPERTY OWNERS AND BUSINESSES OF THE ADJUTING PROPERTY AND THE CROSS STREETS WHICH ARE AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.
- DURING THE ENTIRE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAINTAIN CONSTRUCTION WARNING SIGNS AT EACH END OF THE PROJECT TO WARN MOTORING AND PEDESTRIAN TRAFFIC THAT CONSTRUCTION IS IN PROGRESS AND OF POSSIBLE HAZARDOUS CONDITION GENERATED BY THE CONSTRUCTION.
- DELINEATORS SHALL BE INSTALLED ALONG THE PAVEMENT EDGE TO WARN TRAFFIC OF ANY ROADSIDE OBJECTS OR HAZARDS AND TO DELINEATE THE ROADWAY EDGE DURING HOURS OF DARKNESS.

UTILITIES

- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK IN ANY RIGHT-OF-WAY OR EXISTING EASEMENT.
  - SANITARY SEWER (SAWS) - 210-704-7297
  - WATER (SAWS) - 210-704-7297
  - ELECTRIC AND GAS (CPS ENERGY) - 210-353-3500
  - TELEPHONE (A.T.&T.) - 210-288-5127
  - GAS (GREY FOREST UTILITIES) - 210-695-8781
  - CATV - SPECTRUM - 888-369-2408
  - TEXAS STATE WIDE ONE CALL LOCATOR - 1-800-545-6005
- OVERHEAD POWER LINES EXIST IN THE AREA OF THE PROJECT. CONTRACTOR SHALL MAINTAIN RECOMMENDED CLEARANCE REQUIREMENTS OF PROVIDER. TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN SIX (6) FEET OF ENERGIZED OVERHEAD POWER LINES. FEDERAL REGULATIONS, TITLE 29, PART 1910.180(I) AND PART (1926.550(A)(15) REQUIRE A MINIMUM OF TEN (10) FEET FROM THESE FACILITIES WHERE CONTRACTOR MUST WORK NEAR OVERHEAD POWER LINES. LINES WITHIN THESE LIMITS SHALL BE DE-ENERGIZED AND/OR MOVED AT CONTRACTOR'S EXPENSE.
- IN THE EVENT OF DAMAGE TO UNDERGROUND UTILITIES OR FACILITIES, WHETHER SHOWN OR NOT ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO REPLACE THE UTILITY OR FACILITY BACK IN SERVICE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL UNCOVER ALL EXISTING UTILITIES AND VERIFY EXISTING ELEVATION OF SAME AT ALL UTILITY CROSSINGS BEFORE COMMENCING ANY OTHER WORK. CONFLICTS SHALL BE REPORTED TO THE MANAGING ARCHITECT IMMEDIATELY.

- CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL PROPOSED UTILITIES EXITING BUILDING PRIOR TO COMMENCING WORK ON SITE UTILITIES. UPON DISCOVERY OF ANY DISCREPANCIES, THE MANAGING ENGINEER SHALL BE NOTIFIED.
- ELECTRIC METER AND SERVICE LINE INSTALLATION TO BE COORDINATED WITH CITY PUBLIC SERVICE.
- ON-SITE WATER AND SEWER SERVICES SHALL BE INSPECTED AS REQUIRED BY THE CITY PLUMBING INSPECTOR.
- WATER SERVICE LINE SHALL BE SCHEDULE 40 PVC. LINE SHALL BE BEDDED IN AND BACKFILLED WITH A MINIMUM OF 6" OF WASHED SAND.
- ALL SANITARY SEWER LINES PROPOSED ON THE SITE SHALL BE SDR 26 PVC. BEDDING AND INITIAL BACKFILL (12" ABOVE THE PIPE) SHALL BE GRAVEL (3/4" MAX TO DUST).
- MISCELLANEOUS PVC FITTINGS REQUIRED TO ROUTE SANITARY SEWER OUTSIDE OF BUILDING ARE NOT CALLED FOR ON PLANS BUT SHALL BE FURNISHED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- TIE-INS TO EXISTING MANHOLES SHALL BE MADE SUCH THAT THE FINAL CONDITION UPON COMPLETION OF THE JOB SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING CODE.
- CONTRACTOR TO CUT AND CAP ANY IRRIGATION LINES WHILE NOTING SIZE AND LOCATION IN THESE PLANS AS PART OF THE AS-BUILT SET.
- CONTRACTOR SHALL DOCUMENT ANY REPAIRS MADE TO EXISTING LINES.

EARTHWORK

- THE CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS, LOCAL BUILDING CODE REQUIREMENTS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING AND RESTORING THE DRAINAGE SYSTEM TO ITS ORIGINAL CONDITION. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR MUST CLEAN MUD, DIRT OR DEBRIS TRACKED ONTO EXISTING STREETS BY ANY VEHICLE THAT EXITS OR ENTERS THE SITE.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION TO MEET GEOTECHNICAL AND STRUCTURAL ENGINEER RECOMMENDATIONS.
- ON-SITE SOILS UPON APPROVAL OF GEOTECH MAY BE PLACED UNDER PROPOSED PAVEMENT AREAS IF PLACED IN LOOSE LIFTS NOT EXCEEDING 6" IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DENSITY AS DETERMINED BY TxDOT, TEX-114-E. THE MOISTURE CONTENT SHALL BE WITHIN THE RANGE OF OPTIMUM WATER CONTENT TO 3% ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY COVERED.
- PLACE BACKFILL AS PROMPTLY AND AS PRACTICAL AFTER COMPLETION OF EACH STRUCTURE OR PORTION OF A STRUCTURE. DO NOT PLACE BACKFILL AGAINST CONCRETE WALLS OR SIMILAR STRUCTURES UNTIL CONCRETE HAS CURED AT LEAST SEVEN (7) DAYS.
- ANY DRAINAGE STRUCTURE, DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.
- CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING FINAL GRADES TO ASSURE POSITIVE DRAINAGE.
- GRAVEL SUBGRADE FILLER SHALL CONSIST OF A WELL GRADED, CRUSHED STONE OR GRAVEL, APPROVED BY THE ENGINEER, ONE HUNDRED PERCENT (100%) PASSING A 1 3/4" SIEVE, AT LEAST NINETY-FIVE PERCENT (95%) PASSING A 1 1/2" SIEVE AND AT LEAST NINETY PERCENT (90%) RETAINED ON A ONE QUARTER INCH (1/4") SIEVE. THE CRUSHED STONE OR GRAVEL SHALL HAVE AN ABRASION OF NOT MORE THAN FORTY (40) WHEN SUBJECTED TO THE LOS ANGELES ABRASION TEST.
- INITIAL BACKFILL: INITIAL BACKFILL IS DEFINED AS BACKFILL HAVING A THICKNESS IN ITS COMPACTED STATE FROM THE SURFACE OF THE BEDDING TO A POINT ONE FOOT (1') ABOVE THE TOP OF THE PIPE. SELECT INITIAL BACKFILL MATERIAL SHALL CONFORM TO THE GRAVEL REQUIREMENTS OF BEDDING. FOR PIPES LESS THAN 24" IN DIAMETER, SELECT INITIAL BACKFILL SHALL BE PLACED IN TWO LIFTS. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE OF AND UNDER THE SHOULDERS OF THE PIPE TO ITS SPRING LINE. THE SECOND LIFT OF INITIAL BACKFILL SHALL EXTEND FROM THE SPRING LINE OF THE PIPE TO A DEPTH SUFFICIENT TO PRODUCE A COMPACTED DEPTH OF MATERIAL A MINIMUM OF ONE FOOT ABOVE MINIMUM OF ONE FOOT ABOVE THE TOP OF THE PIPE.
- FOR PIPES 24" IN DIAMETER AND LARGER, SELECT INITIAL BACKFILL MATERIAL SHALL BE EVENLY AND SIMULTANEOUSLY SPREAD ALONGSIDE, UNDER THE SHOULDERS OR HAUNCHES OF THE PIPE AND OVER THE PIPE IN SIX INCH (6") LIFTS TO A POINT SUFFICIENT TO PRODUCE A COMPACTED DEPTH OF MATERIAL A THE TOP OF THE PIPE.
- SECONDARY BACKFILL: SECONDARY BACKFILL IS DEFINED AS BACKFILL FROM ONE FOOT (1') ABOVE THE TOP OF THE PIPE TO THE TOP OF THE TRENCH. SECONDARY BACKFILL SHALL GENERALLY CONSIST OF MATERIALS REMOVED FROM THE TRENCH AND SHALL BE FREE OF BRUSH, DEBRIS AND JUNK. NO ROCK OR STONES HAVING ANY DIMENSION LARGER THAN 6 INCHES AT THE LARGEST DIMENSION SHALL BE USED IN THE SECONDARY BACKFILLING ZONE AND SHALL BE AT LEAST 1 FOOT BELOW FINISHED GRADE. SECONDARY BACKFILL MATERIAL SHALL BE COMPOSED OF PRIMARILY COMPACTIBLE SOIL MATERIALS.
- WATER JETTING OR WATER FLOODING WILL NOT BE PERMITTED AS A METHOD OF COMPACTION. SECONDARY BACKFILL SHALL BE COMPACTED TO THE REQUIRED DENSITY OF NINETY-THREE PERCENT (93%) USING ANY SIZE AND TYPE OF EQUIPMENT WHICH WILL GIVE THE REQUIRED COMPACTION WITHOUT DAMAGING THE PIPE, BEDDING OR STRUCTURES. THE DEPTH OF LAYER, PRIOR TO COMPACTION, SHALL DEPEND UPON THE TYPE OF SPRINKLING AND COMPACTION EQUIPMENT USED TO ACHIEVE THE REQUIRED DENSITY AND THE TEST RESULTS THEREBY OBTAINED AND SHALL BE A MAXIMUM OF TWENTY FOUR INCHES (24"). PRIOR TO AND IN CONJUNCTION WITH THE COMPACTION OPERATION, EACH LAYER SHALL BE BROUGHT TO THE MOISTURE CONTENT NECESSARY TO OBTAIN THE REQUIRED DENSITY AND SHALL BE KEPT LEVEL TO INSURE UNIFORM COMPACTION OVER THE ENTIRE LAYER. ESTABLISHMENT OF THE OPTIMUM MOISTURE AND DENSITY WILL BE IN ACCORDANCE WITH TxDOT TEST METHOD TEX-113-E. DENSITY SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENT OF ASTM D 2922. EACH LAYER OF BACKFILL MUST PROVIDE THE DENSITY AS REQUIRED HEREIN. IF THE MATERIAL FAILS TO MEET THE DENSITY INDICATED, THE COURSE SHALL BE REWORKED AS NECESSARY TO OBTAIN THE INDICATED COMPACTION.
- ALL WORK WITHIN THE CITY STREET OR STATE HIGHWAY RIGHT OF WAY MUST MEET THE INDICATED REQUIREMENTS IN THIS SECTION AS A MINIMUM AND SHALL MEET THE REQUIREMENTS INDICATED IN THE PLANS OR THE PERMIT ISSUED BY THE COUNTY, CITY, OR STATE WHEN THEIR REQUIREMENTS ARE MORE STRINGENT. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE TxDOT, CITY, OR COUNTY OFFICE AND FOR COORDINATING HIS ACTIVITIES WITH THE OPERATING PROCEDURE IN EFFECT FOR UTILITY CUT PERMITS AND PAVEMENT REPAIR UNDER THEIR JURISDICTION. APPROVAL FOR ALL COMPETED WORK IN THE CITY, STATE OR COUNTY RIGHT OF WAY MUST BE OBTAINED FROM THE APPROPRIATE OFFICIAL PRIOR TO FINAL ACCEPTANCE.

FLATWORK

- ALL FLATWORK WITHIN PUBLIC R.O.W. SHALL BE DONE IN ACCORDANCE WITH THE CITY REQUIREMENTS.
- CONTRACTOR SHALL ENSURE THAT THE SLOPE ON THE FINISHED SURFACE OF THE CONCRETE IN THE FIRST FIVE FEET OUTSIDE DOORS DOES NOT EXCEED 2%.
- SEE GRADING PLANS FOR DROPS AT DOORS.
- THE SLOPE OF SITE SIDEWALKS SHALL NOT EXCEED A LONGITUDINAL SLOPE OF 5% OR A CROSS-SLOPE OF 2%
- THE PORTLAND CEMENT CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 5" AND A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. A LIQUID MEMBRANE-FORMING COMPOUND SHALL BE APPLIED AS SOON AS PRACTICAL AFTER BROOM FINISH IS APPLIED TO CONCRETE.
- PRIOR TO BEGINNING PAVEMENT CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE TO ESTABLISH A JOINT PATTERN.

PAVING NOTES

- REFERENCE PAVEMENT DETAILS AND NOTES ON DETAIL SHEET.
- NO RAP OR RAS SHALL BE USED IN ASPHALT SURFACE COURSE.
- REFERENCE GEOTECHNICAL ENGINEERING STUDY PREPARED BY TERRACON, PROJECT #90235228, DATED NOVEMBER 3, 2023.

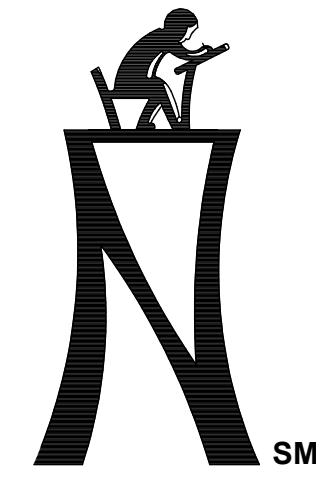
CPS ENERGY NOTES

WHAT TO DO BEFORE/DURING EXCAVATION

- WHITE LINING THE JOB SITE BEFORE YOU CALL 811 IS RECOMMENDED
- CALL 811- 2 BUSINESS DAYS BEFORE YOU DIG. EACH EXCAVATOR MUST HAVE THEIR OWN LOCATE REQUEST
- WAIT FOR A POSITIVE RESPONSE BEFORE YOU DIG. A POSITIVE RESPONSE INCLUDES MARKS ON GROUND, EMAIL NOTIFICATION, OR PHONE CALL
- IF NO POSITIVE RESPONSE IS GIVEN THE EXCAVATOR MUST MAKE A SECOND CALL TO 811 (THE EXCAVATOR MUST WAIT 4 HOURS AFTER THE SECOND CALL IS MADE PRIOR DIGGING)
- THE EXCAVATOR IS ALSO RESPONSIBLE FOR MAKING A SECOND CALL TO 811 IF THERE ARE NO LOCATES BUT THERE IS VISUAL INDICATION OF GAS OR ELECTRIC FACILITIES
- THE EXCAVATOR SHALL PROTECT AND PRESERVE LOCATE MARKINGS THROUGHOUT THE LIFE OF THE TICKET
- THE LOCATE REQUEST IS VALID FOR 14 BUSINESS DAYS OR WHEN MARKS ARE NO LONGER VISIBLE. REFRESHING THE LOCATE TICKET ON THE TWELFTH DAY IS RECOMMENDED
- MECHANIZED EQUIPMENT IS NOT ALLOWED WITHIN THE EXCAVATION TOLERANCE ZONE. THIS AREA IS 18-INCHES ON EITHER OUTSIDE OF EDGE OF EITHER SIDE OF THE GAS OR ELECTRIC FACILITY
- SIGNING AN EXCAVATORS AGREEMENT IS ALSO RECOMMENDED FOR LARGE PROJECTS WHERE THE SCOPE OF WORK IS TOO LARGE TO WHITE-LINE. THE LOCATE TICKET STILL NEEDS TO BE UPDATED EVERY 14 BUSINESS DAYS

IN CASE OF PIPELINE DAMAGE

- CALL 811 IMMEDIATELY BUT NO LATER THAN 2 HRS FOLLOWING THE DAMAGE. FOR CPS ENERGY GAS OR ELECTRIC DAMAGES CALL IMMEDIATELY 210-353-HELP (4357)
- DAMAGE INCLUDES THE FOLLOWING: DETAISING, SCRAPING, DISPLACEMENT, PENETRATION, DESTRUCTION, PARTIAL OR COMPLETE SEVERANCE OF AN UNDERGROUND PIPELINE OR OF ANY PROTECTIVE COATING, HOUSE/CASING, OR OTHER PROTECTIVE DEVICE OF AN UNDERGROUND PIPELINE
- REPORT ANY BROKEN GAS TRACER WIRE TO CPS ENERGY AT 210-353-HELP (4357)
- DO NOT TRY AND FIX DAMAGED LINE OR STOP PRODUCT FROM LEAKING
- DO NOT BACKFILL THE IMMEDIATE AREA OF DAMAGE, UTILITY OWNER WILL GIVE THAT ORDER
- MAKE AREA SAFE FOR CREW AND PUBLIC, KEEP SOURCES OF IGNITION AWAY FROM INCIDENT AREA
- KEEP UPWIND FROM PLUME OR VAPOR CLOUD
- MUST FILE A GAS DAMAGE REPORT WITHIN 10 BUSINESS DAYS OF INCIDENT ONLINE AT <http://webapps.rrc.state.tx.us/TPD/publicHomeAction.do>
- FOR CPS ENERGY RELATED EVENTS OR NATURAL GAS ODOR COMPLAINTS THE EMERGENCY NUMBER IS 210-353-HELP (4357)



**KCI TECHNOLOGIES, INC.**  
 2808 W. BITTERS ROAD, SUITE 218  
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 REGISTRATION #F-10673 / #101943-65



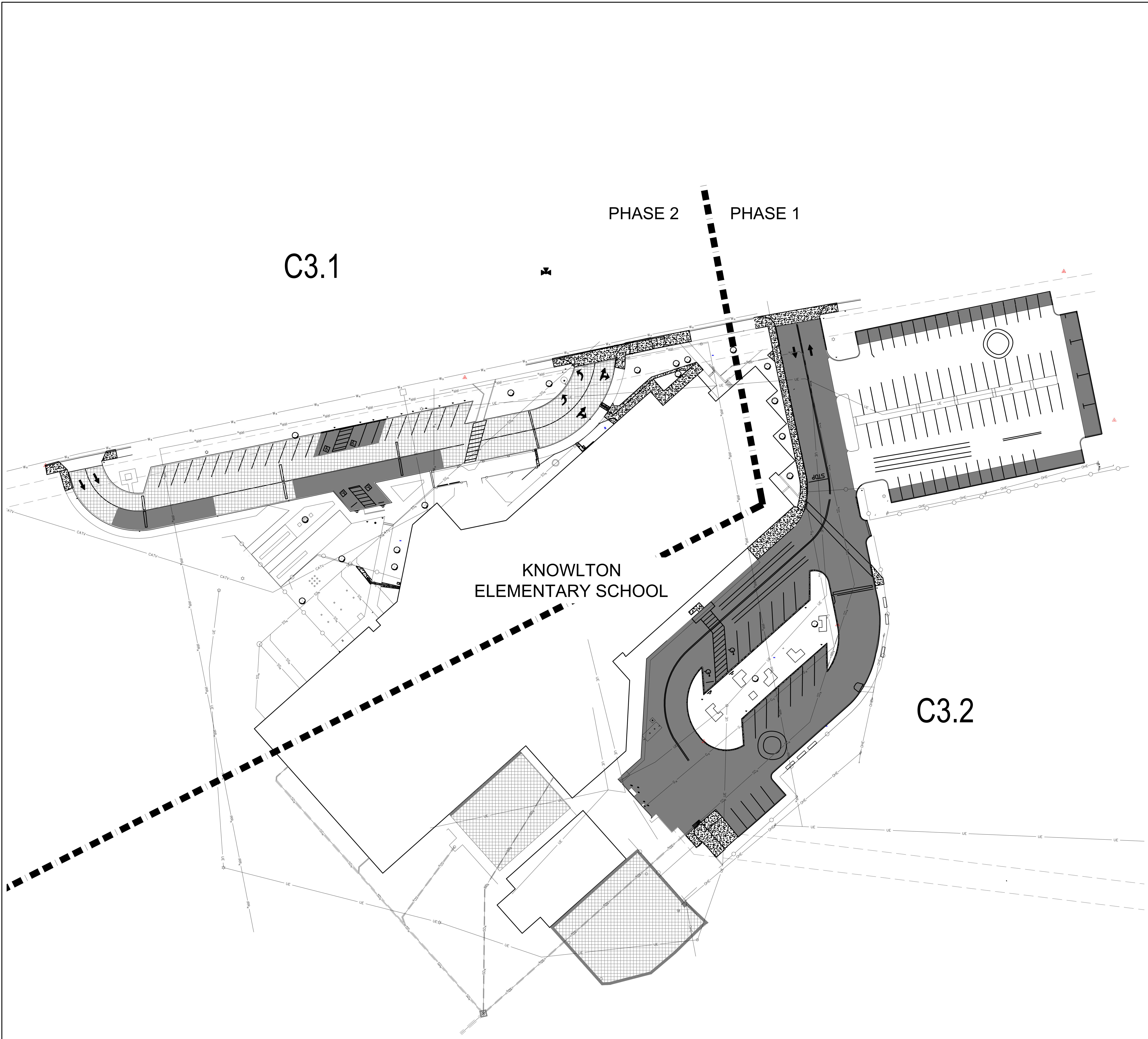
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 PAUL A. MARTIN, P.E.  
 NO. #105075  
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**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
 RFCSP # 2024-005  
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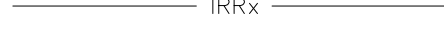



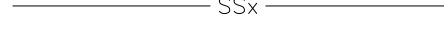






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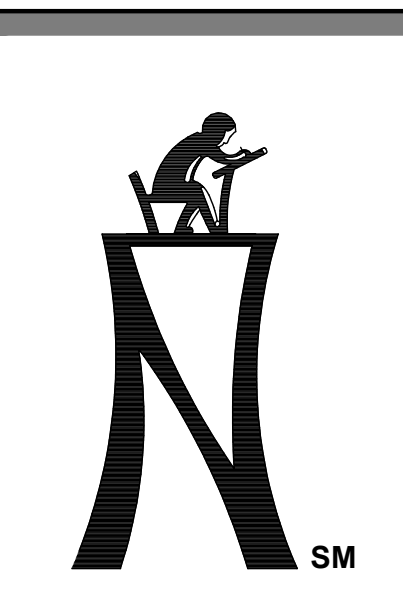
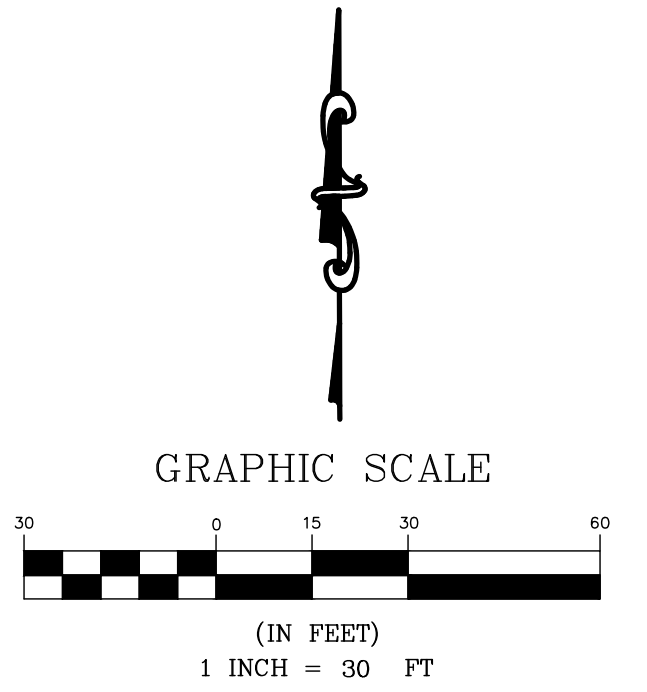
PHASE 2

PHASE 1

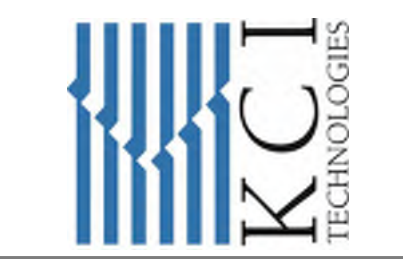
KNOWLTON  
ELEMENTARY SCHOOL

C3.2

- LEGEND:**
-  EXISTING CHAINLINK FENCE
  -  UE EXISTING UNDERGROUND ELECTRIC
  -  OHE EXISTING OVERHEAD ELECTRIC
  -  IRRx EXISTING IRRIGATION
  -  Wx EXISTING WATER LINE
  -  Gx EXISTING GAS LINE
  -  SSx EXISTING SANITARY SEWER
  -  CATV EXISTING CABLE TV
  -  SDx EXISTING STORM DRAIN
  -  EPP EXISTING ELECTRIC POLE
  -  SPP EXISTING ELECTRIC POLE
  -  EXISTING CLEANOUT
  -  EXISTING LIGHT POLE
  -  EXISTING FIRE HYDRANT
  -  EXISTING STORM DRAIN JUNCTION BOX



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 REGISTRATION # 105075 / #101943-85



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 P.E. #105075  
 ON JANUARY 31, 2024  
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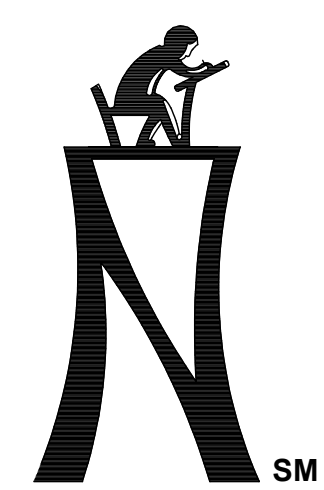
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EXISTING &  
 DEMOLITION PLAN

KCI JOB NO. 782203504  
 DATE: 01-31-2024  
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 REVISIONS:

C3.0



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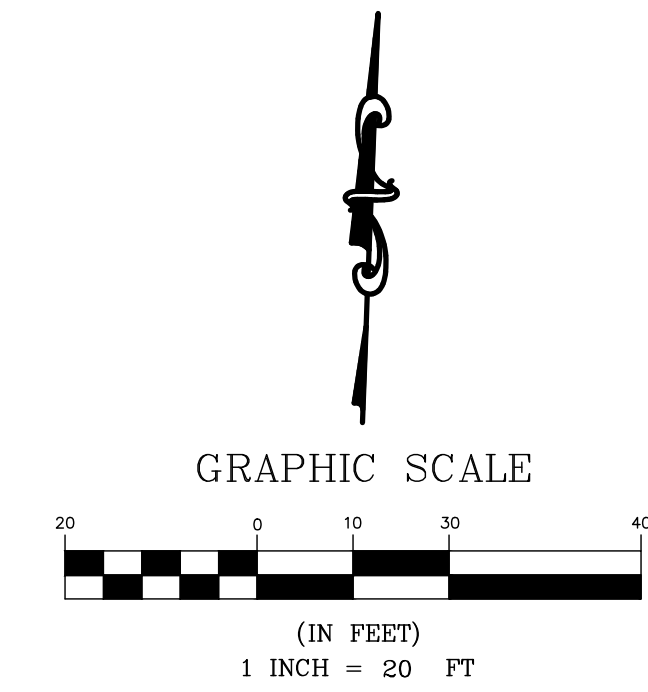


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C3.1



**GENERAL NOTE:**

REFER TO LANDSCAPE PLANS FOR ANY TREE REMOVAL/PRESERVATION

**SUE NOTE:**

EXISTING UTILITIES ARE SHOWN BASED ON RECORD DRAWINGS AND FIELD EVIDENCE. NO SUE INVESTIGATION HAS BEEN DONE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND VERIFYING THE DEPTH OF ALL UTILITIES.

**LEGEND:**

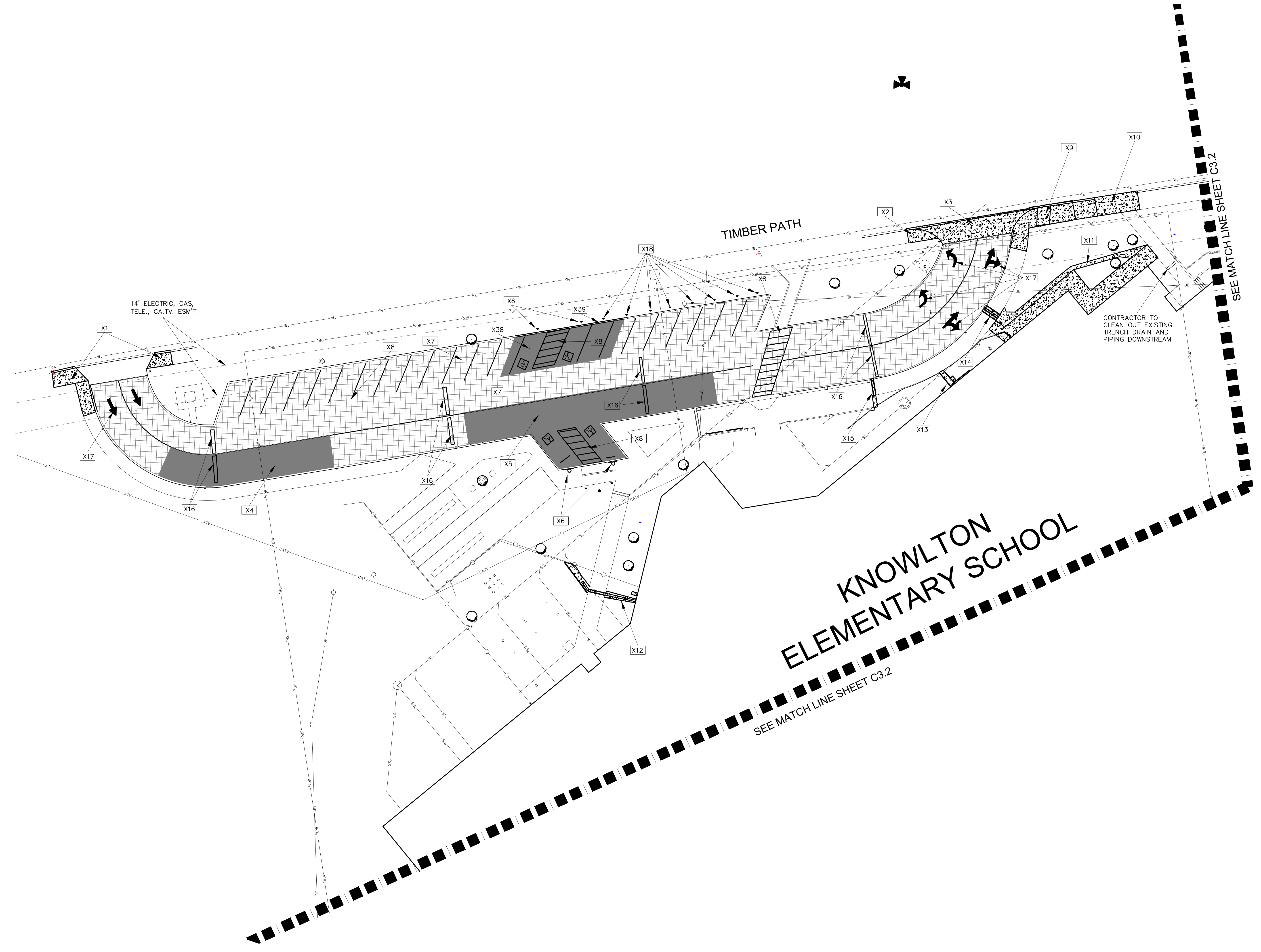
- EXISTING CHAINLINK FENCE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING IRRIGATION
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING SANITARY SEWER
- EXISTING CABLE TV
- EXISTING STORM DRAIN
- EXISTING ELECTRIC POLE
- EXISTING ELECTRIC POLE
- EXISTING CLEANOUT
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING STORM DRAIN JUNCTION BOX

**LEGEND:**

- DEMO ASPHALT PAVEMENT
- DEMO CONCRETE PAVEMENT AND SIDEWALK
- MILL EXISTING ASPHALT

**EXISTING SURVEY AND DEMOLITION KEYED NOTES:**

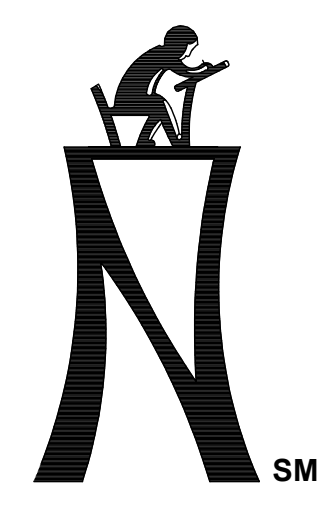
- X1 SAWCUT AND REMOVE 248 SF OF CONCRETE SIDEWALK & 33 LF OF CURB
- X2 SAWCUT AND REMOVE 61 SF OF CONCRETE SIDEWALK & 13 LF OF CURB
- X3 SAWCUT AND REMOVE 423 SF OF CONCRETE DRIVEWAY & 43 LF OF CURB
- X4 REMOVE 1,180 SF OF ASPHALT PAVEMENT TO A FULL DEPTH
- X5 REMOVE 2,351 SF OF ASPHALT PAVEMENT TO A FULL DEPTH
- X6 REMOVE EXISTING ADA PARKING SIGNAGE AND VAN SPACE AS APPLICABLE
- X7 MILL 14,381 SF OF EXISTING ASPHALT
- X8 REMOVE STRIPING
- X9 SAWCUT AND REMOVE 383 SF OF CONCRETE SIDEWALK & 35 LF OF CURB
- X10 SAWCUT AND REMOVE 175 SF OF SIDEWALK & 20 LF OF CURB
- X11 REMOVE 873 SF OF CONCRETE SIDEWALK AND SWALE
- X12 REMOVE 91 SF OF CONCRETE FLUME AND SIDEWALK DRAIN
- X13 REMOVE 26 SF OF CONCRETE FLUME AND SIDEWALK DRAIN
- X14 REMOVE 28 SF OF CONCRETE FLUME AND SIDEWALK DRAIN
- X15 REMOVE 20 SF OF CONCRETE FLUME AND SIDEWALK DRAIN
- X16 REMOVE 8 SPEED BUMPS
- X17 REMOVE 6 ARROWS
- X18 REMOVE & RELOCATE VISITOR PARKING SIGNS TO NEW PARKING SPOTS
- X19 REMOVE STRIPING AND ADA SIGNAGE
- X20 REMOVE AND SAWCUT 974 SF OF CONCRETE SIDEWALK & 173 LF OF CURB
- X21 DEMO 396 SF OF CONCRETE DRIVEWAY & REGRADE CROSS SLOPE AS 2%
- X22 REMOVE 45 SF OF EXISTING CONCRETE RAMP AND HANDRAILS AS WELL. (TOPPING SLAB TO BE CHIPPED DOWN 3" FROM TOP OF RAMP FOR PLACEMENT OF NEW TOPPING.)
- X23 REMOVE EXISTING 29,549 SF OF ASPHALT FROM THE BUS LOOP AREA & 935 LF OF CURB
- X24 REMOVE 1,542 SF OF ASPHALT AND 176 LF OF CURB
- X25 REMOVE 1,233 SF OF ASPHALT AND 125 LF OF CURB
- X26 REMOVE 1,529 SF OF ASPHALT AND 175 LF OF CURB
- X27 CLEAN SIDEWALK DRAINS
- X28 DEMO 762 SF OF CONCRETE ISLAND
- X29 REMOVE EXISTING GRATE INLET
- X30 REMOVE 1,000 GALLON GREASE TRAP
- X31 REMOVE SPEED BUMP
- X32 DEMO EXISTING LAWN MOWER RAMP
- X33 REMOVE/REPLACE 5 BOLLARDS
- X34 DEMO 21 SF OF CONCRETE SIDEWALK
- X35 DEMO 582 SF OF CONCRETE SIDEWALK
- X36 DEMO 83 SF OF CONCRETE SIDEWALK
- X37 REMOVE 89 SY OF ASPHALT PAVEMENT
- X38 REMOVE 838 SF OF ASPHALT PAVEMENT TO A FULL DEPTH
- X39 REMOVE 53 LF OF CONCRETE CURB



**KNOWLTON ELEMENTARY SCHOOL**

SEE MATCH LINE SHEET C3.2

SEE MATCH LINE SHEET C3.2



**KCI TECHNOLOGIES, INC.**  
 2808 W. BITTERS ROAD, SUITE 218  
 SAN ANTONIO, TEXAS 78246  
 PHONE: (210) 641-9899  
 FAX: (210) 641-6440  
 REGISTRATION # 10273 / #101943-65



THE SEAL APPEARING ON THIS DOCUMENT WAS FORKLEAS A. MARTIN, PAUL A. MARTIN, P.E. NO. #105075 DATE: JANUARY 31, 2024



**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
 RFCSP # 2024-005  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

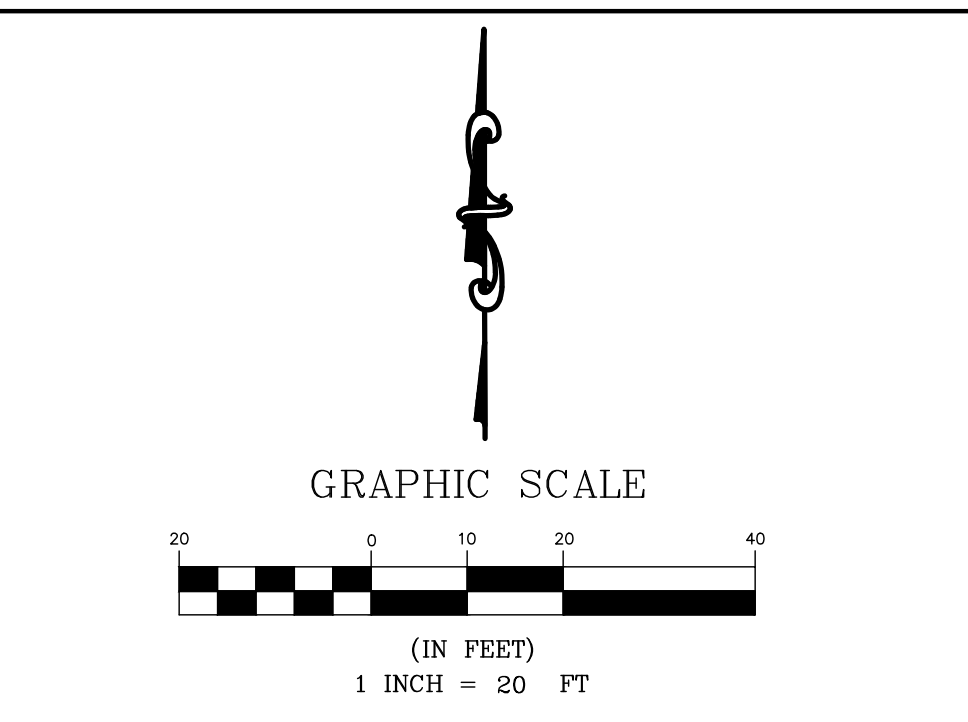
NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 DEMOLITION PLAN NE

KCI JOB NO. 782003504  
 DATE: 01-31-2024  
 DRAWN BY: JHE  
 CHECKED BY: JHE  
 REVISIONS: PAM

C3.2

**EXISTING SURVEY AND DEMOLITION KEYED NOTES:**

- X1 SAWCUT AND REMOVE 248 SF OF CONCRETE SIDEWALK & 33 LF OF CURB
- X2 SAWCUT AND REMOVE 61 SF OF CONCRETE SIDEWALK & 13 LF OF CURB
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- X38 REMOVE 838 SF OF ASPHALT PAVEMENT TO A FULL DEPTH
- X39 REMOVE 53 LF OF CONCRETE CURB
- X40 ALTERNATE 1: MILL 1267 SY OF ASPHALT PAVEMENT

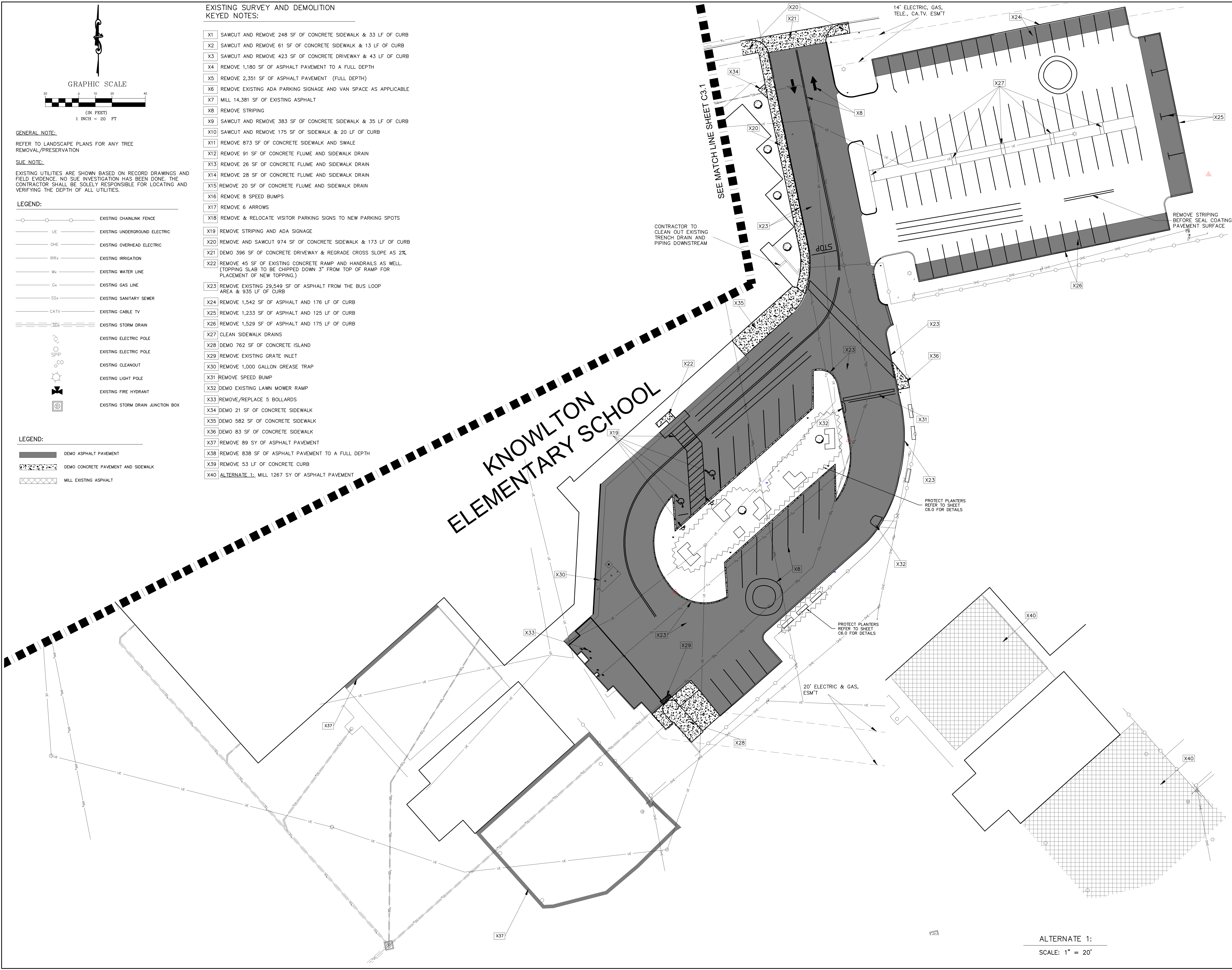


**GENERAL NOTE:**  
 REFER TO LANDSCAPE PLANS FOR ANY TREE REMOVAL/PRESERVATION

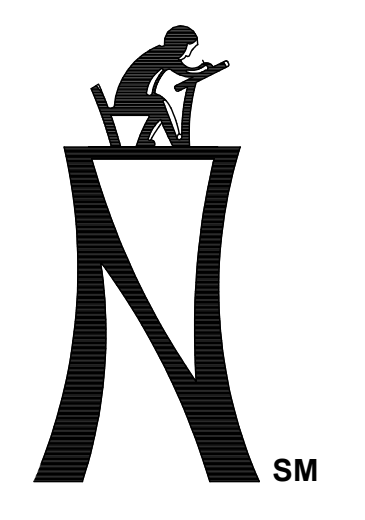
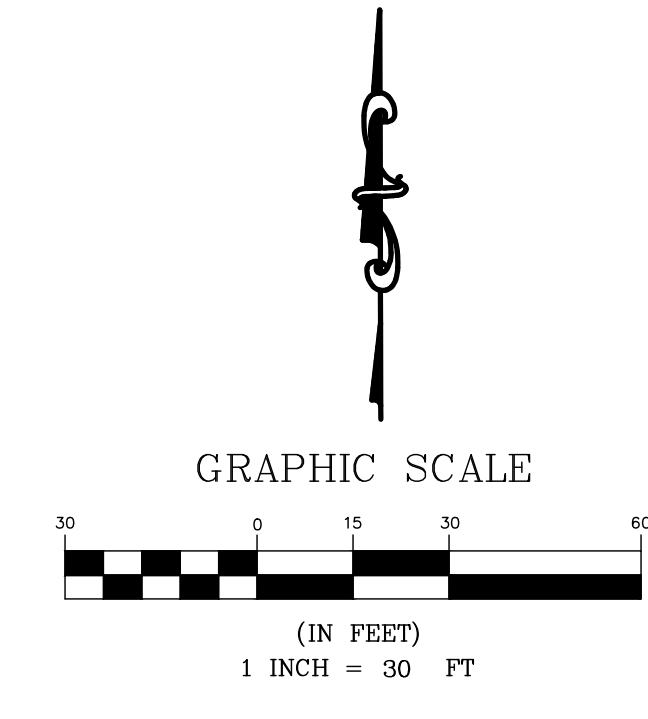
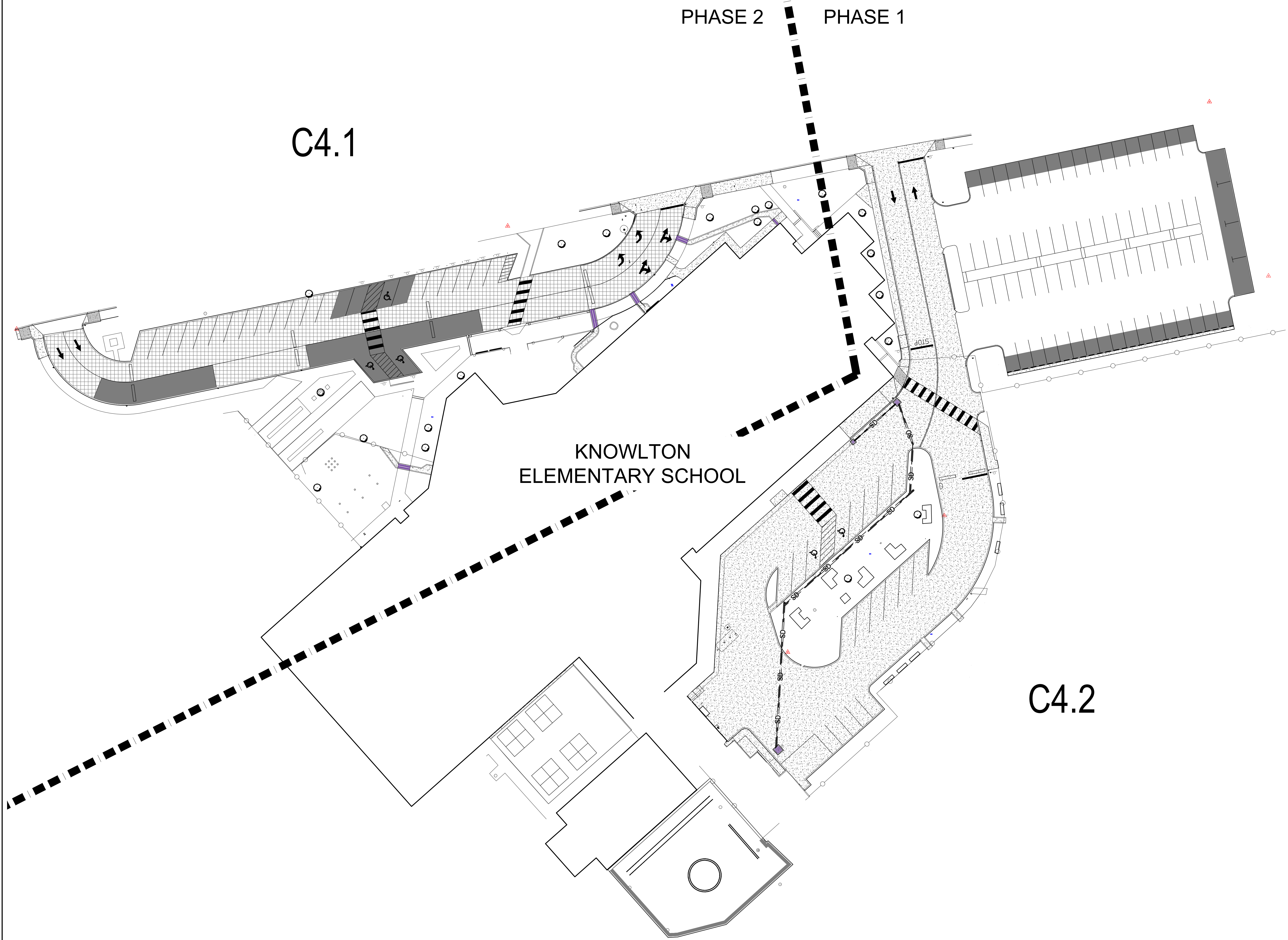
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- LEGEND:**
- EXISTING CHAINLINK FENCE
  - EXISTING UNDERGROUND ELECTRIC
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING IRRIGATION
  - EXISTING WATER LINE
  - EXISTING GAS LINE
  - EXISTING SANITARY SEWER
  - EXISTING CABLE TV
  - EXISTING STORM DRAIN
  - EXISTING ELECTRIC POLE
  - EXISTING CLEANOUT
  - EXISTING LIGHT POLE
  - EXISTING FIRE HYDRANT
  - EXISTING STORM DRAIN JUNCTION BOX

- LEGEND:**
- DEMO ASPHALT PAVEMENT
  - DEMO CONCRETE PAVEMENT AND SIDEWALK
  - MILL EXISTING ASPHALT



ALTERNATE 1:  
 SCALE: 1" = 20'



**KCI TECHNOLOGIES, INC.**  
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 REGISTRATION # 10573 / #101943-65



THE SEAL APPEARING ON  
 THIS DOCUMENT WAS  
 ISSUED TO  
 PAUL A. MARTIN, P.E.  
 NO. #105075  
 OK: JANUARY 31, 2024  
 DATE

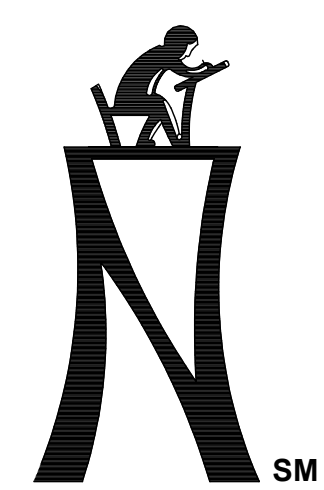


**PAVING UPGRADES AT LLOYD M.  
 KNOWLTON ES**  
 RFCSP # 2024-005  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT  
 SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 OVERALL DIMENSION PLAN

KCI JOB NO. 782203504  
 DATE: 01-31-2024  
 DRAWN BY: JAE  
 CHECKED BY: PAM  
 REVISIONS:

C4.0



**KCI TECHNOLOGIES, INC.**  
 2808 W. BITTERS ROAD, SUITE 216  
 SAN ANTONIO, TEXAS 78236  
 PHONE: (210) 641-9899  
 FAX: (210) 641-6440  
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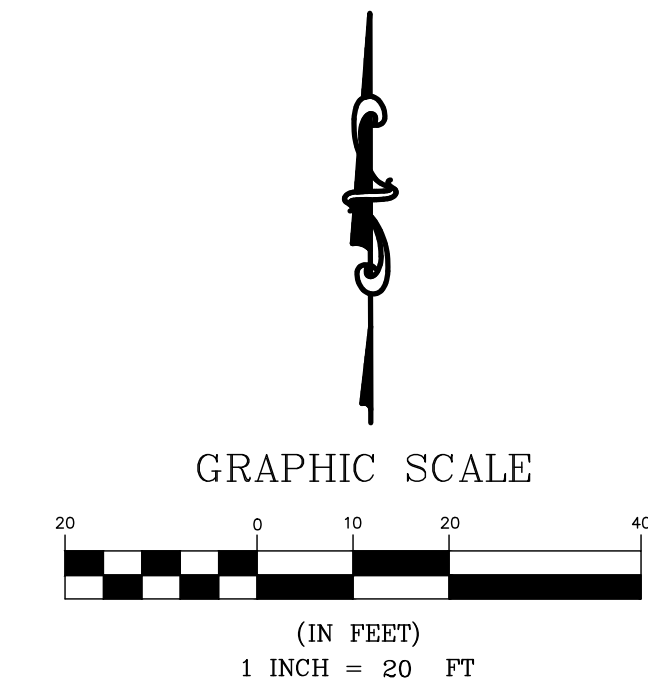


**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250  
 RFCSP # 2024-005

NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 DIMENSION PLAN NW

KCI JOB NO. 78203504  
 DATE: 01-31-2024  
 DRAWN BY: JAE  
 CHECKED BY: PAM  
 REVISIONS:

C4.1



**SUE NOTE:**  
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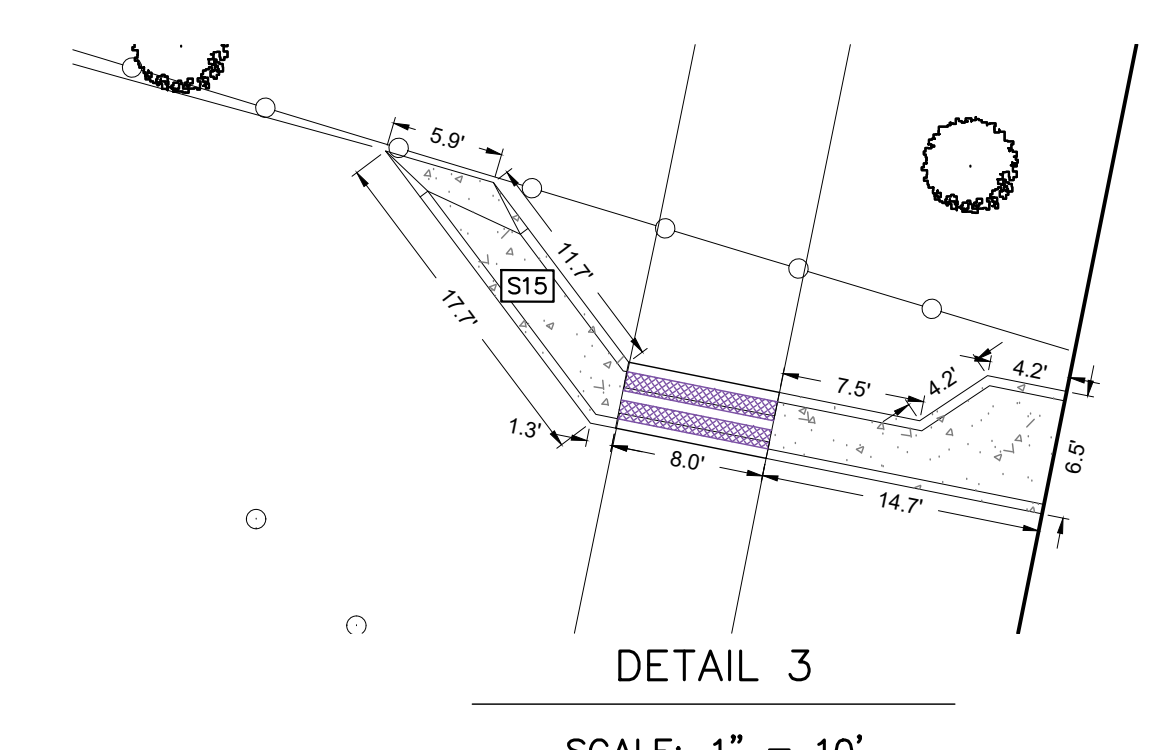
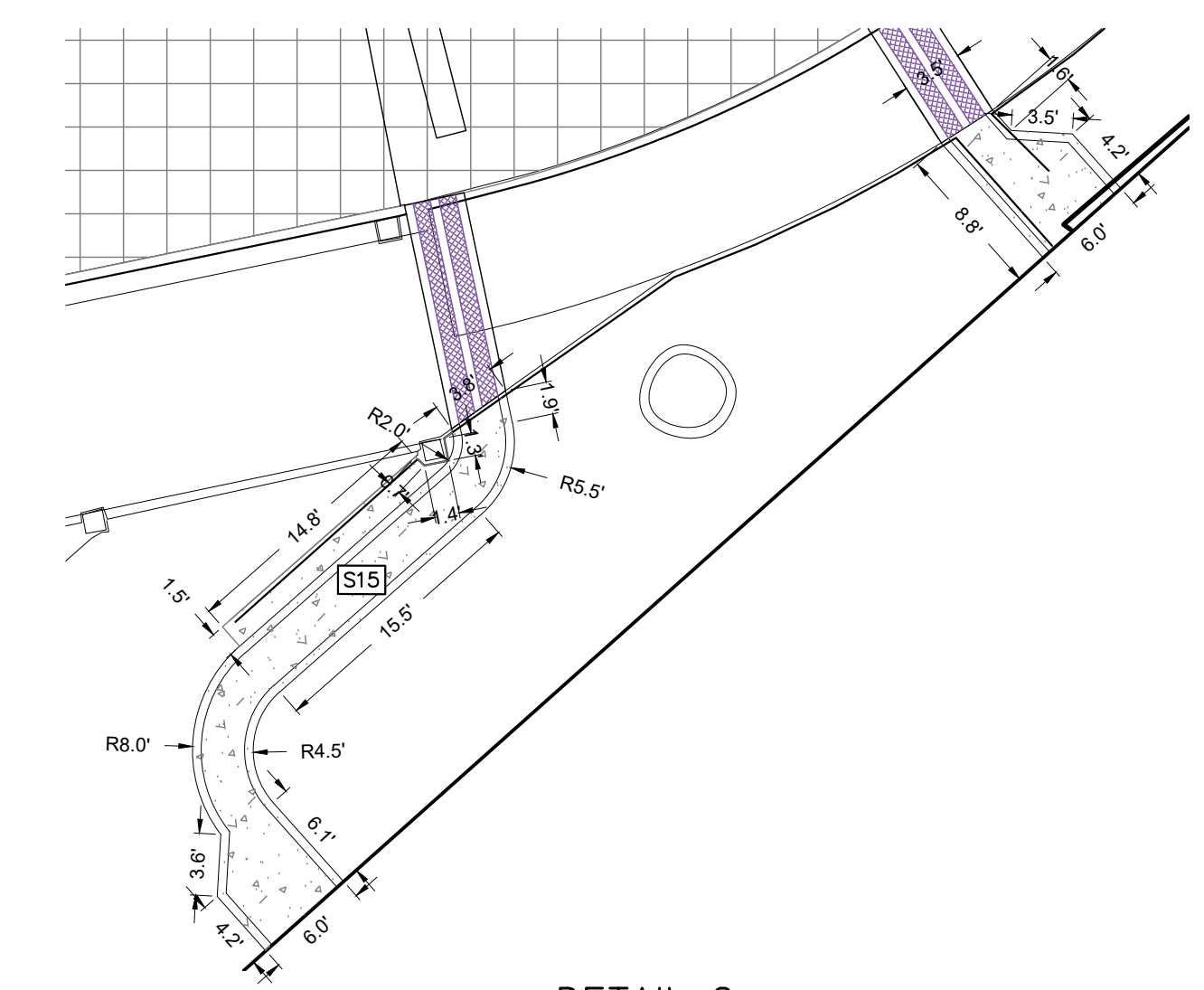
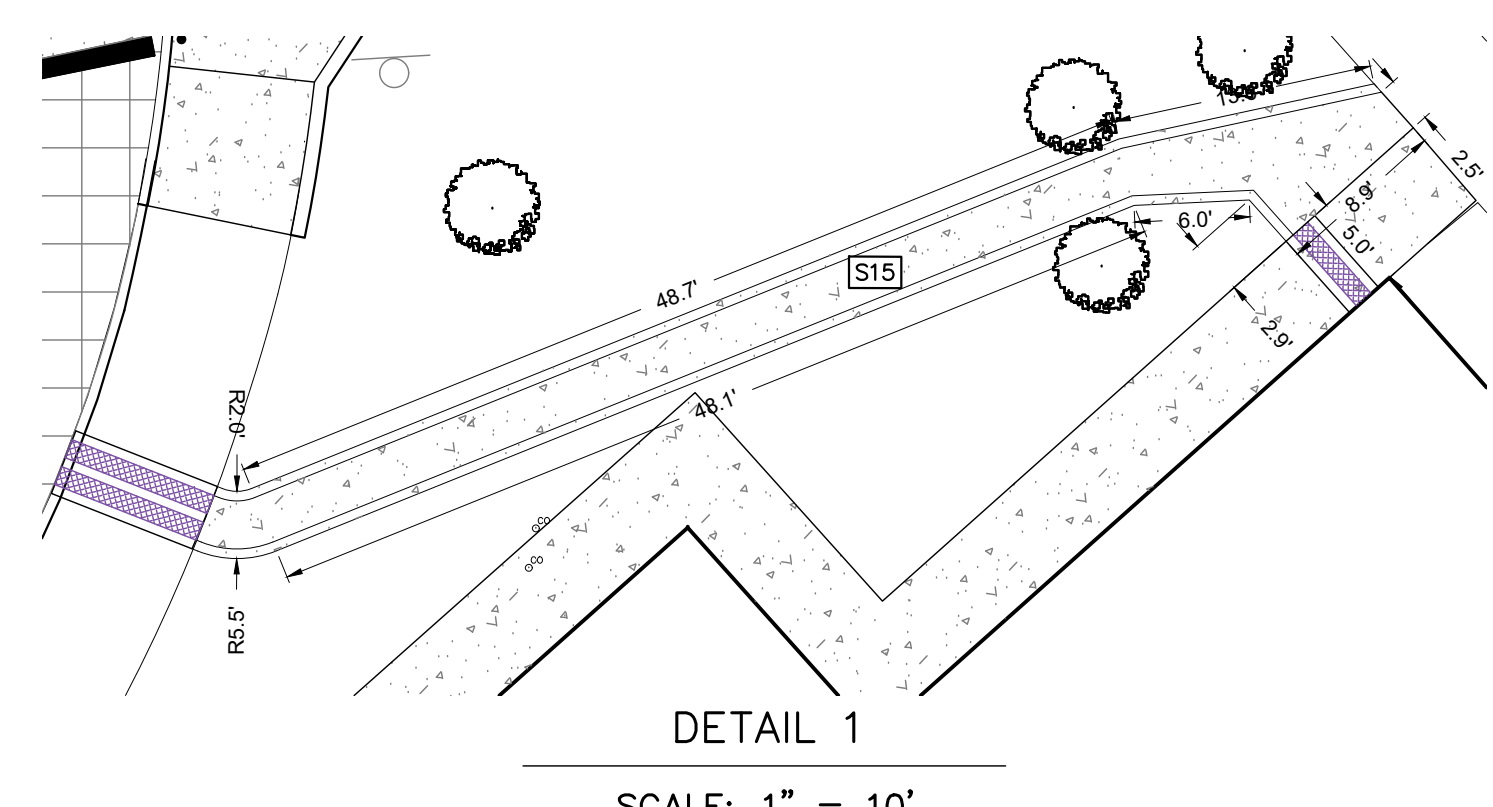
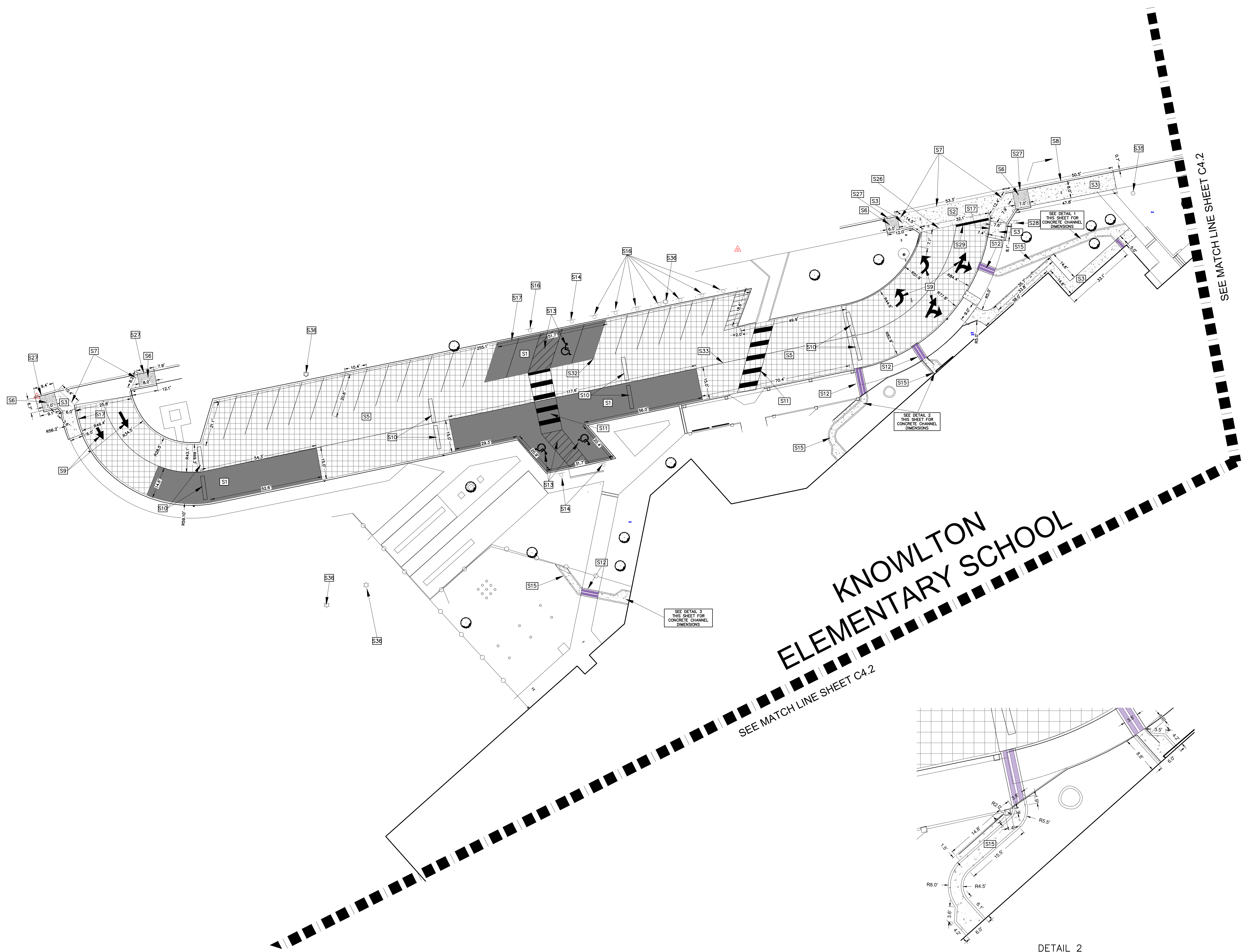
**GENERAL NOTES:**  
 1. ALL DIMENSIONS ARE FACE TO FACE OF CURB.  
 2. ALL STRIPING PAINT SHALL BE ACRYLIC EXCEPT SYMBOLS (WORDS AND ARROWS) AND CROSS WALK STRIPING IN PUBLIC R.O.W SHALL BE THERMOPLASTIC.

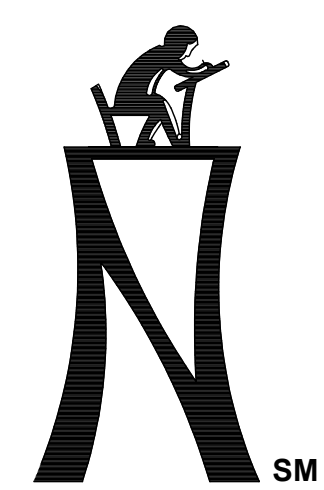
**LEGEND:**

	NEW CONCRETE PAVEMENT
	OVERLAY ASPHALT PAVEMENT
	FULL DEPTH ASPHALT RECONSTRUCTION

**SITE DIMENSION AND GRADING NOTES:**

- S1 FULL DEPTH ASPHALT PAVEMENT REPLACEMENT SEE DETAIL 1 ON SHEET C5.3
- S2 PROPOSED CONCRETE DRIVEWAY APPROACH SEE DETAIL 2 ON SHEET C5.3
- S3 PROPOSED CONCRETE SIDEWALKS SEE DETAIL 10 ON SHEET C5.3
- S4 CRACK SEAL AND COAT ASPHALT PAVEMENT (CONTRACTOR TO CLEAN AND SWEEP ASPHALT, CRACK SEAL, SEAL COAT, AND PAINT STRIPE)
- S5 OVERLAY ASPHALT PAVEMENT
- S6 PROPOSED RAMP SEE DETAIL 6 SHEET C5.7
- S7 PROPOSED FLUSH CURB SEE DETAIL ON SHEET C5.3
- S8 FULL HEIGHT CURB SEE DETAIL ON SHEET C5.4
- S9 ARROWS SEE DETAIL ON SHEET C5.7
- S10 PROPOSED SPEED BUMPS SEE DETAIL 17 ON SHEET C5.3
- S11 THERMOPLASTIC CROSS WALK SEE DETAIL 7 SHEET C5.7
- S12 CONCRETE SIDEWALK DRAIN SEE CONCRETE SIDEWALK DRAIN DETAIL 12 ON SHEET C5.3
- S13 PROPOSED ADA STRIPING SEE DETAIL 5 ON SHEET C5.7
- S14 PROPOSED SIGNAGE SEE DETAIL 1 TO 3 ON SHEET C5.7
- S15 PROPOSED CONCRETE CHANNEL SEE DETAIL 11 ON SHEET C5.3
- S16 VISITOR PARKING SIGNS TO BE ADJUSTED TO NEW PARKING SPOTS
- S17 PROPOSED FULL HEIGHT CURB SEE DETAIL 3 ON SHEET C5.3
- S18 NEW BIKE RODEO STRIPING
- S19 EXISTING POLES TO BE PROTECTED
- S20 NEW FOUR SQUARE STRIPING
- S21 NEW 186 LF OF CURB SEE DETAIL 3 ON SHEET C5.3
- S22 NEW 89 SY OF ASPHALT PAVEMENT SEE DETAIL 1 ON SHEET C5.3
- S23 74 LF OF RIBBON CURB SEE DETAIL 4 ON SHEET C5.8
- S24 ALTERNATE 1: MILL AND OVERLAY 1267 SY OF ASPHALT PAVEMENT
- S25 PROPOSED CURB SEE DETAIL 18 ON SHEET C5.3
- S26 CONCRETE/ASPHALT JUNCTION SEE DETAIL 1 ON SHEET C5.8
- S27 TRANSITION CURB SEE DETAIL 2 ON SHEET C5.8
- S28 STOP SIGN SEE DETAIL 3 ON SHEET C5.8
- S29 24 INCH WIDE WHITE LINE SOLID "STOP BAR" (REFL)
- S30 SAW TOOTH CURB SEE DETAIL 9 ON SHEET C5.3
- S31 DOUBLE YELLOW STRIPING
- S32 4" WIDE WHITE PARKING STRIPING
- S33 6" WIDE WHITE CENTERLINE STRIPING
- S34 CONTRACTOR TO INSTALL NEW GREASE TRAP AS PER NISD STANDARDS
- S35 ALTERNATE 2: PAINT EXISTING POLES, KEEP EXISTING FIXTURE HEADS, DO NOT PAINT THE FIXTURE HEADS, FIX THE GROUTING UNDERNEATH THE BASE PLATES, AND REPLACE THE HANDHOLE COVERS THAT ARE MISSING.
- S36 ALTERNATE 2: PAINT EXISTING POLES, KEEP EXISTING FIXTURE HEADS, DO NOT PAINT FIXTURE HEADS.
- S37 ALTERNATE 2: FIX GROUTING UNDERNEATH THE BASE PLATES AND REPLACE HANDHOLE COVERS.





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 SAN ANTONIO, TEXAS 78246  
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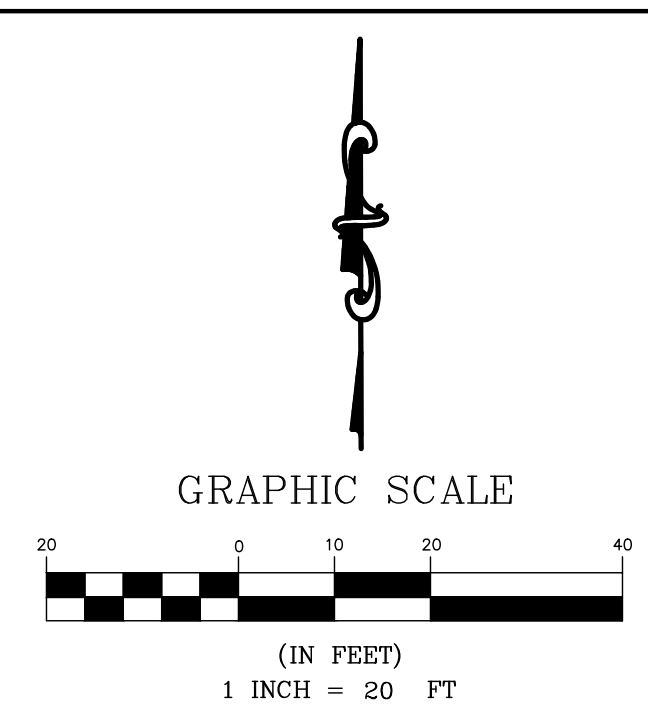
THE SEAL APPEARING ON THIS DOCUMENT WAS OBTAINED BY PAUL A. MARTIN, P.E. NO. #105075 ON JANUARY 31, 2024 DATE

**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
 RFCSP # 2024-005  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 DIMENSION PLAN NE

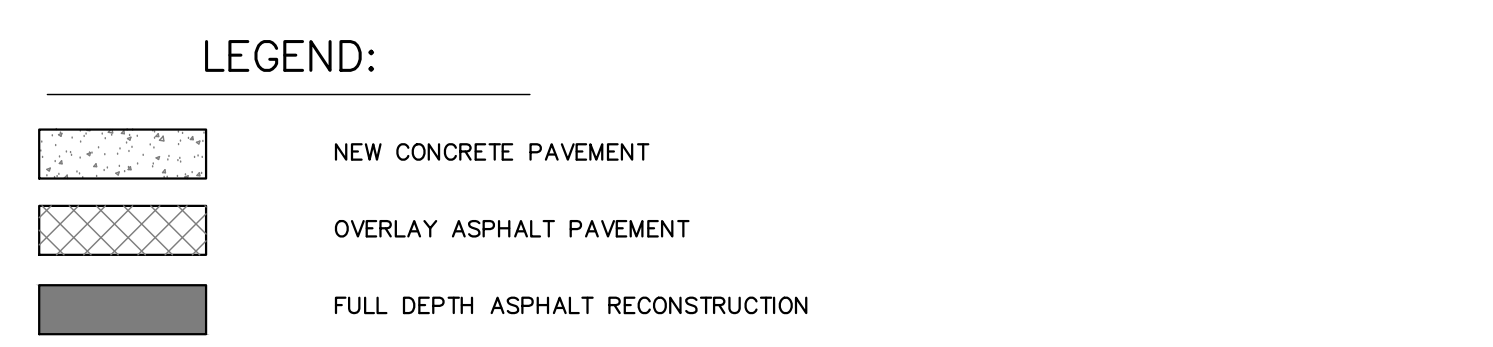
KCI JOB NO. 78203504  
 DATE: 01-31-2024  
 DRAWN BY: ME  
 CHECKED BY: PAM  
 REVISIONS:

C4.2



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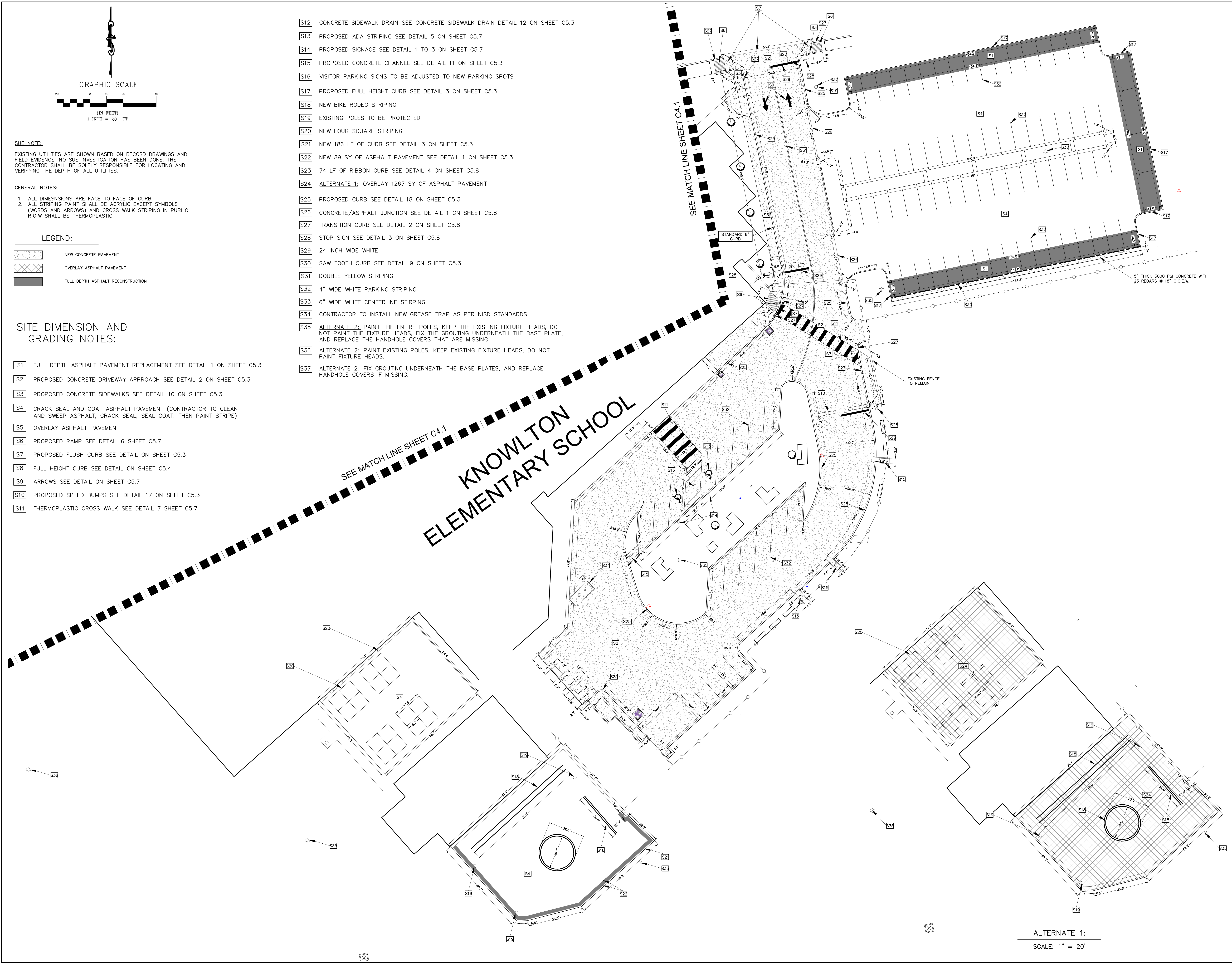
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**SITE DIMENSION AND GRADING NOTES:**

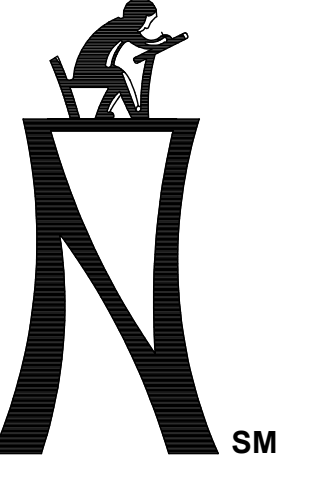
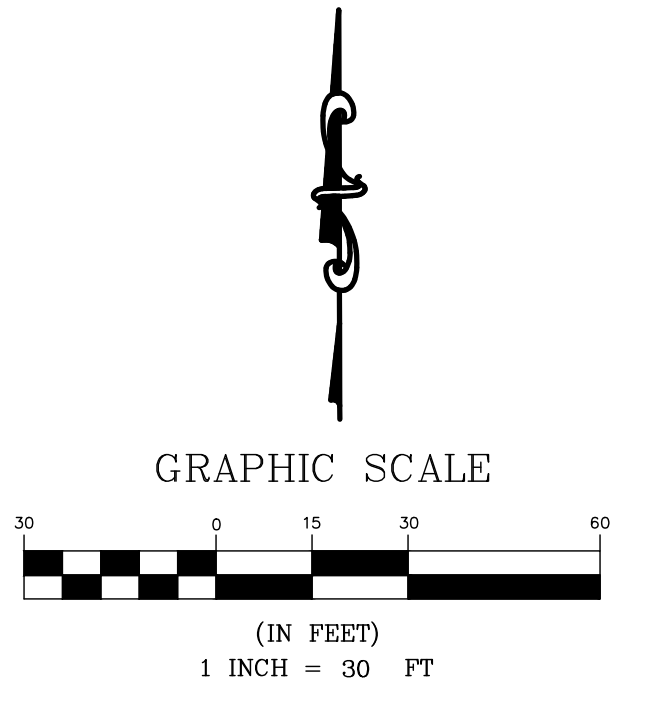
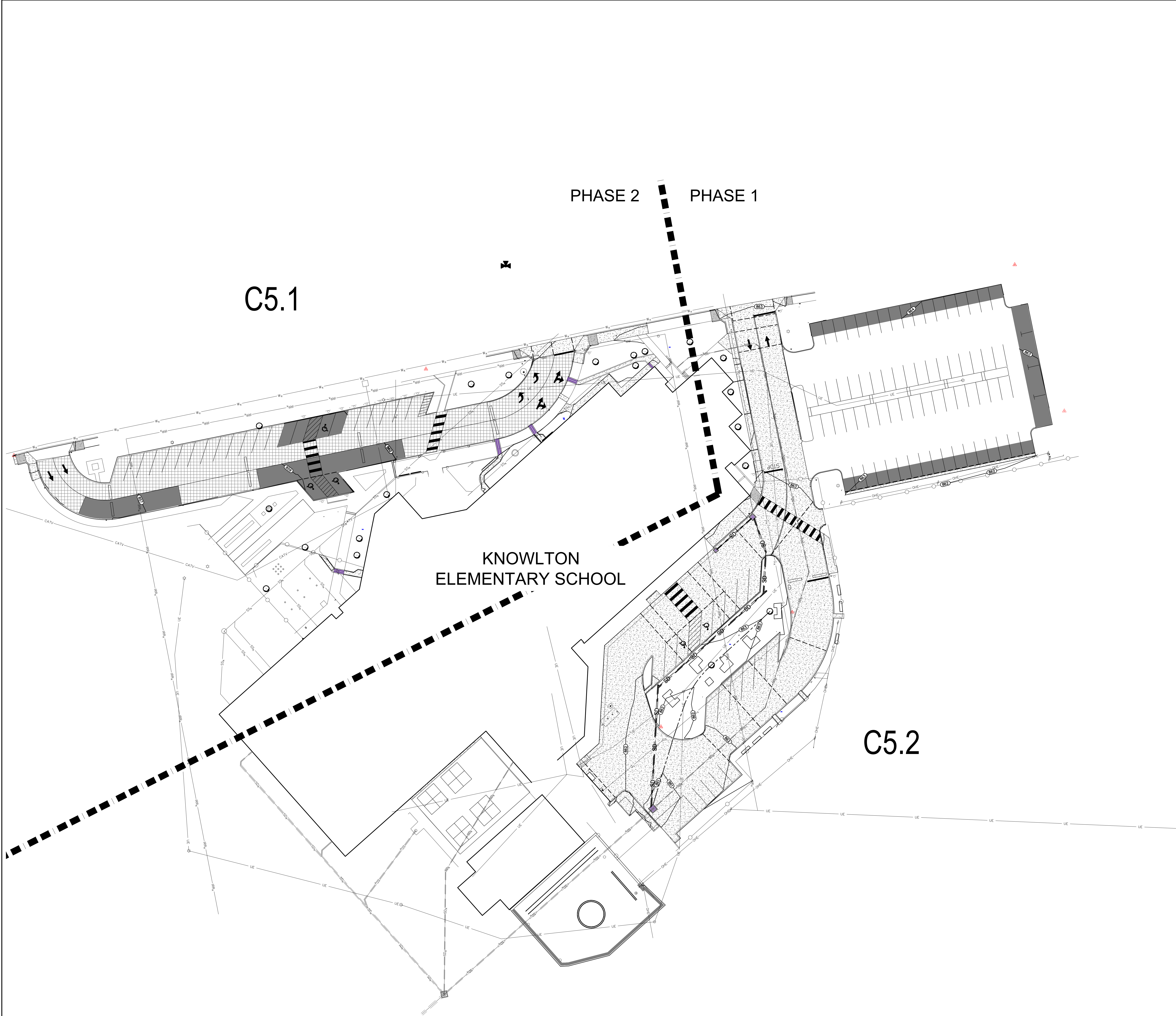
- S1 FULL DEPTH ASPHALT PAVEMENT REPLACEMENT SEE DETAIL 1 ON SHEET C5.3
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- S35 ALTERNATE 2: PAINT THE ENTIRE POLES, KEEP THE EXISTING FIXTURE HEADS, DO NOT PAINT THE FIXTURE HEADS, FIX THE GROUTING UNDERNEATH THE BASE PLATE, AND REPLACE THE HANDHOLE COVERS THAT ARE MISSING
- S36 ALTERNATE 2: PAINT EXISTING POLES, KEEP EXISTING FIXTURE HEADS, DO NOT PAINT FIXTURE HEADS.
- S37 ALTERNATE 2: FIX GROUTING UNDERNEATH THE BASE PLATES, AND REPLACE HANDHOLE COVERS IF MISSING.



ALTERNATE 1:  
 SCALE: 1" = 20'





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 SAN ANTONIO, TEXAS 78236  
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 REGISTRATION # 10573 / #101943-65



THE SEAL APPEARING ON  
 THIS DOCUMENT WAS  
 FORWARDED BY  
 PAUL A. MARTIN, P.E.  
 NO. #105075  
 OK JANUARY 31, 2024  
 DATE

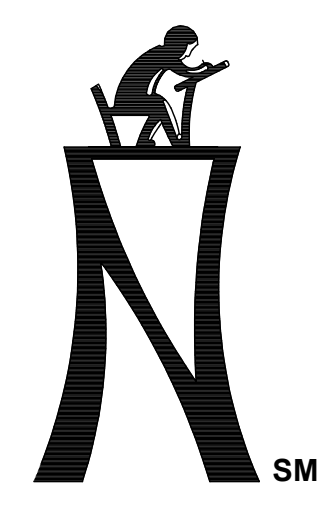
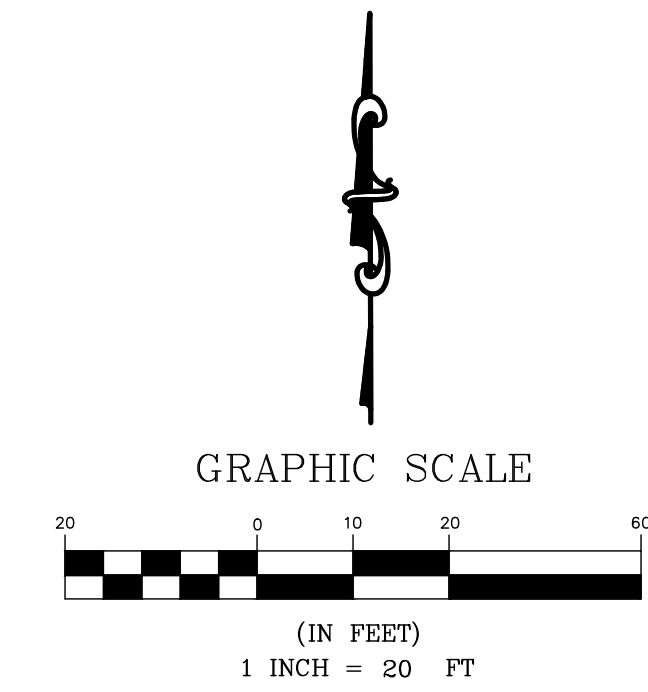


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 KNOWLTON ES**  
 RFCSP # 2024-005  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT  
 SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 OVERALL GRADING PLAN

KCI JOB NO. 782203504  
 DATE 01-31-2024  
 DRAWN BY JAE  
 CHECKED BY PAM  
 REVISIONS:

C5.0



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THE SEAL APPEARING ON THIS DOCUMENT WAS ISSUED TO: PAUL A. MARTIN, P.E. NO. #105075  
 OK: JANUARY 31, 2024 DATE

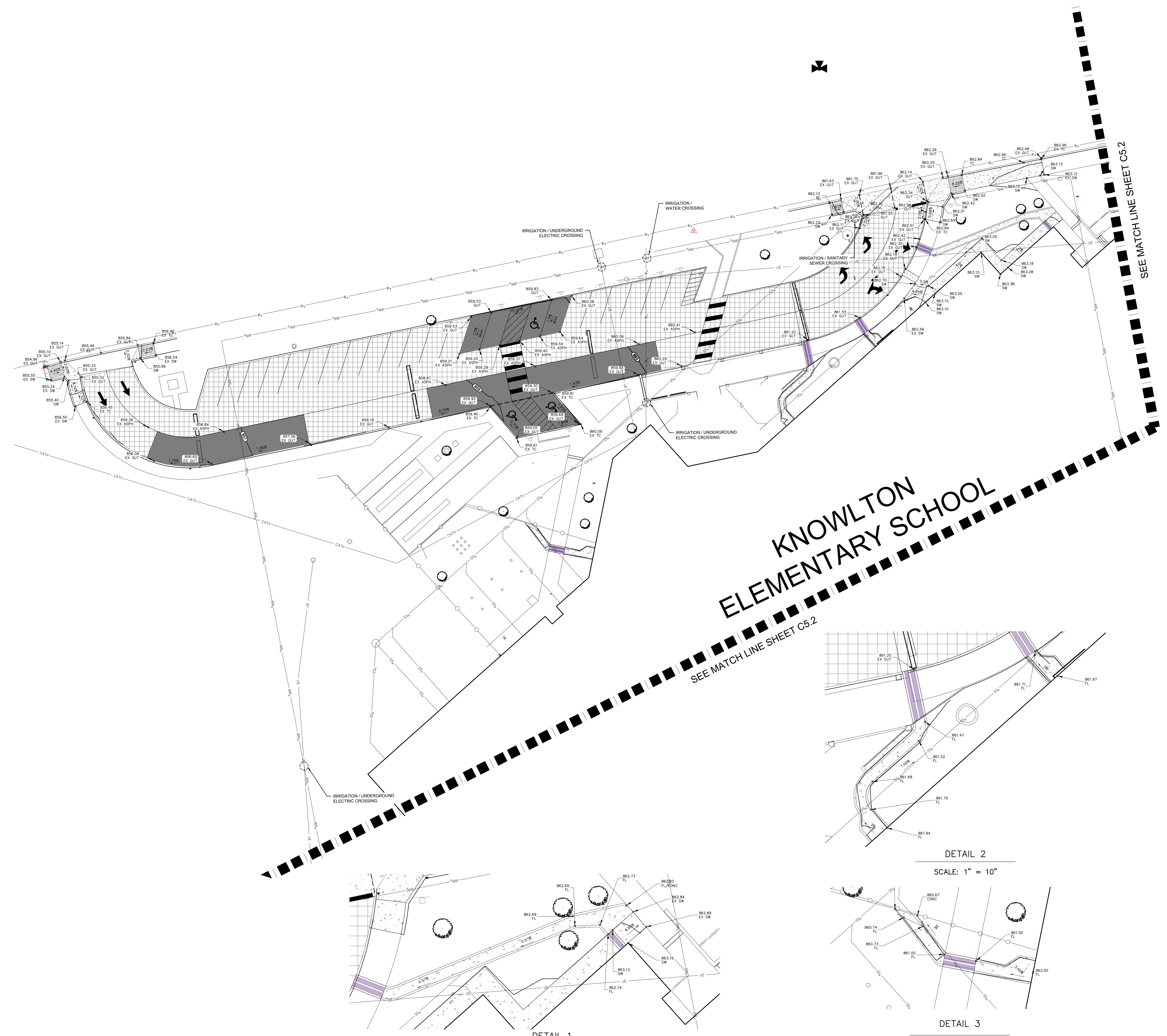


**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
 RFCSP # 2024-005  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 GRADING PLAN - NW

KCI JOB NO. 78203504  
 DATE: 01-31-2024  
 DRAWN BY: JAE  
 CHECKED BY: JAE  
 REVISIONS: PAM

C5.1



**LEGEND:**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- BREAKLINE
- SWALE
- ASPH TOP OF ASPHALT
- CONC CONCRETE
- EC EDGE OF CONCRETE
- EX EXISTING
- FG FINISH GROUND
- FL FLOWLINE
- FF FINISH FLOOR
- GUT GUTTER
- INV INVERT
- SW SIDEWALK
- SLPB SLOPE BOTTOM
- SLPT SLOPE TOP
- TC TOP OF CURB

**PLAN NOTES**

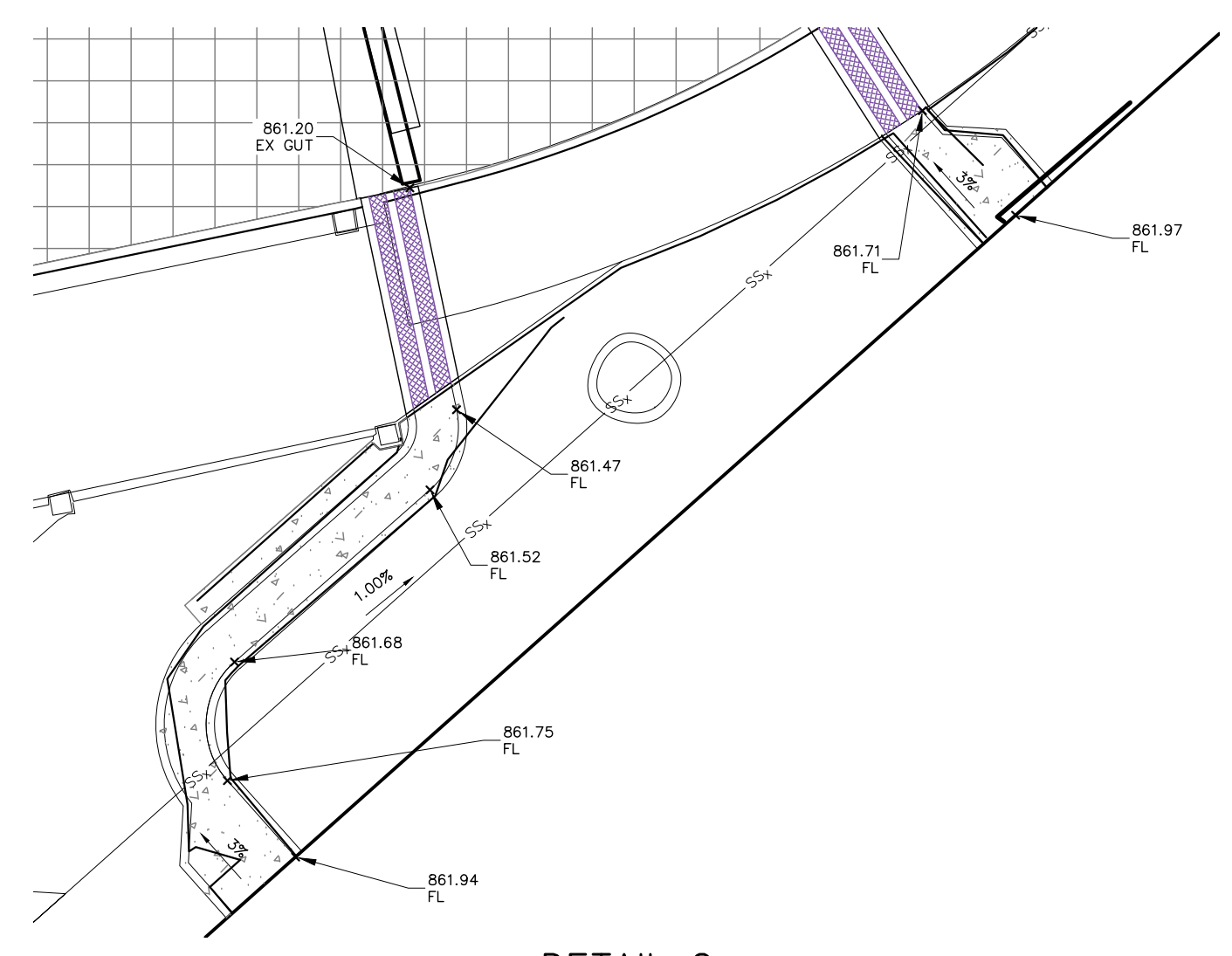
- ① CAUTION: UTILITY CROSSING.
- ② REFER TO GEOTECHNICAL REPORT FOR JOINT SPACING AT THE CONCRETE PAVEMENT AND AT SIDEWALK.

**SUE NOTE:**

EXISTING UTILITIES ARE SHOWN BASED ON RECORD DRAWINGS AND FIELD EVIDENCE. NO SUE INVESTIGATION HAS BEEN DONE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND VERIFYING THE DEPTH OF ALL UTILITIES.

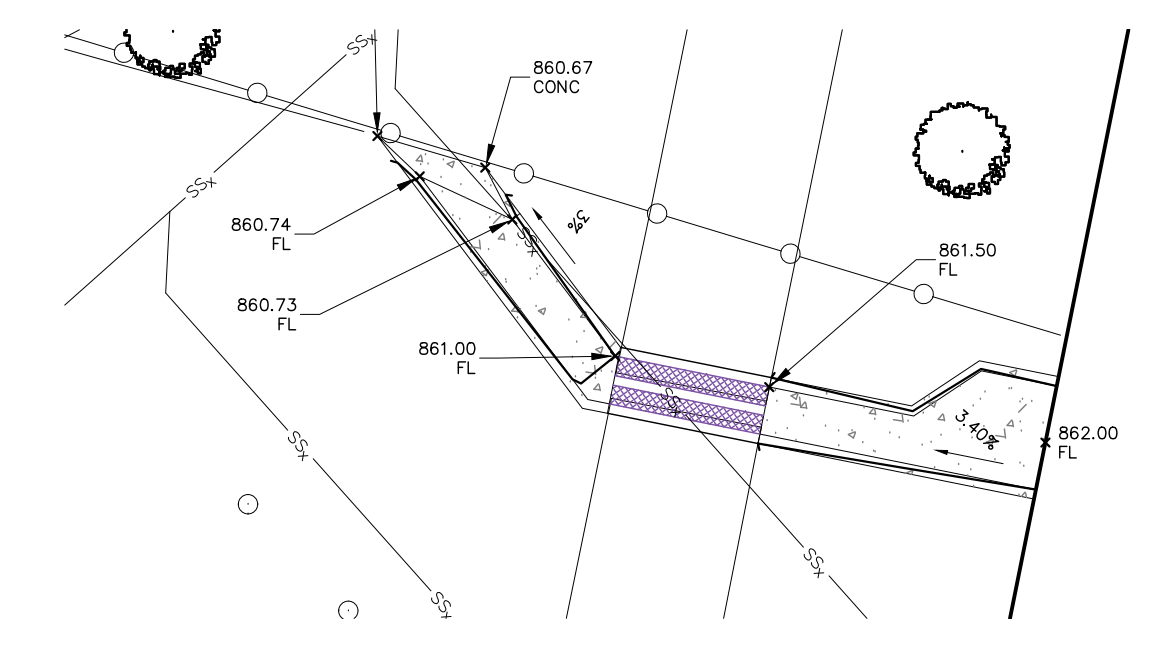
**LEGEND:**

- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- IRR- EXISTING IRRIGATION
- W- EXISTING WATER LINE
- G- EXISTING GAS LINE
- SS- EXISTING SANITARY SEWER
- CATV- EXISTING CABLE TV
- EXISTING STORM DRAIN
- EXISTING ELECTRIC POLE
- EXISTING ELECTRIC POLE
- EXISTING CLEANOUT
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- NEW CONCRETE PAVEMENT
- MILL AND OVERLAY ASPHALT PAVEMENT
- FULL DEPTH ASPHALT RECONSTRUCTION



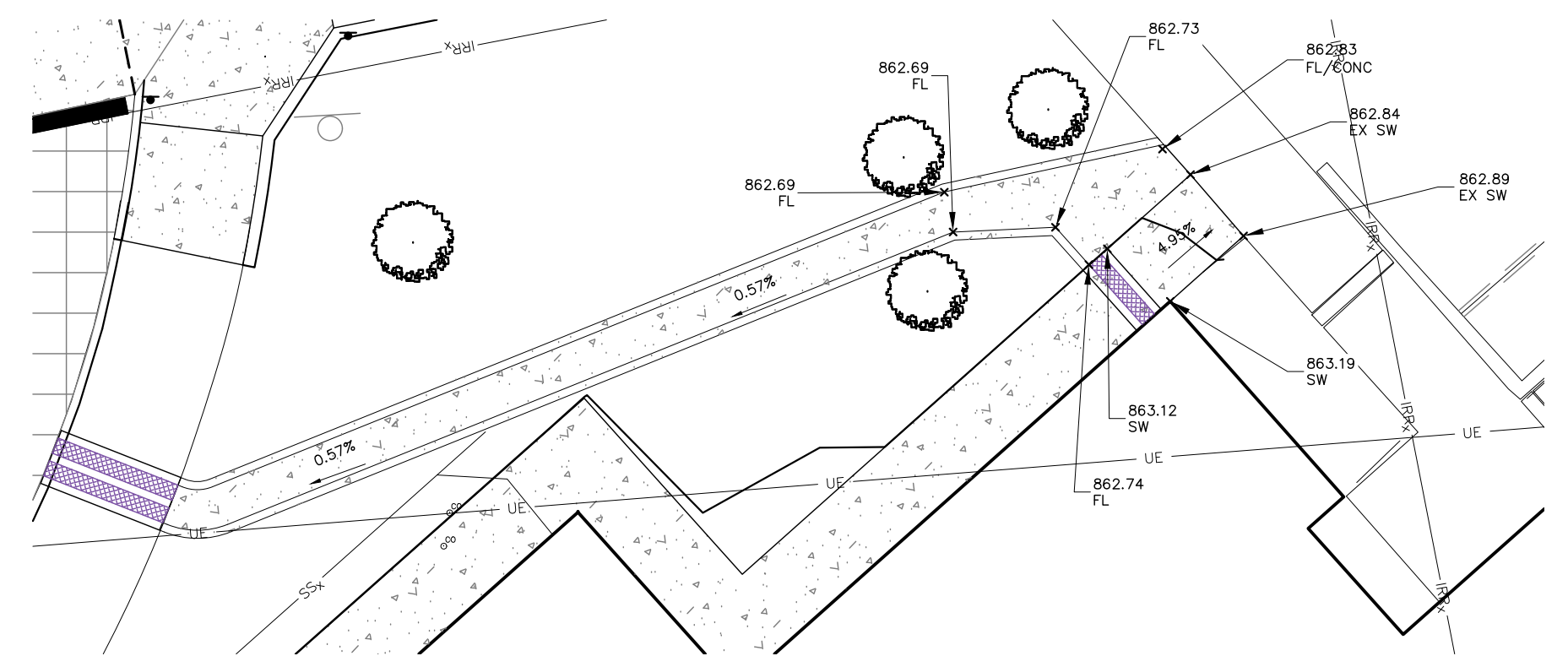
DETAIL 2

SCALE: 1" = 10"



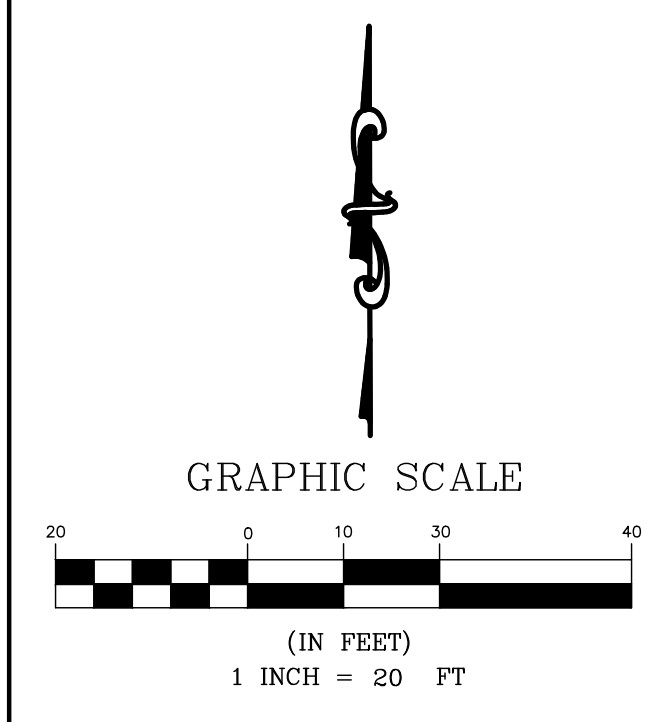
DETAIL 3

SCALE: 1" = 10"



DETAIL 1

SCALE: 1" = 10"



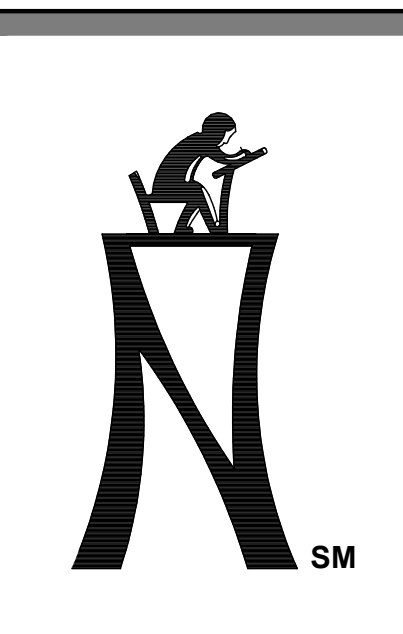
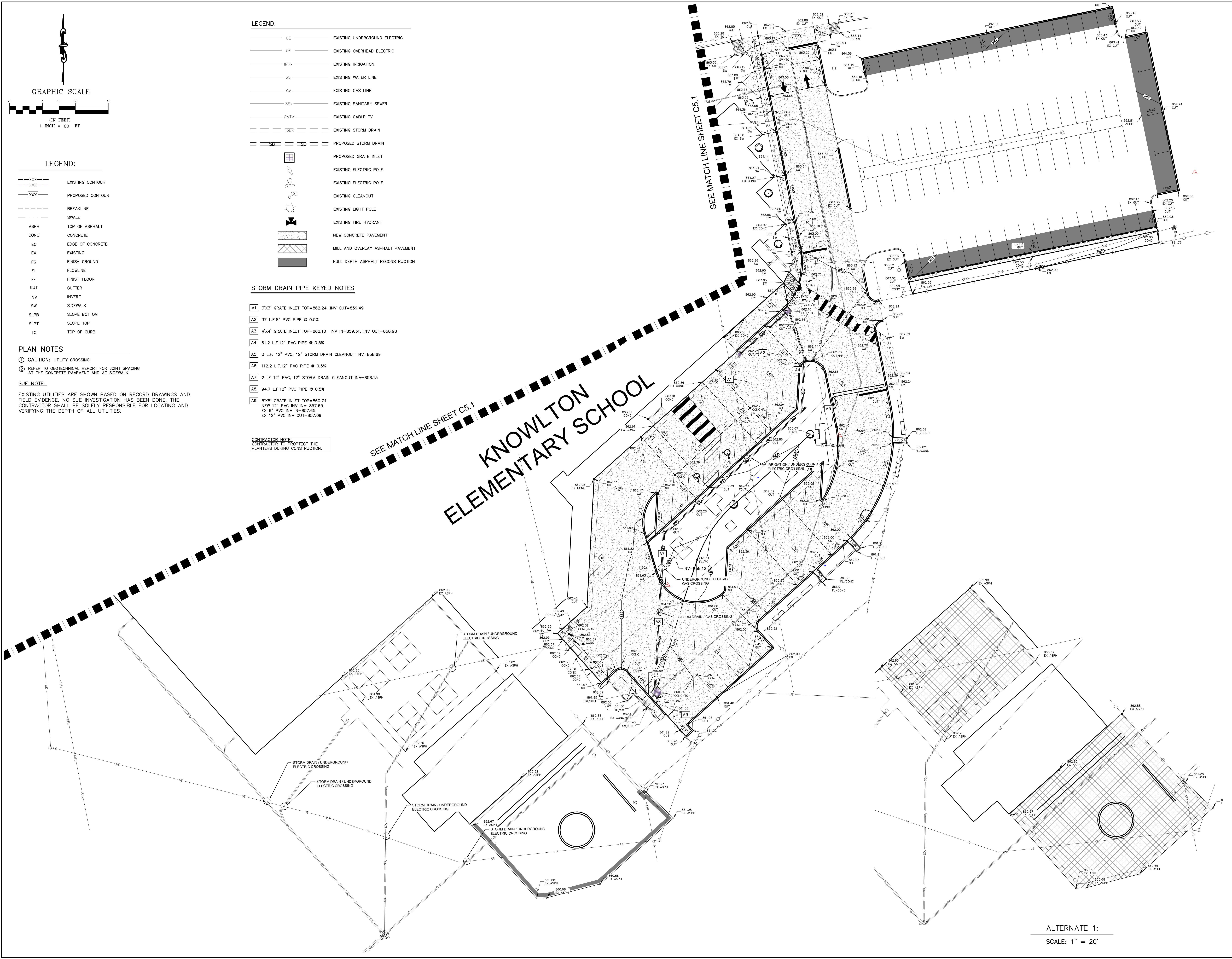
- LEGEND:**
- X---X---X--- EXISTING CONTOUR
  - XXX--- PROPOSED CONTOUR
  - - - - - BREAKLINE
  - - - - - SWALE
  - ASPH TOP OF ASPHALT
  - CONC CONCRETE
  - EC EDGE OF CONCRETE
  - EX EXISTING
  - FG FINISH GROUND
  - FL FLOWLINE
  - FF FINISH FLOOR
  - GUT GUTTER
  - INV INVERT
  - SW SIDEWALK
  - SUBP SLOPE BOTTOM
  - SUPT SLOPE TOP
  - TC TOP OF CURB

- LEGEND:**
- UE --- EXISTING UNDERGROUND ELECTRIC
  - OE --- EXISTING OVERHEAD ELECTRIC
  - IRRx --- EXISTING IRRIGATION
  - Wx --- EXISTING WATER LINE
  - Gx --- EXISTING GAS LINE
  - Ssx --- EXISTING SANITARY SEWER
  - CATV --- EXISTING CABLE TV
  - SD --- EXISTING STORM DRAIN
  - SD --- PROPOSED STORM DRAIN
  - GR --- PROPOSED GRATE INLET
  - EP --- EXISTING ELECTRIC POLE
  - SPP --- EXISTING ELECTRIC POLE
  - CO --- EXISTING CLEANOUT
  - LP --- EXISTING LIGHT POLE
  - FH --- EXISTING FIRE HYDRANT
  - NC --- NEW CONCRETE PAVEMENT
  - MA --- MILL AND OVERLAY ASPHALT PAVEMENT
  - FA --- FULL DEPTH ASPHALT RECONSTRUCTION

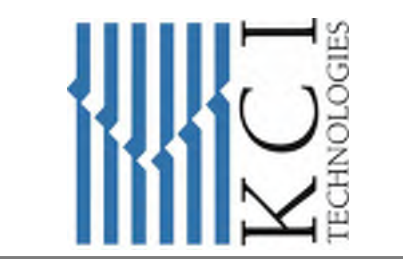
- STORM DRAIN PIPE KEYED NOTES**
- A1 3'X3' GRATE INLET TOP=862.24, INV OUT=859.49
  - A2 37 L.F. 8" PVC PIPE @ 0.5%
  - A3 4'X4' GRATE INLET TOP=862.10 INV IN=859.31, INV OUT=858.98
  - A4 61.2 L.F. 12" PVC PIPE @ 0.5%
  - A5 3 L.F. 12" PVC, 12" STORM DRAIN CLEANOUT INV=858.69
  - A6 112.2 L.F. 12" PVC PIPE @ 0.5%
  - A7 2 L.F. 12" PVC, 12" STORM DRAIN CLEANOUT INV=858.13
  - A8 94.7 L.F. 12" PVC PIPE @ 0.5%
  - A9 5'X5' GRATE INLET TOP=860.74 NEW 12" PVC INV IN= 857.85 EX 6" PVC INV IN=857.85 EX 12" PVC INV OUT=857.09

**CONTRACTOR NOTE:**  
CONTRACTOR TO PROTECT THE PLANTERS DURING CONSTRUCTION.

- PLAN NOTES**
- 1 CAUTION: UTILITY CROSSING.
  - 2 REFER TO GEOTECHNICAL REPORT FOR JOINT SPACING AT THE CONCRETE PAVEMENT AND AT SIDEWALK.
- SUE NOTE:**  
EXISTING UTILITIES ARE SHOWN BASED ON RECORD DRAWINGS AND FIELD EVIDENCE. NO SUE INVESTIGATION HAS BEEN DONE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND VERIFYING THE DEPTH OF ALL UTILITIES.



**KCI TECHNOLOGIES, INC.**  
2808 W BITTERS ROAD, SUITE 218  
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FAX: (210) 641-6440  
REGISTRATION # 10273 / #101943-65



THE SEAL APPEARING ON THIS DOCUMENT WAS OBTAINED BY PAUL A. MARTIN, P.E. NO. #108070 ON JANUARY 31, 2024 DATE

**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
RFCSP # 2024-005  
9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

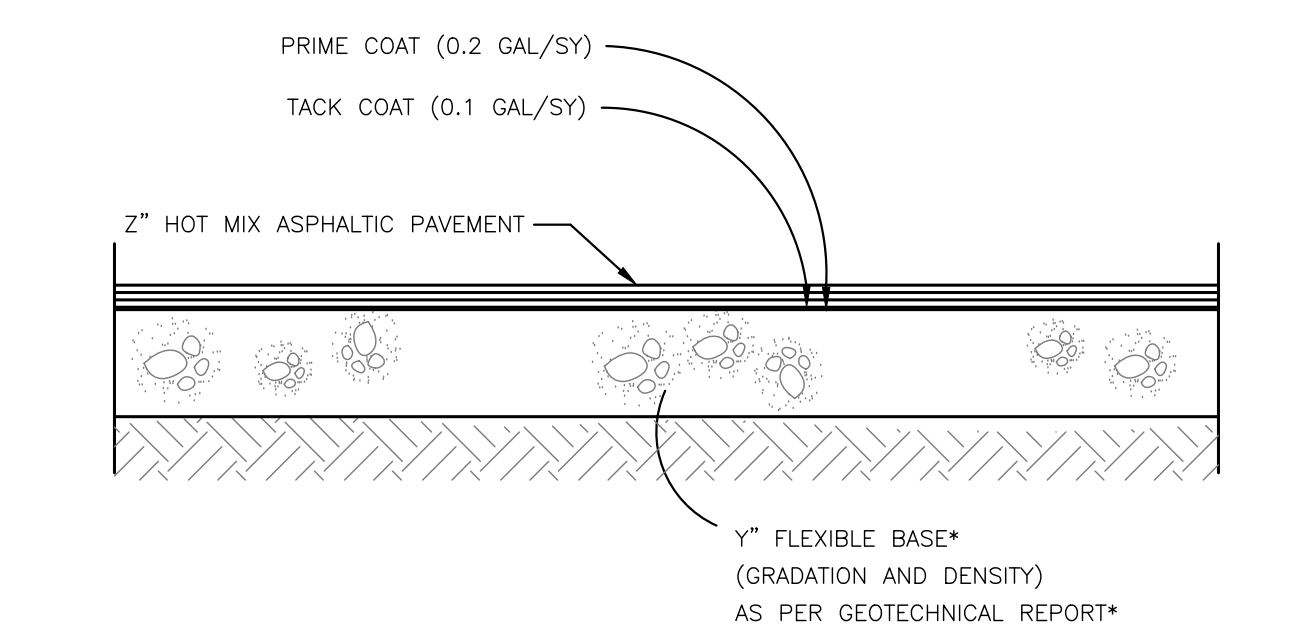
**NORTSIDE INDEPENDENT SCHOOL DISTRICT**  
5900 EVERS ROAD, BUILDING C  
SAN ANTONIO, TX 78238

**GRADING AND STORM DRAIN PLAN - 1E**

KCI JOB NO. 78203504  
DATE 01-31-2024  
DRAWN BY JAE  
CHECKED BY PAM  
REVISIONS:

C5.2

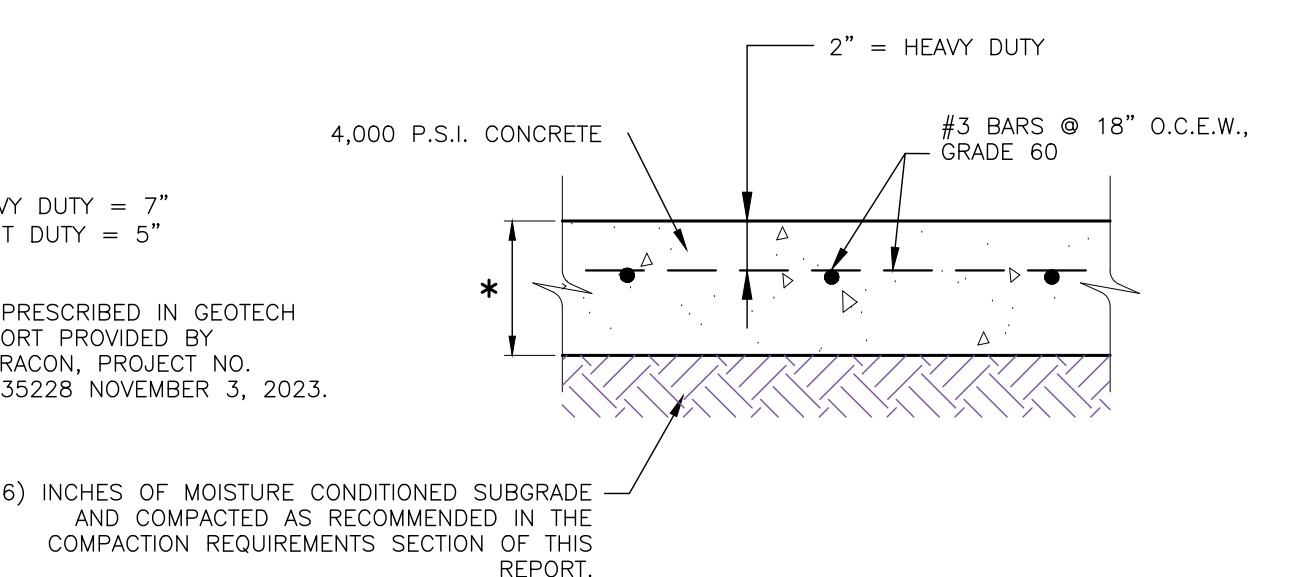
ALTERNATE 1:  
SCALE: 1" = 20'



TRAFFIC TYPE	1" FLEXIBLE BASE	2" HOT MIX ASPHALTIC PAVEMENT TYPE "D"	MOISTURE CONDITIONED SUBGRADE
LIGHT DUTY PAVEMENT	8"	2"	6"
HEAVY DUTY PAVEMENT	12"	3"	6"

\* AS PRESCRIBED IN GEOTECH REPORT PROVIDED BY TERRACON, PROJECT NO. 90235228 NOVEMBER 3, 2023.

**1 HMAc PAVEMENT SECTION**  
NTS

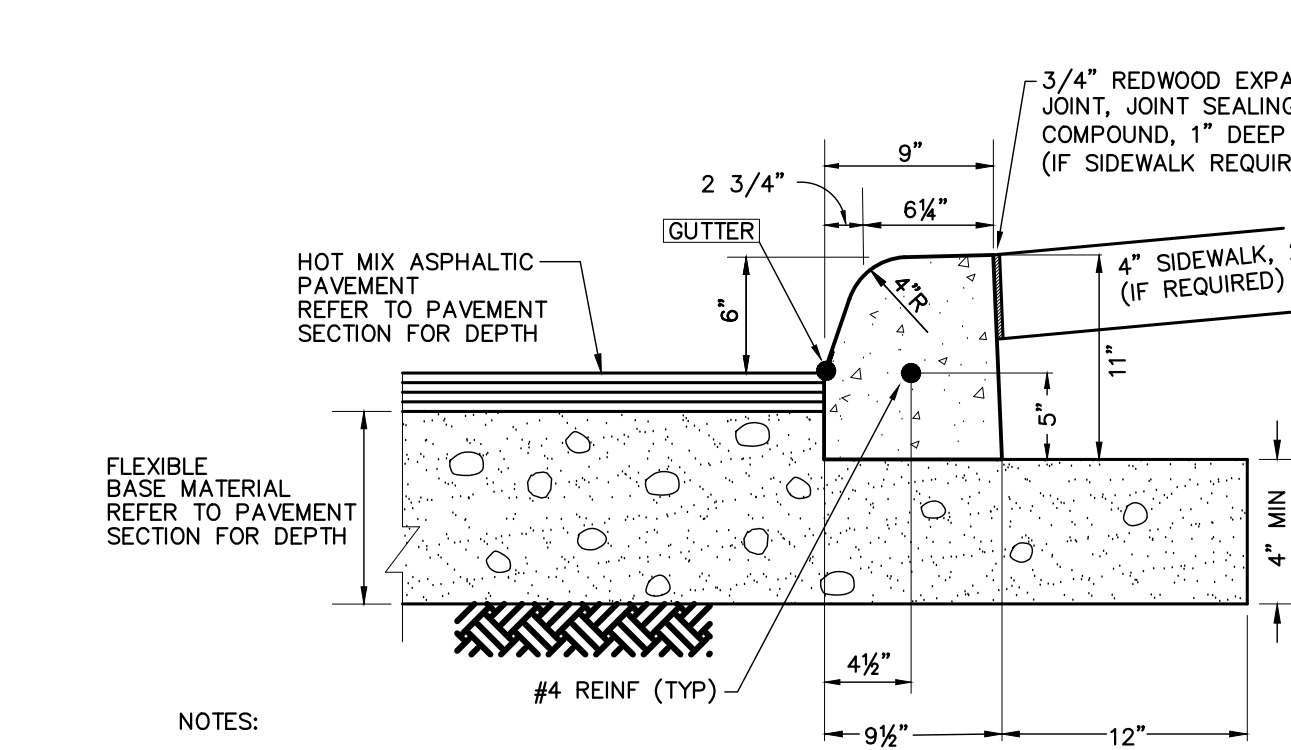


\* HEAVY DUTY = 7"  
LIGHT DUTY = 5"

\*\* AS PRESCRIBED IN GEOTECH REPORT PROVIDED BY TERRACON, PROJECT NO. 90235228 NOVEMBER 3, 2023.

\*\* SIX (6) INCHES OF MOISTURE CONDITIONED SUBGRADE AND COMPACTED AS RECOMMENDED IN THE COMPACTION REQUIREMENTS SECTION OF THIS REPORT.

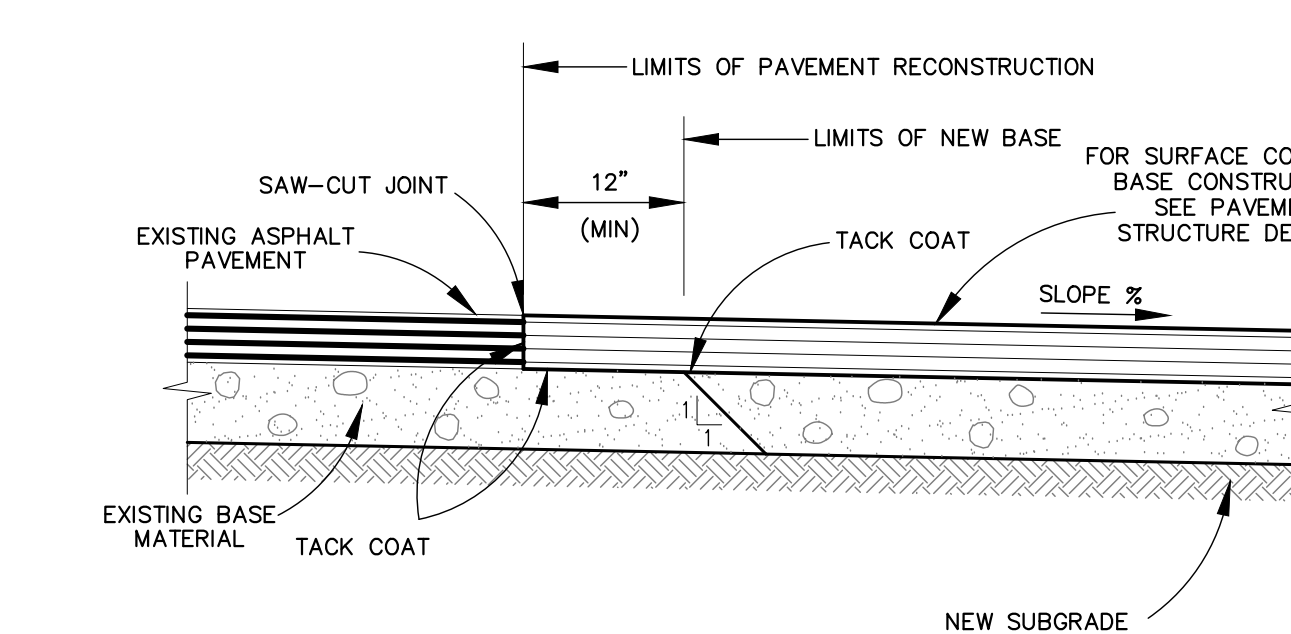
**2 CONCRETE PAVEMENT**  
NTS



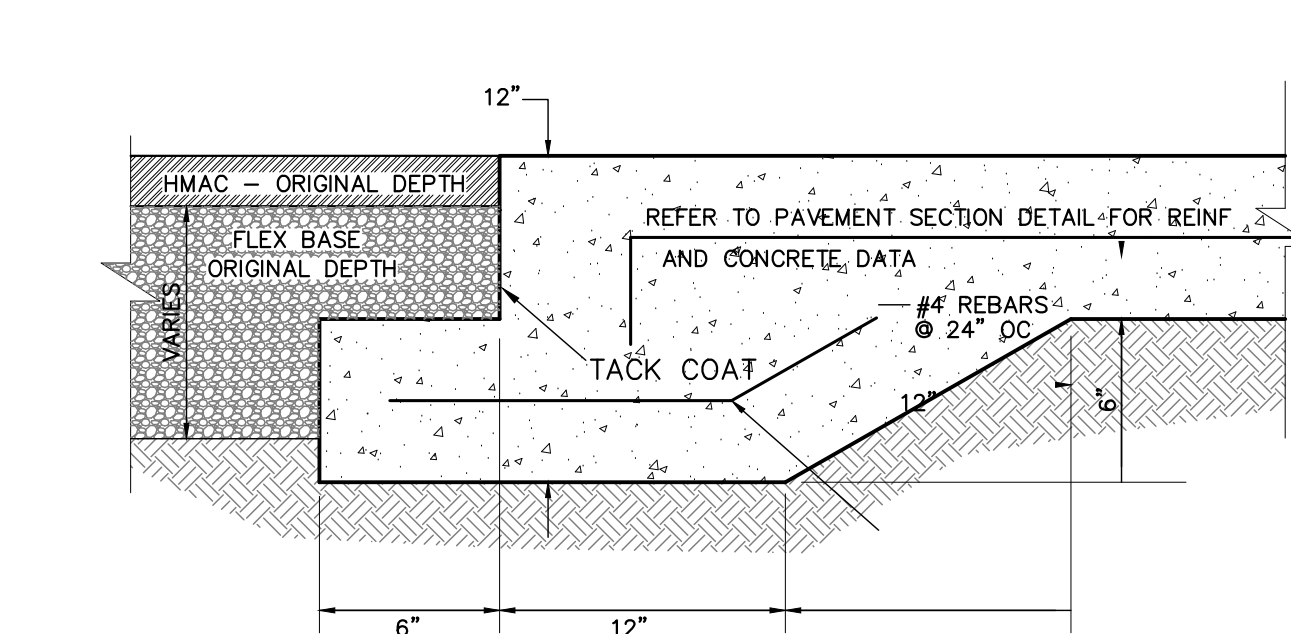
NOTES:

- 1/2" DUMMY JOINTS @ 10' ON CENTER
- 1/2" EXPANSION JOINT @ 40' ON CENTER (TYP) OR WHEN CURB ABUTS A CONCRETE STRUCTURE
- CONCRETE SHALL BE  $f_c = 3,000$  PSI, MAX 4" SLUMP (CSA PW ITEM 300 CLASS A)
- IF NO SIDEWALK REQUIRED AT BACK OF CURB BACKFILL/SLOPE AS SHOWN ON PLANS
- EXPOSED SURFACES TO BE CURED AS PER TxDOT "MS-4650"; REFER TO TxDOT APPROVED SUPPLIER MATERIALS PRODUCER LIST, CURRENT VERSION
- REINFORCING STEEL SHALL COMPLY WITH TxDOT ITEM 440.

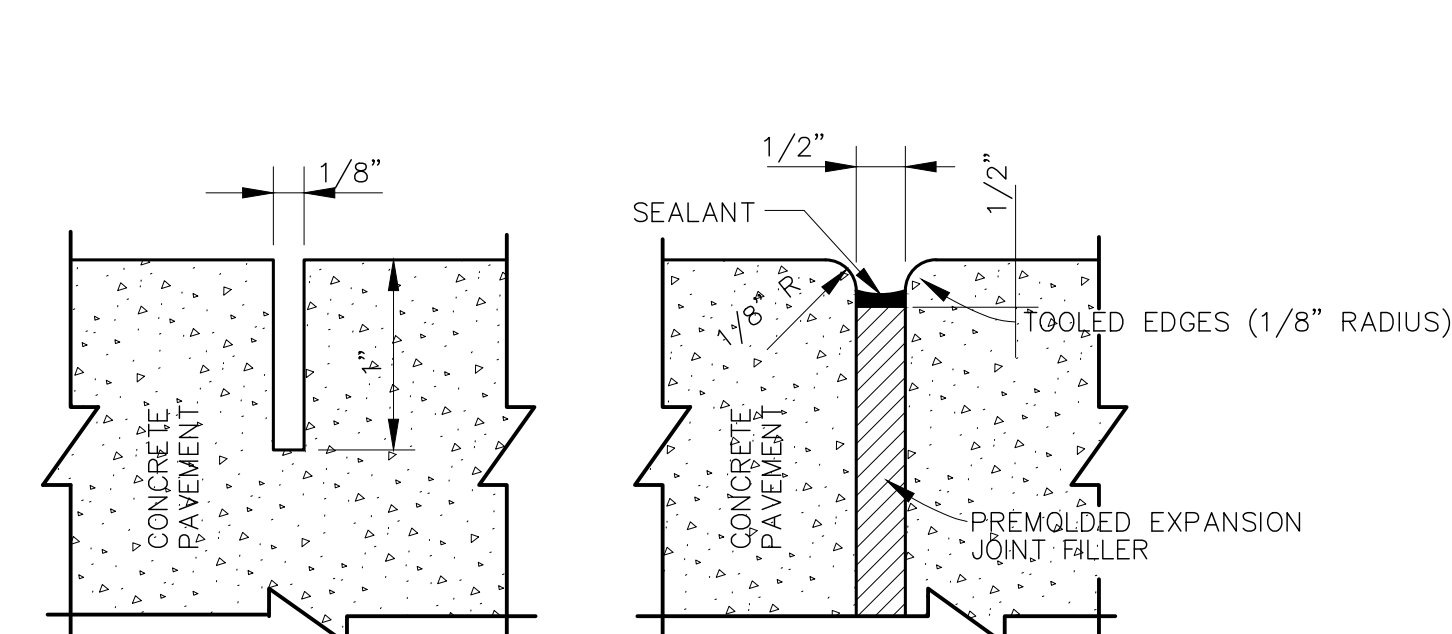
**3 MACHINE LAID CURB**  
COMMERCIAL USE  
NTS



**4 PAVEMENT JUNCTION DETAILS**  
NTS



**5 CONCRETE/ASPHALT PVMt JUNCTION DETAIL**  
NTS

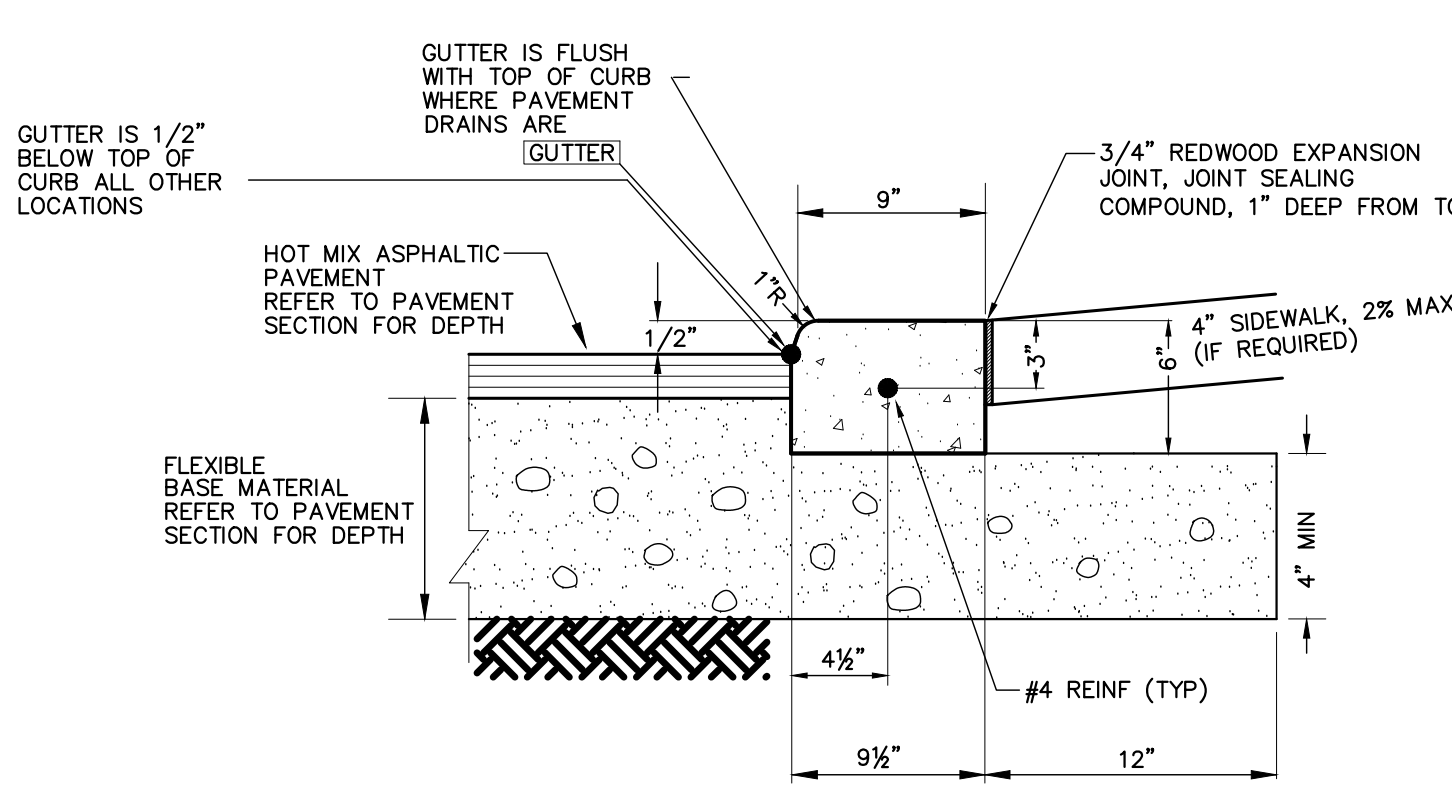


**6 JOINT DETAILS**  
NTS

NOTES:

- CONTROL JOINTS TO BE NO MORE THAN 10' APART.
- EXPANSION JOINTS TO BE LOCATED WHERE CONCRETE PAVEMENT ABUTS THE STRUCTURAL SLAB WITH #4 DOWELS SPACED AT 18" O.C. AND @ 40' INTERVALS.

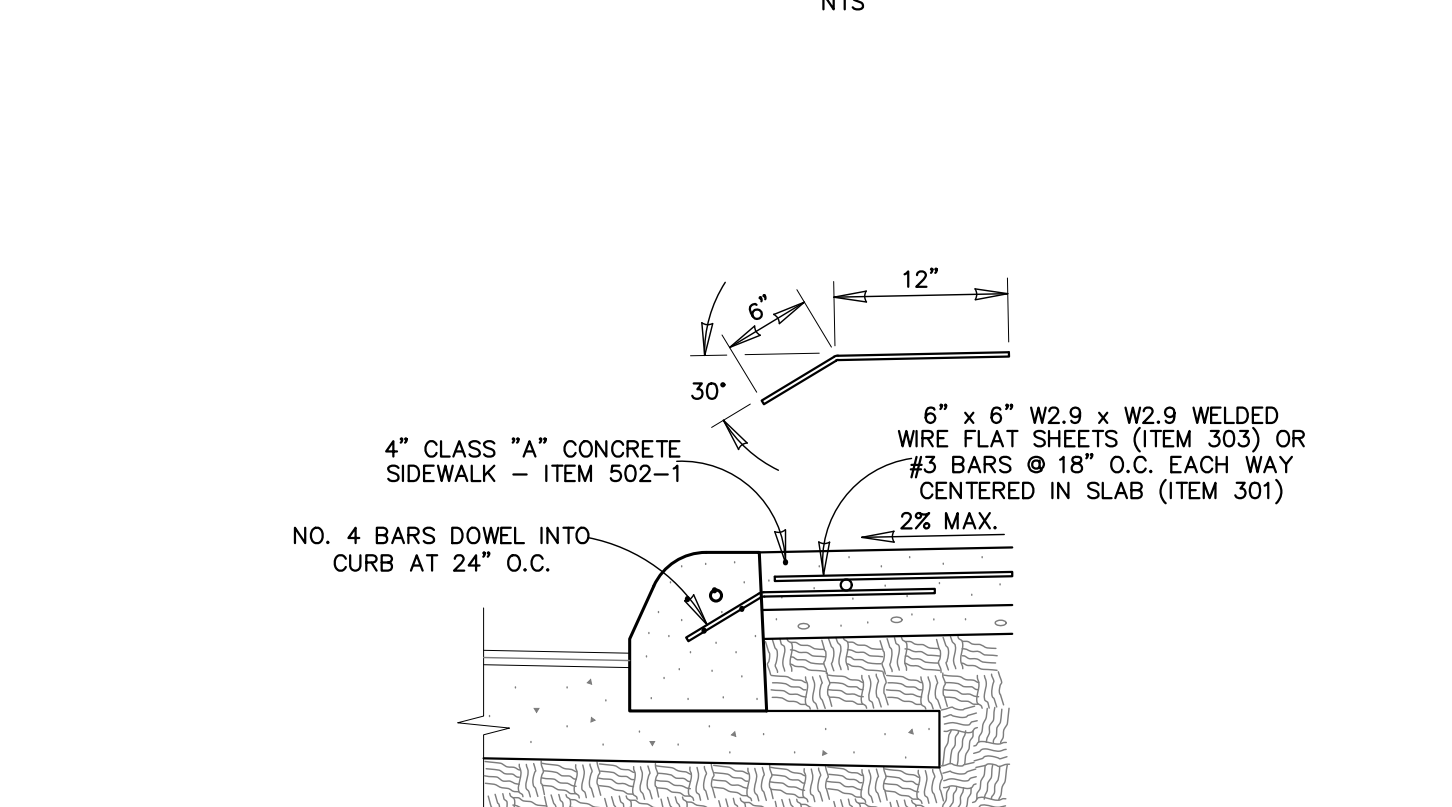
**7 MACHINE LAID FLUSH CURB**  
COMMERCIAL USE  
NTS



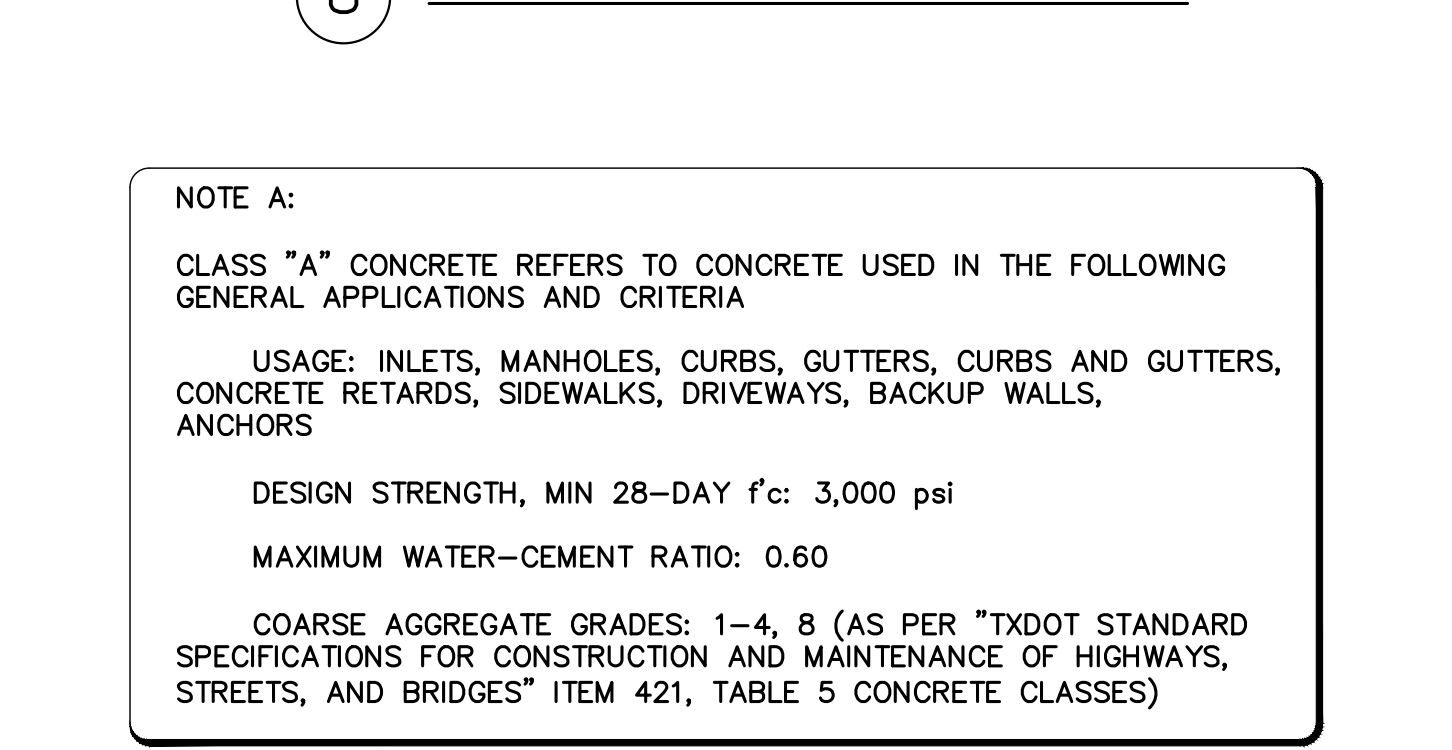
NOTES:

- 1/2" DUMMY JOINTS @ 10' ON CENTER
- 1/2" EXPANSION JOINT @ 40' ON CENTER (TYP) OR WHEN CURB ABUTS A CONCRETE STRUCTURE
- CONCRETE SHALL BE  $f_c = 3,000$  PSI, MAX 4" SLUMP (CSA PW ITEM 300 CLASS A)
- IF NO SIDEWALK REQUIRED AT BACK OF CURB BACKFILL/SLOPE AS SHOWN ON PLANS
- EXPOSED SURFACES TO BE CURED AS PER TxDOT "MS-4650"; REFER TO TxDOT APPROVED SUPPLIER MATERIALS PRODUCER LIST, CURRENT VERSION
- REINFORCING STEEL SHALL COMPLY WITH TxDOT ITEM 440.

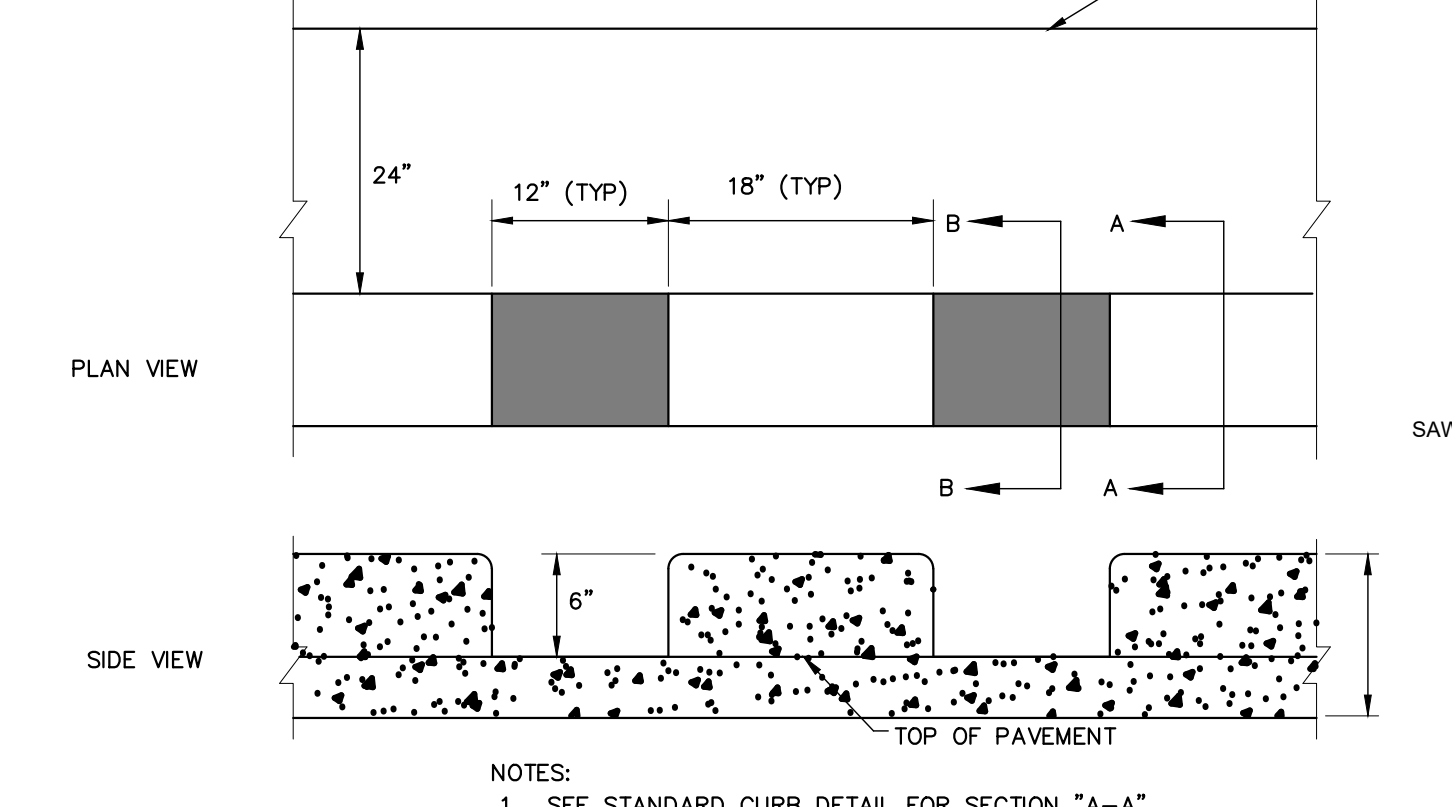
**8 CONCRETE SIDEWALK ABUTTING CURB SECTION**  
NTS



**9 SAWTOOTH CURB**  
NTS



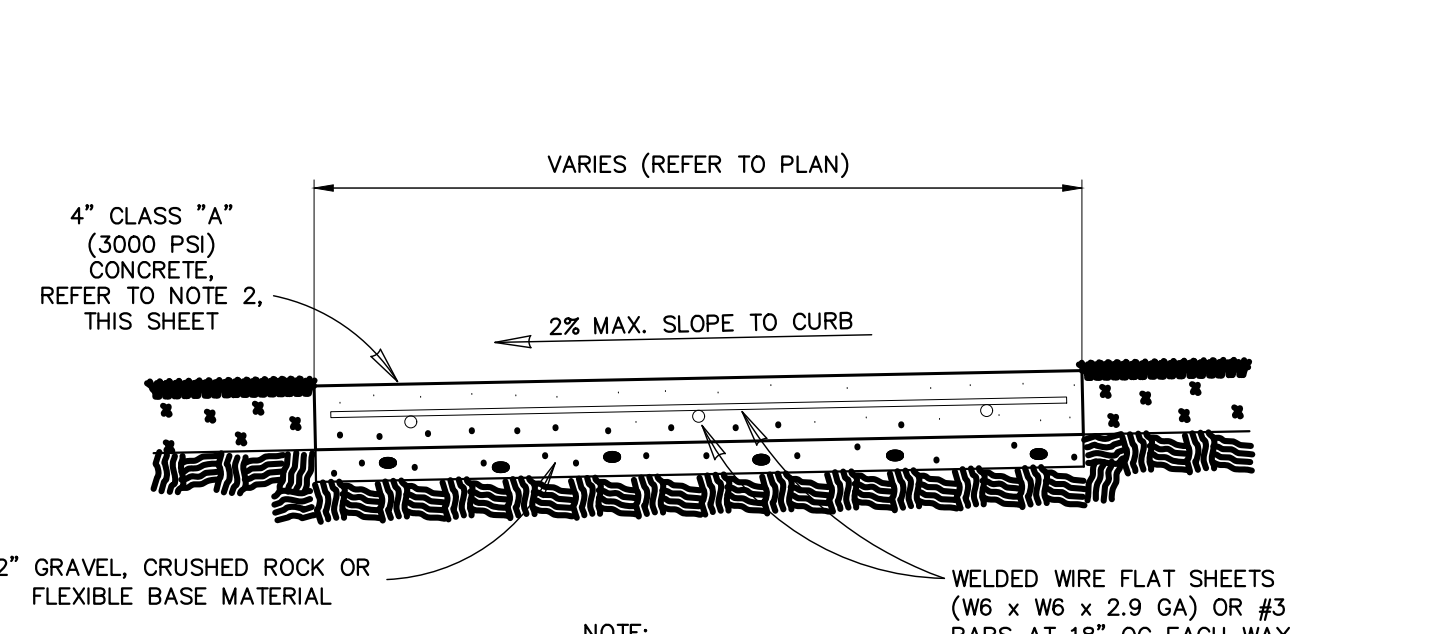
NOTE A:  
CLASS "A" CONCRETE REFERS TO CONCRETE USED IN THE FOLLOWING GENERAL APPLICATIONS AND CRITERIA  
USAGE: INLETS, MANHOLES, CURBS, GUTTERS, CURBS AND GUTTERS, CONCRETE RETARDS, SIDEWALKS, DRIVEWAYS, BACKUP WALLS, ANCHORS  
DESIGN STRENGTH, MIN 28-DAY  $f_c$ : 3,000 psi  
MAXIMUM WATER-CEMENT RATIO: 0.60  
COARSE AGGREGATE GRADES: 1-4, 8 (AS PER "TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES" ITEM 421, TABLE 5 CONCRETE CLASSES)



**10 CONCRETE SIDEWALK**  
NTS

NOTES:

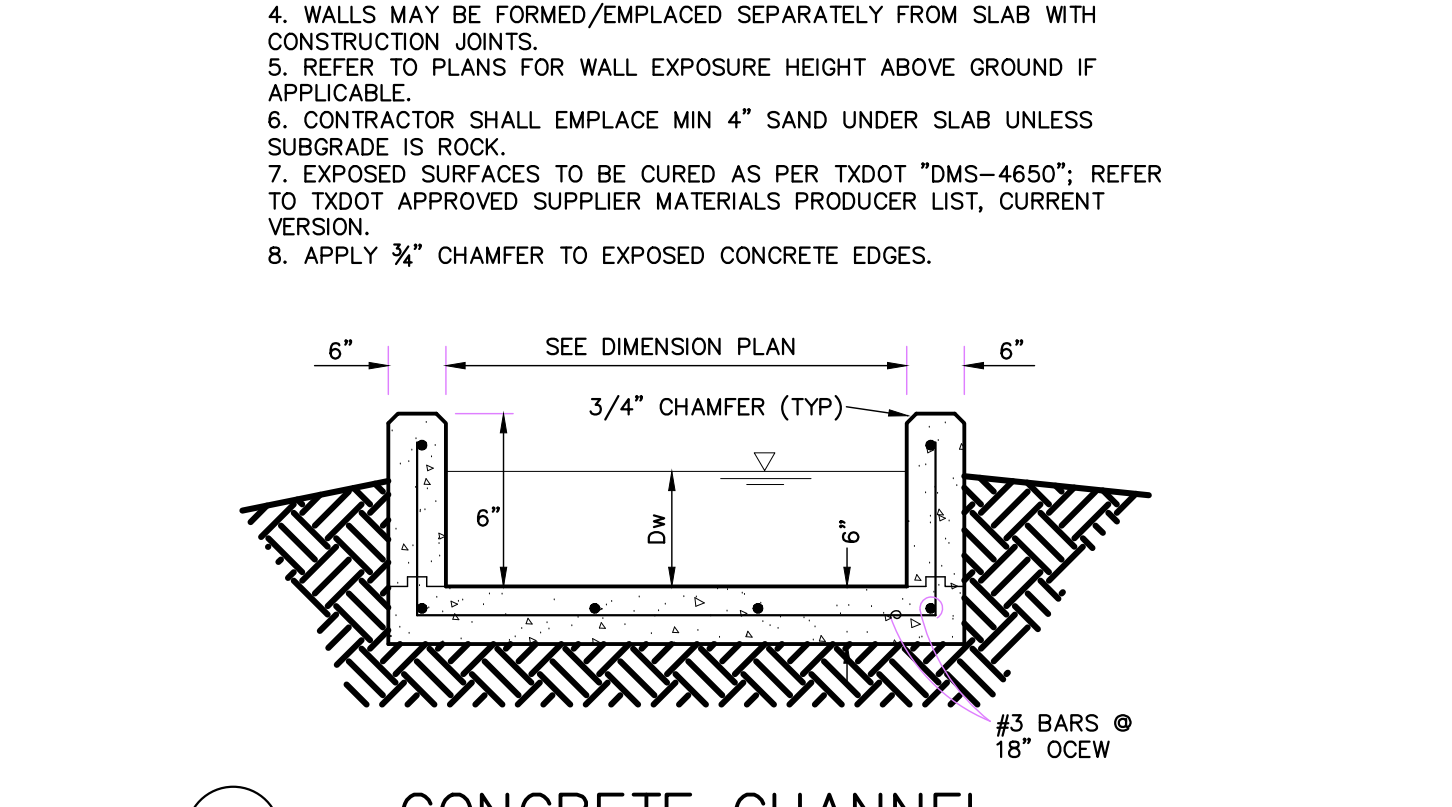
- CONCRETE SHALL BE  $f_c = 3000$  PSI, MAX 1" AGGREGATE (TxDOT ITEM 421, CLASS "A", 4" SLUMP)
- REINFORCING STEEL SHALL COMPLY WITH TxDOT ITEM 440.
- EXPANSION JOINTS AT 30' MAX PERPENDICULAR TO FLOW LINE; CONTRACTION JOINTS AT 10' MAX.
- WALLS MAY BE FORMED/EMPLACED SEPARATELY FROM SLAB WITH CONSTRUCTION JOINTS.
- REFER TO PLANS FOR WALL EXPOSURE HEIGHT ABOVE GROUND IF APPLICABLE.
- CONTRACTOR SHALL EMPLACE MIN 4" SAND UNDER SLAB UNLESS SUBGRADE IS ROCK.
- EXPOSED SURFACES TO BE CURED AS PER TxDOT "MS-4650"; REFER TO TxDOT APPROVED SUPPLIER MATERIALS PRODUCER LIST, CURRENT VERSION.
- APPLY 3/4" CHAMFER TO EXPOSED CONCRETE EDGES.



**11 CONCRETE CHANNEL**  
NTS

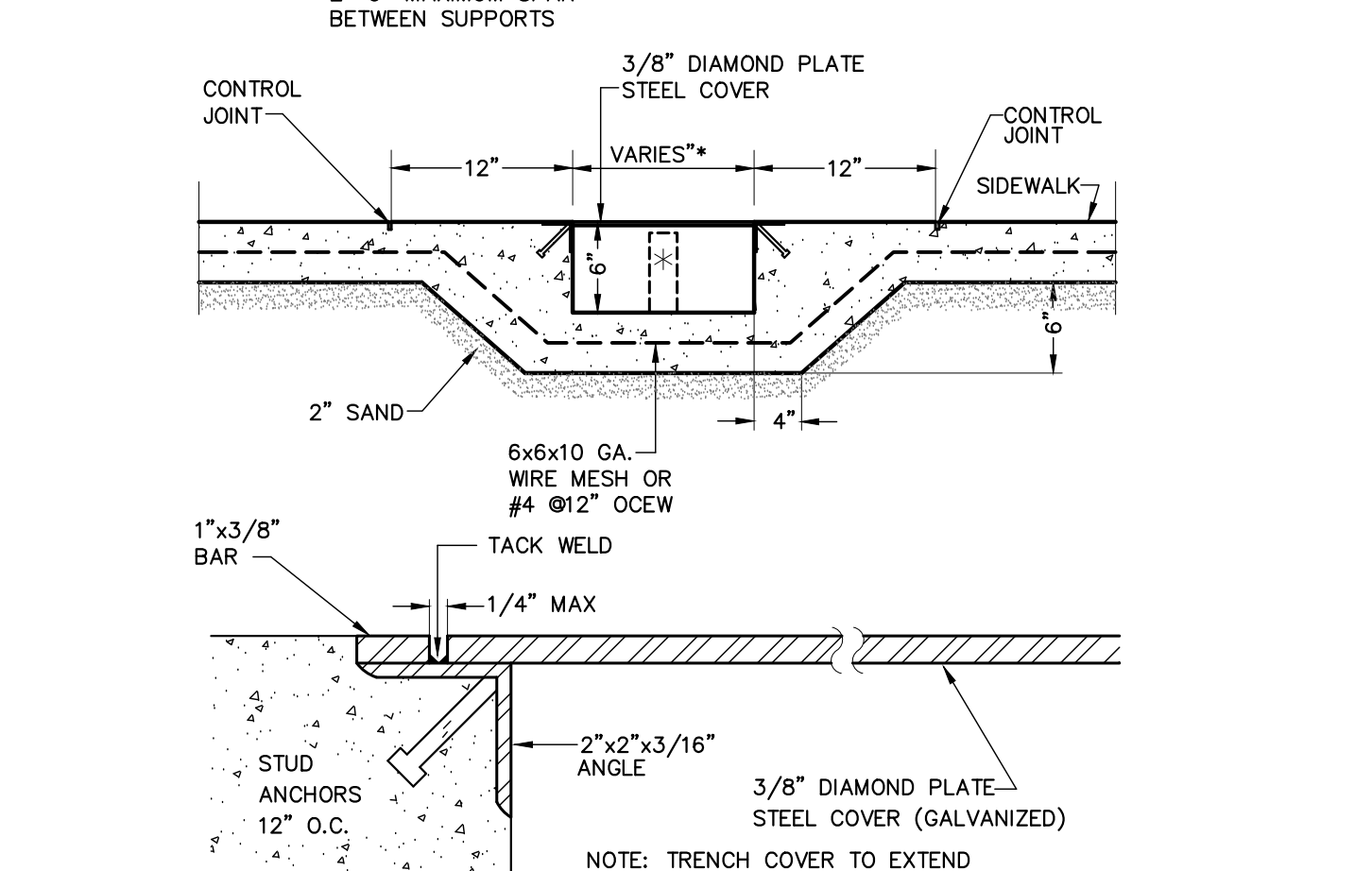
NOTES:

- CONCRETE SHALL BE  $f_c = 3000$  PSI, MAX 1" AGGREGATE (TxDOT ITEM 421, CLASS "A", 4" SLUMP)
- REINFORCING STEEL SHALL COMPLY WITH TxDOT ITEM 440.
- EXPANSION JOINTS AT 30' MAX PERPENDICULAR TO FLOW LINE; CONTRACTION JOINTS AT 10' MAX.
- WALLS MAY BE FORMED/EMPLACED SEPARATELY FROM SLAB WITH CONSTRUCTION JOINTS.
- REFER TO PLANS FOR WALL EXPOSURE HEIGHT ABOVE GROUND IF APPLICABLE.
- CONTRACTOR SHALL EMPLACE MIN 4" SAND UNDER SLAB UNLESS SUBGRADE IS ROCK.
- EXPOSED SURFACES TO BE CURED AS PER TxDOT "MS-4650"; REFER TO TxDOT APPROVED SUPPLIER MATERIALS PRODUCER LIST, CURRENT VERSION.
- APPLY 3/4" CHAMFER TO EXPOSED CONCRETE EDGES.

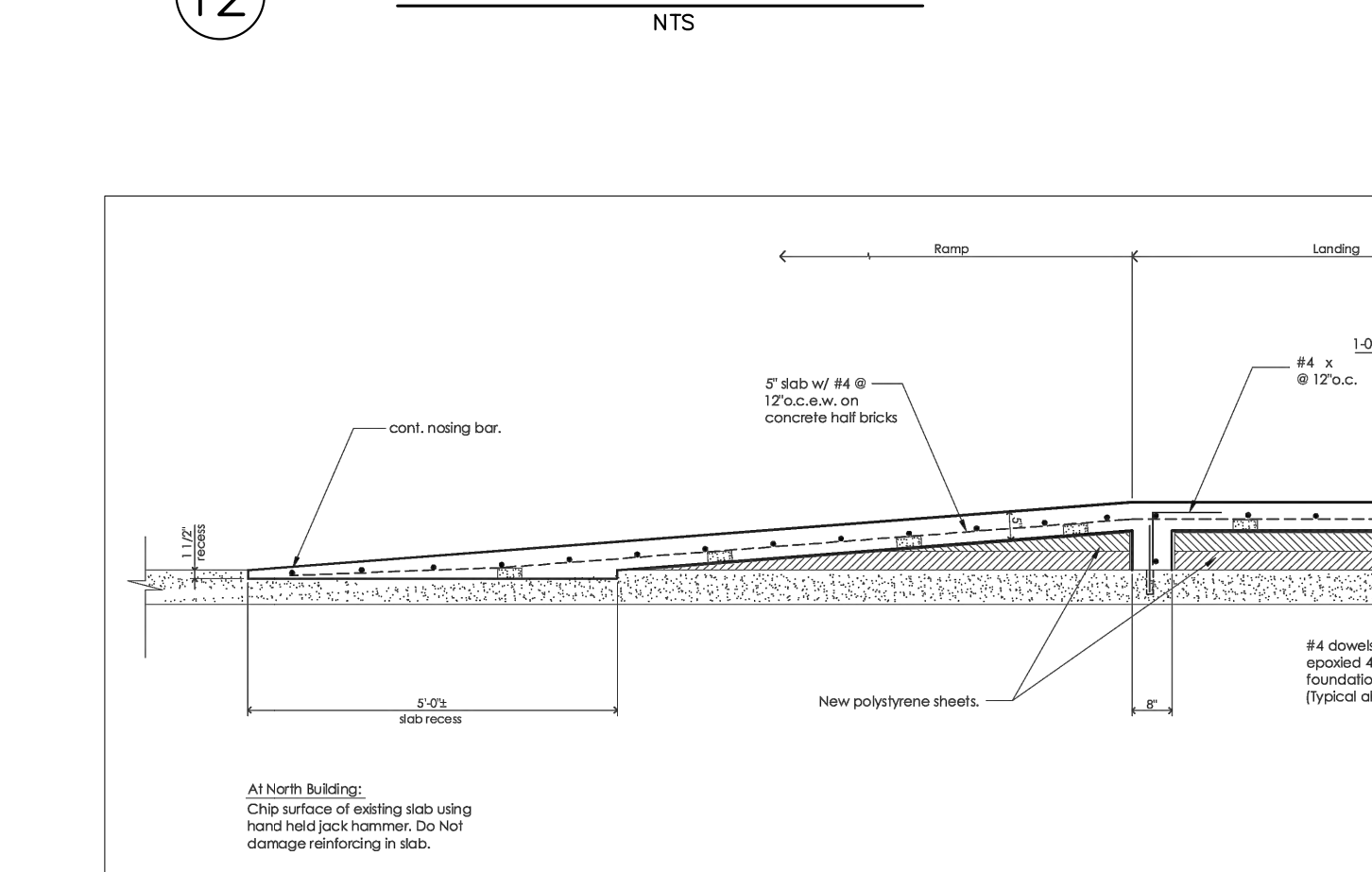


**12 SIDEWALK DRAIN**  
NTS

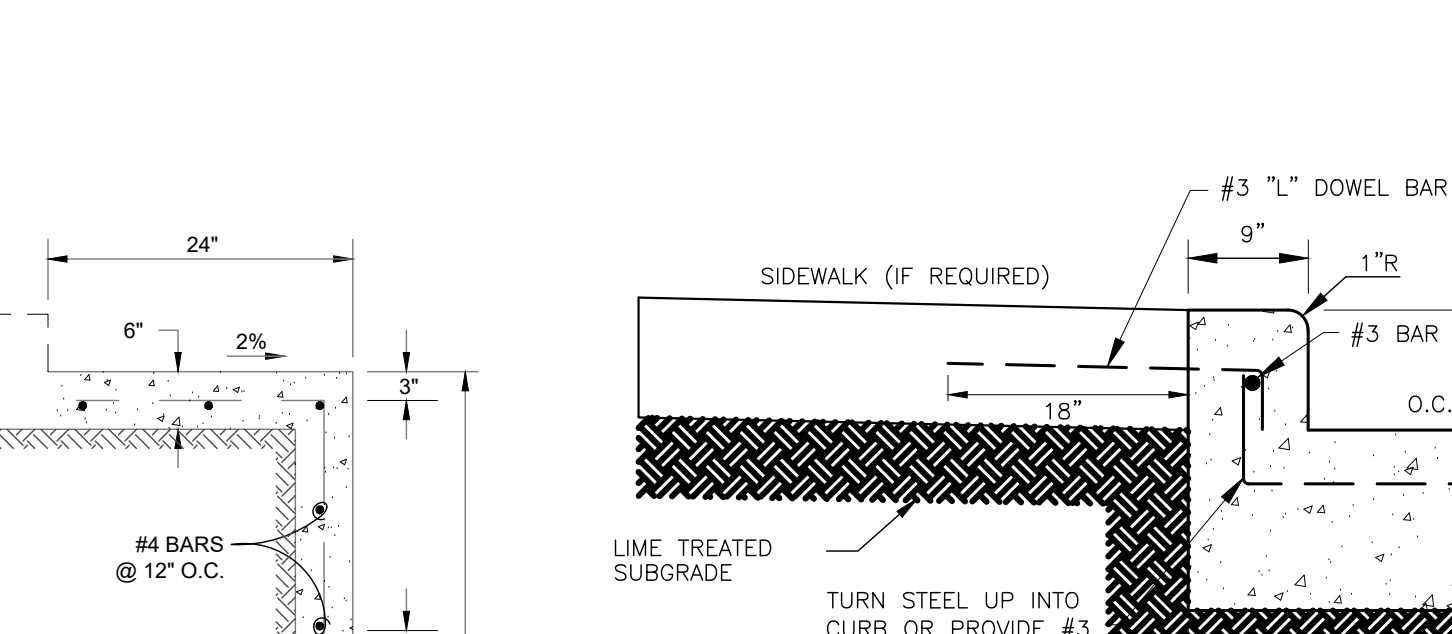
NOTE: TRENCH COVER TO EXTEND CONTINUOUSLY FROM FACE OF CURB TO RIGHT OF WAY LINE.



**13 TYPICAL RAMP DETAIL AT EXISTING CONCRETE**  
NTS



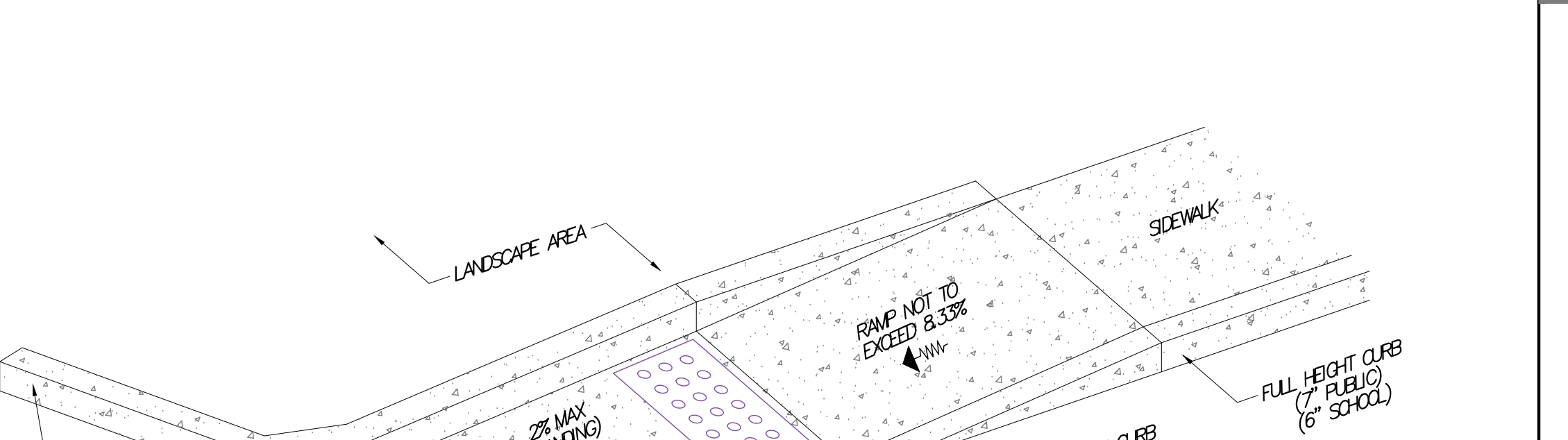
**14 TYPICAL RAMP DETAIL AT DRIVEWAYS**  
NTS



**15 FIRE LANE STRIPING**  
NTS

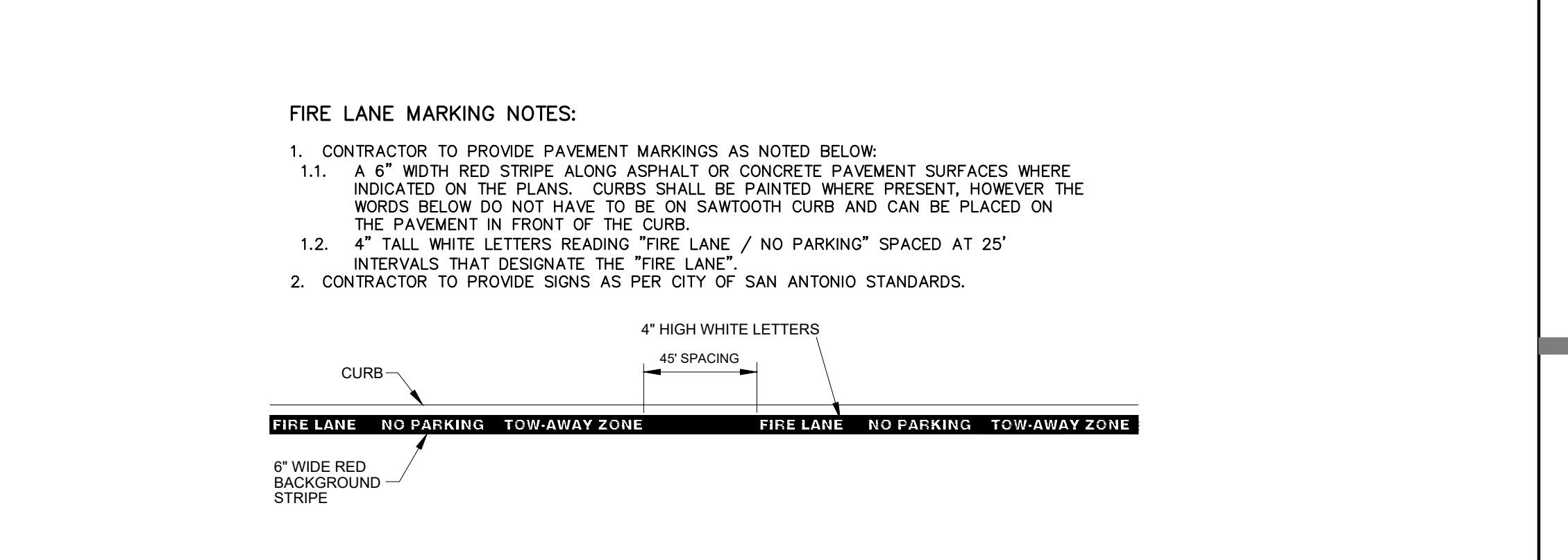
NOTES:

- CONTRACTOR TO PROVIDE PAVEMENT MARKINGS AS NOTED BELOW:
- 1.1. A 6" WIDTH RED STRIPE ALONG ASPHALT OR CONCRETE PAVEMENT SURFACES WHERE THE WORDS BELOW DO NOT HAVE TO BE ON SAWTOOTH CURB AND CAN BE PLACED ON THE PAVEMENT IN FRONT OF THE CURB.
- 1.2. 4" TALL WHITE LETTERS READING "FIRE LANE / NO PARKING" SPACED AT 25' INTERVALS THAT DESIGNATE THE "FIRE LANE".
- CONTRACTOR TO PROVIDE SIGNS AS PER CITY OF SAN ANTONIO STANDARDS.



**16 6" PIPE/CONCRETE BOLLARD**  
NTS

NOTE: PIPE SHALL BE 6" SCH 40 STEEL.



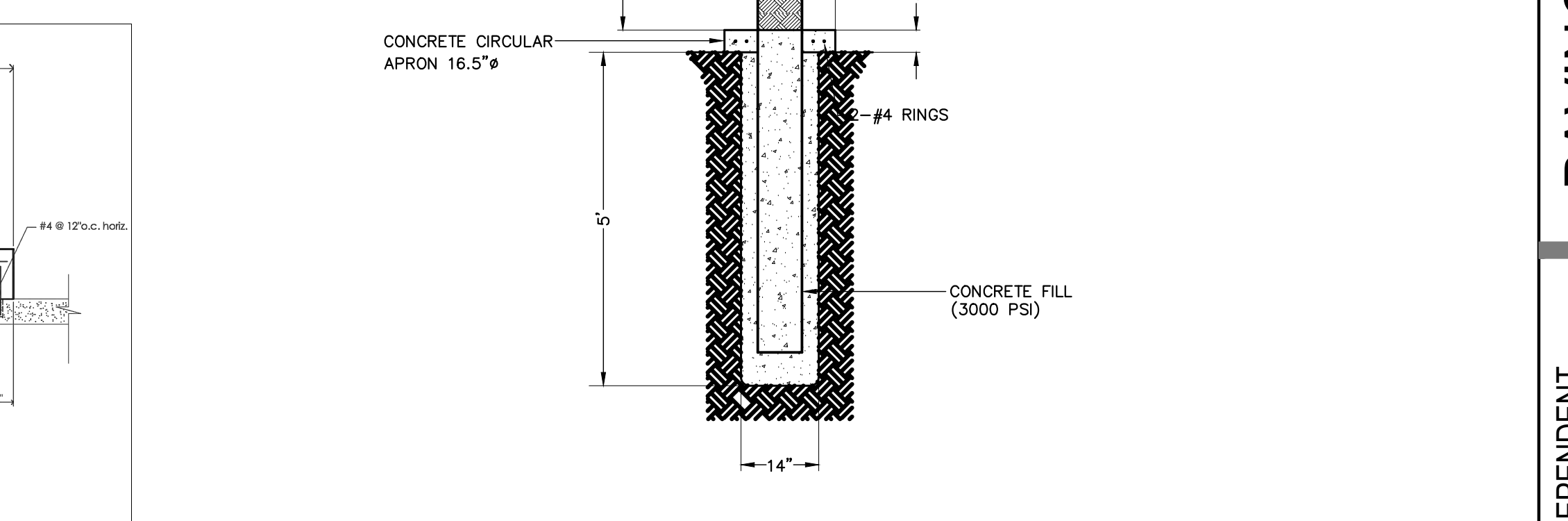
**17 RAISED PAVEMENT UNDULATION**  
NTS

NOTE: TRENCH COVER TO EXTEND CONTINUOUSLY FROM FACE OF CURB TO RIGHT OF WAY LINE.

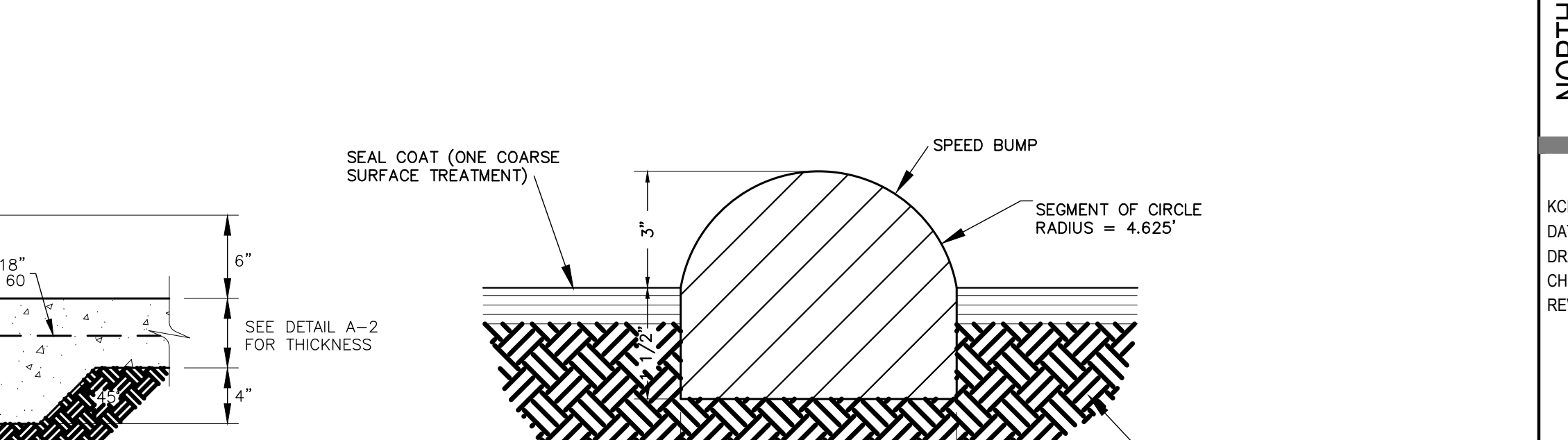


**18 CURB DETAIL FOR CONCRETE PAVEMENT**  
NTS

NOTE: TRENCH COVER TO EXTEND CONTINUOUSLY FROM FACE OF CURB TO RIGHT OF WAY LINE.

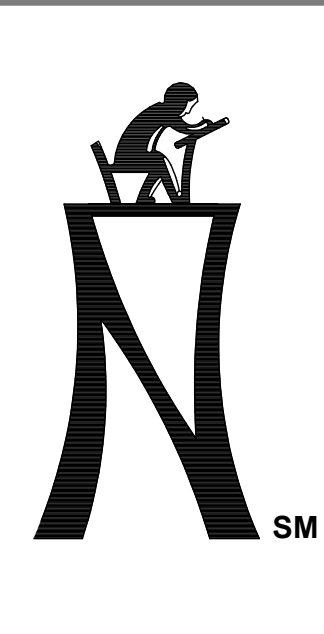


**19 TYPICAL RAMP DETAIL AT EXISTING CONCRETE**  
NTS



**20 TYPICAL RAMP DETAIL AT EXISTING CONCRETE**  
NTS

NOTE: TRENCH COVER TO EXTEND CONTINUOUSLY FROM FACE OF CURB TO RIGHT OF WAY LINE.



KCI TECHNOLOGIES, INC.  
2808 W. BITTERS ROAD, SUITE 218  
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REGISTRATION #F-10723 / #101943-65



THE SEAL APPEARING ON THIS DOCUMENT WAS DRAWN BY: PAUL A. MARTIN, P.E. NO. #105075 DATE: JANUARY 31, 2024



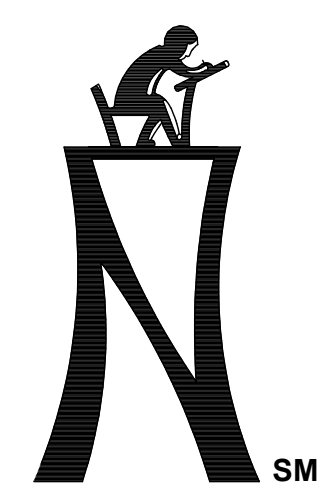
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RFCSP # 2024-005  
9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
5900 EVERS ROAD, BUILDING C  
SAN ANTONIO, TX 78238

CIVIL DETAILS  
KCI JOB NO. 782203504  
DATE: 01-31-2024  
DRAWN BY: ME  
CHECKED BY: PAM  
REVISIONS:

C5.3





KCI TECHNOLOGIES, INC.  
 2808 W. BITTERS ROAD, SUITE 218  
 SAN ANTONIO, TEXAS 78246  
 PHONE: (210) 641-9899  
 FAX: (210) 641-6440  
 REGISTRATION # 10573 / #101943-65



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 OK JANUARY 31, 2024 DATE

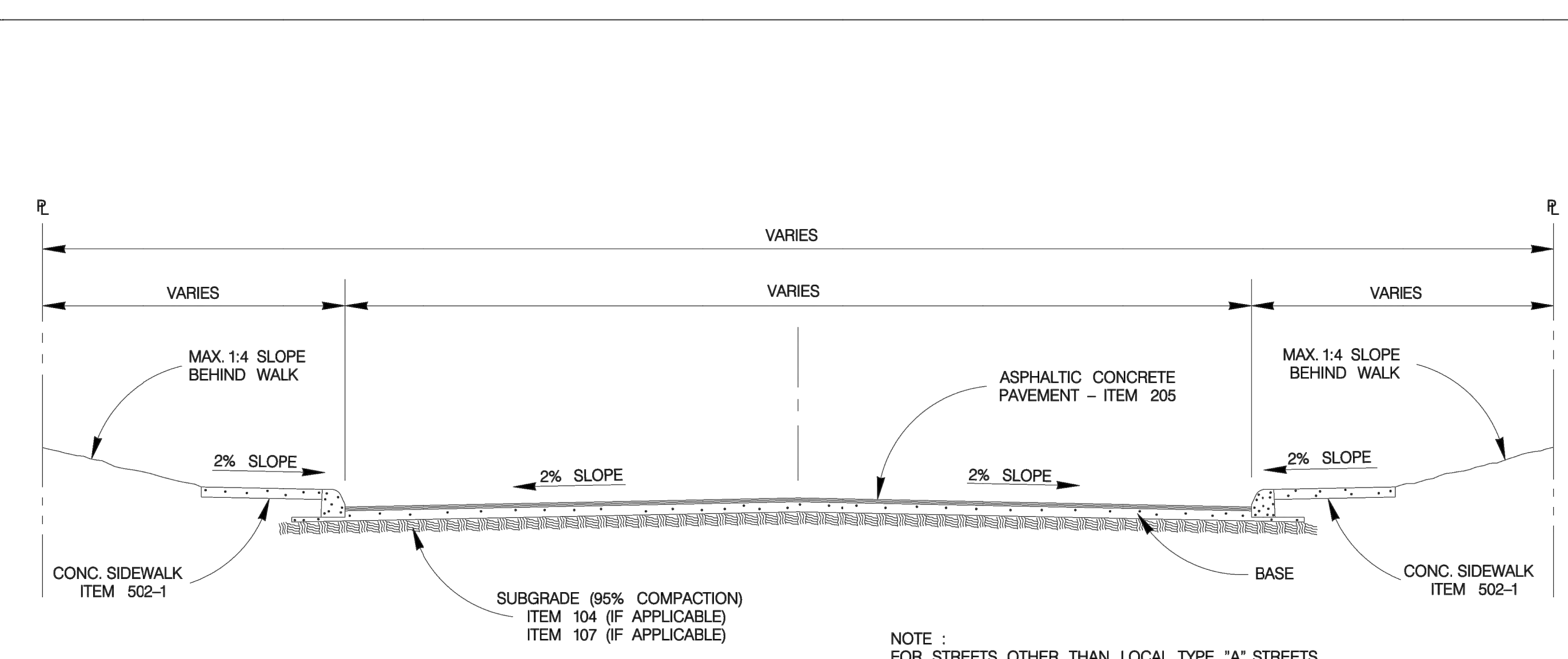


PAVING UPGRADES AT LLOYD M. KNOWLTON ES  
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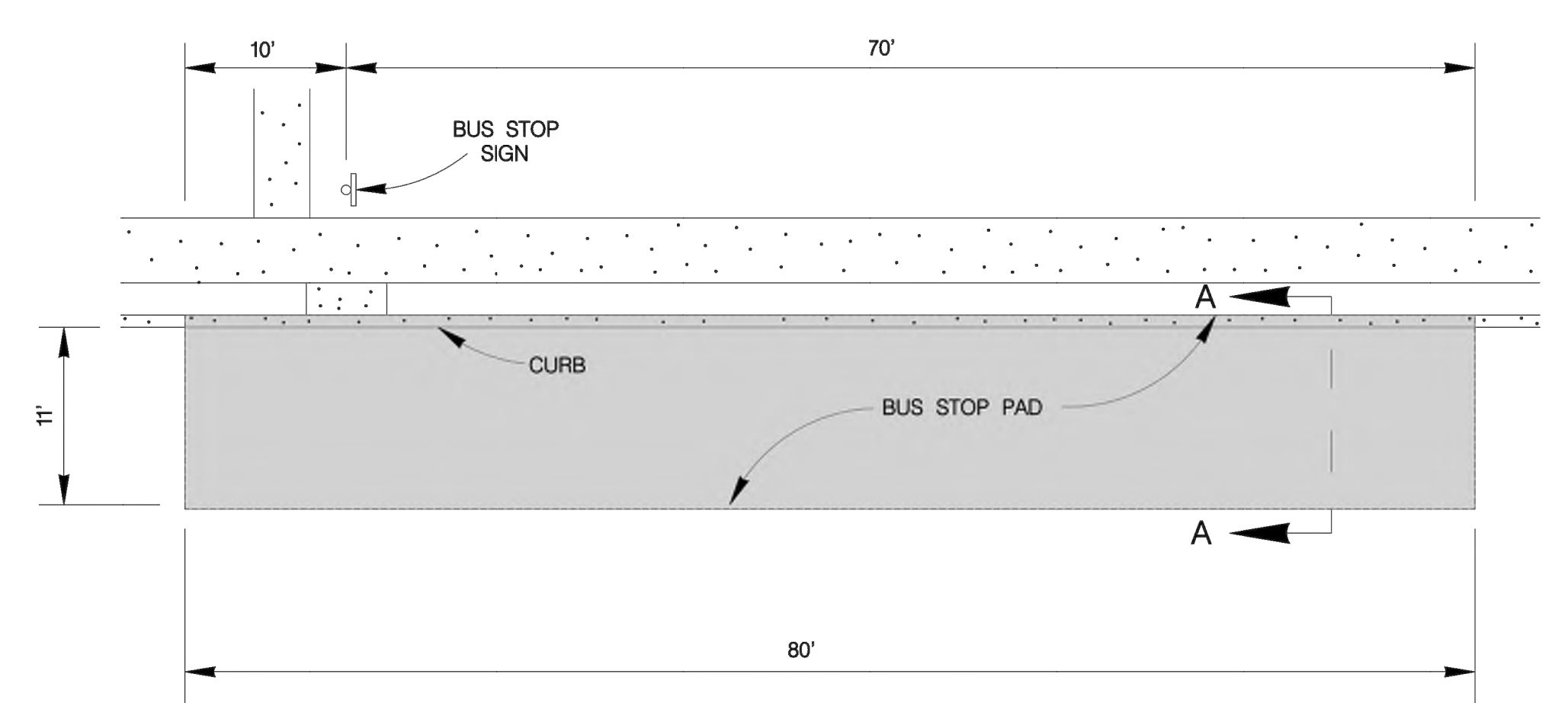
NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 COSA STANDARD DETAILS

KCI JOB NO. 78203504  
 DATE 01-31-2024  
 DRAWN BY JAE  
 CHECKED BY PAM  
 REVISIONS:

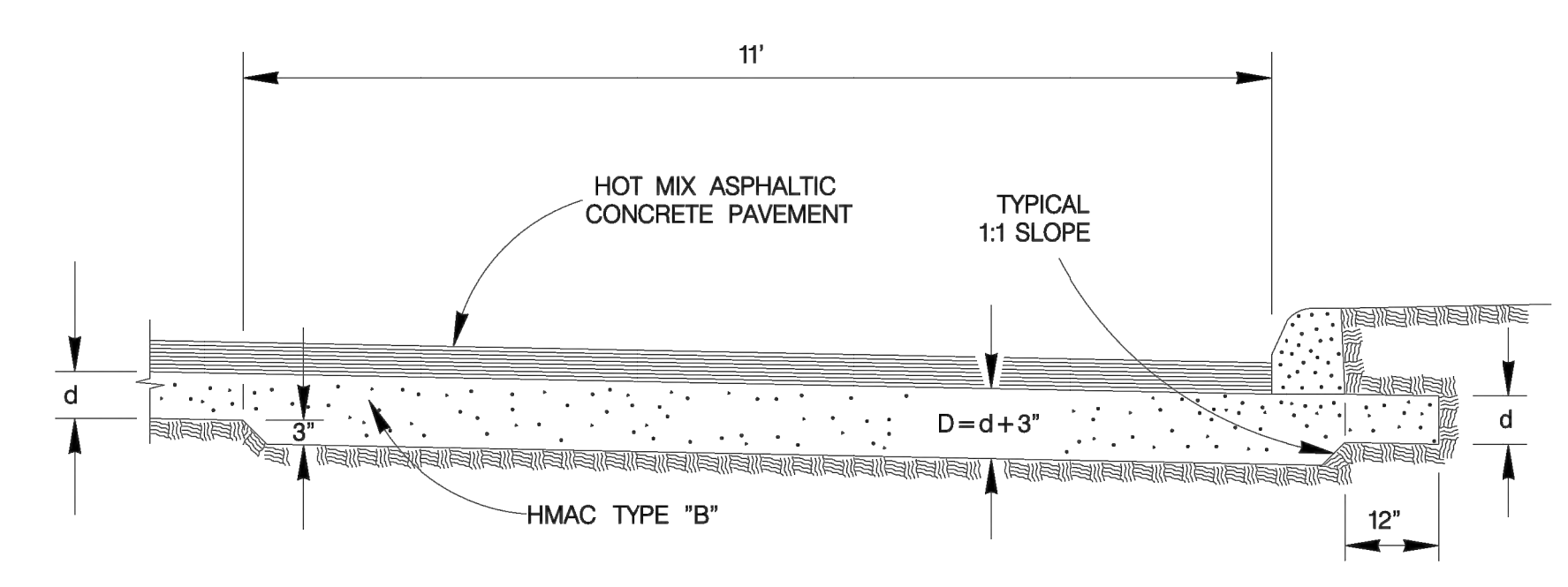
C5.5



TYPICAL STREET SECTION  
 SCALE : 1"=8'

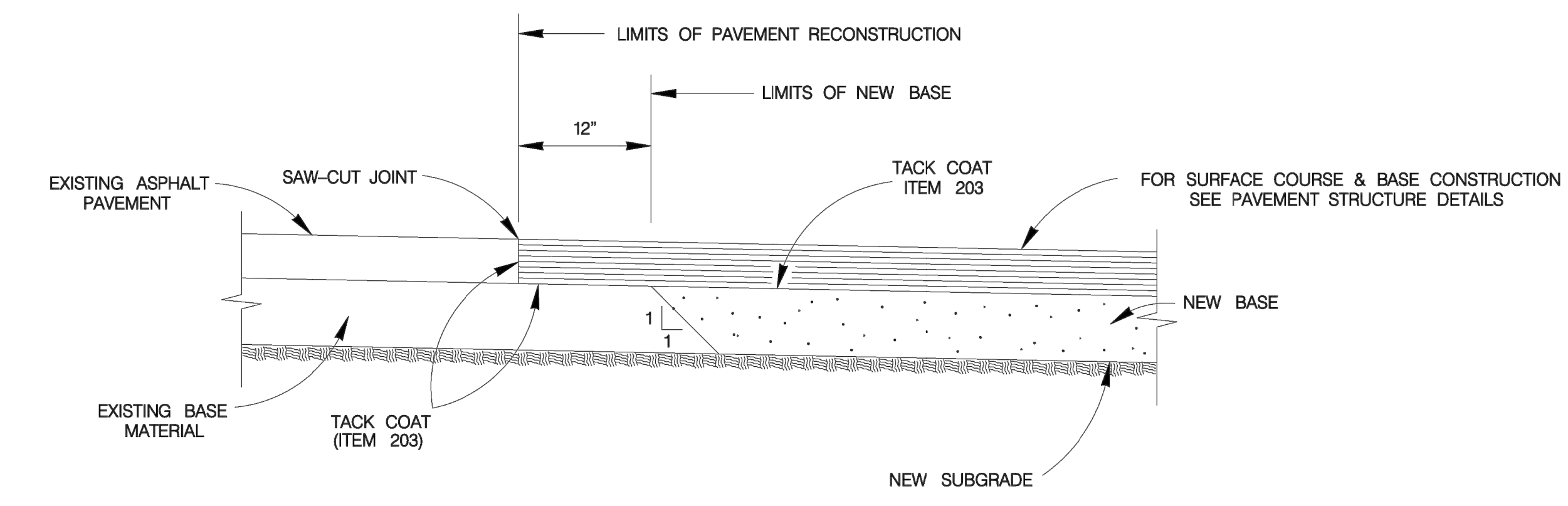


PLAN VIEW  
 SCALE : 1"=20'

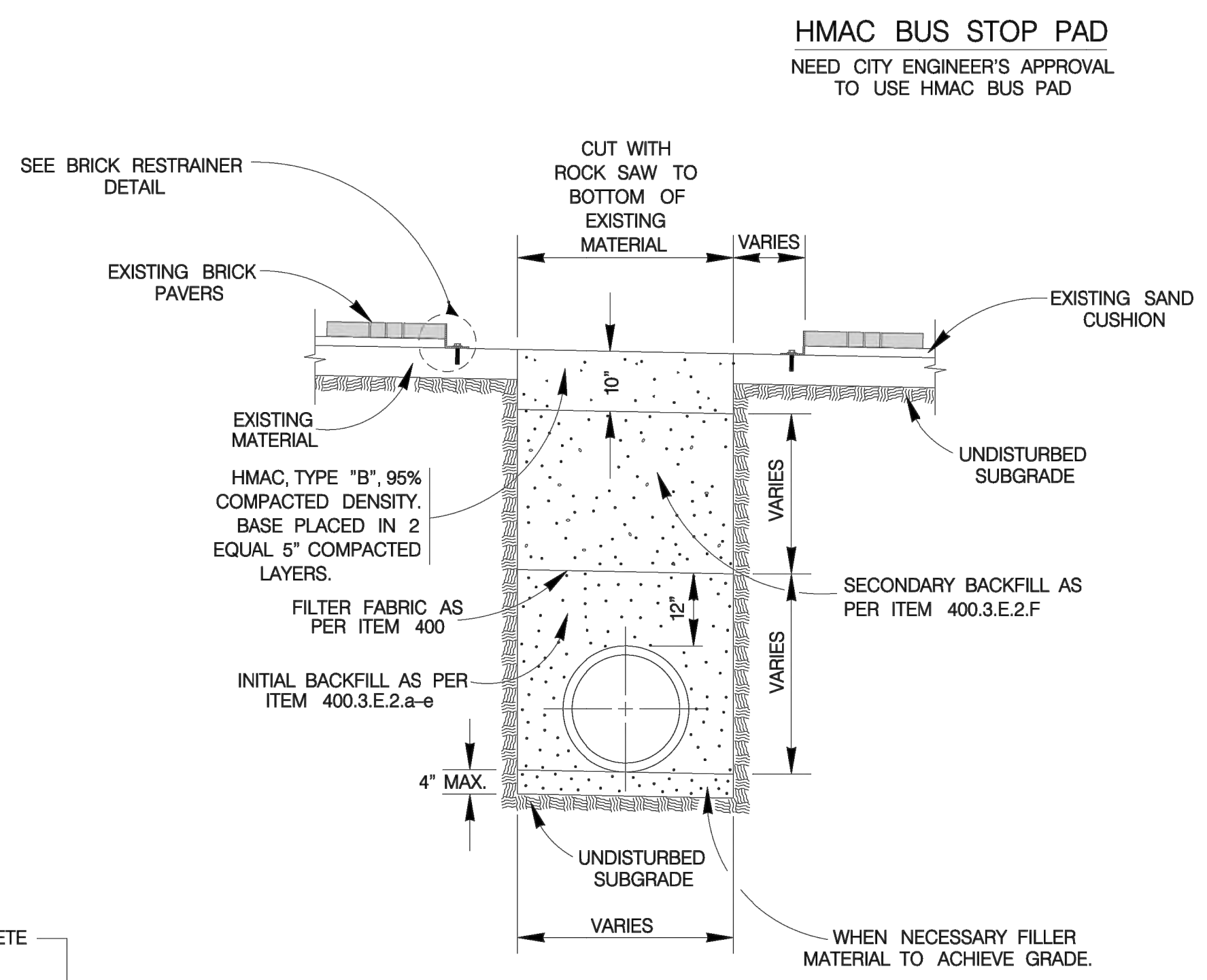


SECTION "A-A"  
 SCALE : 1"=4'

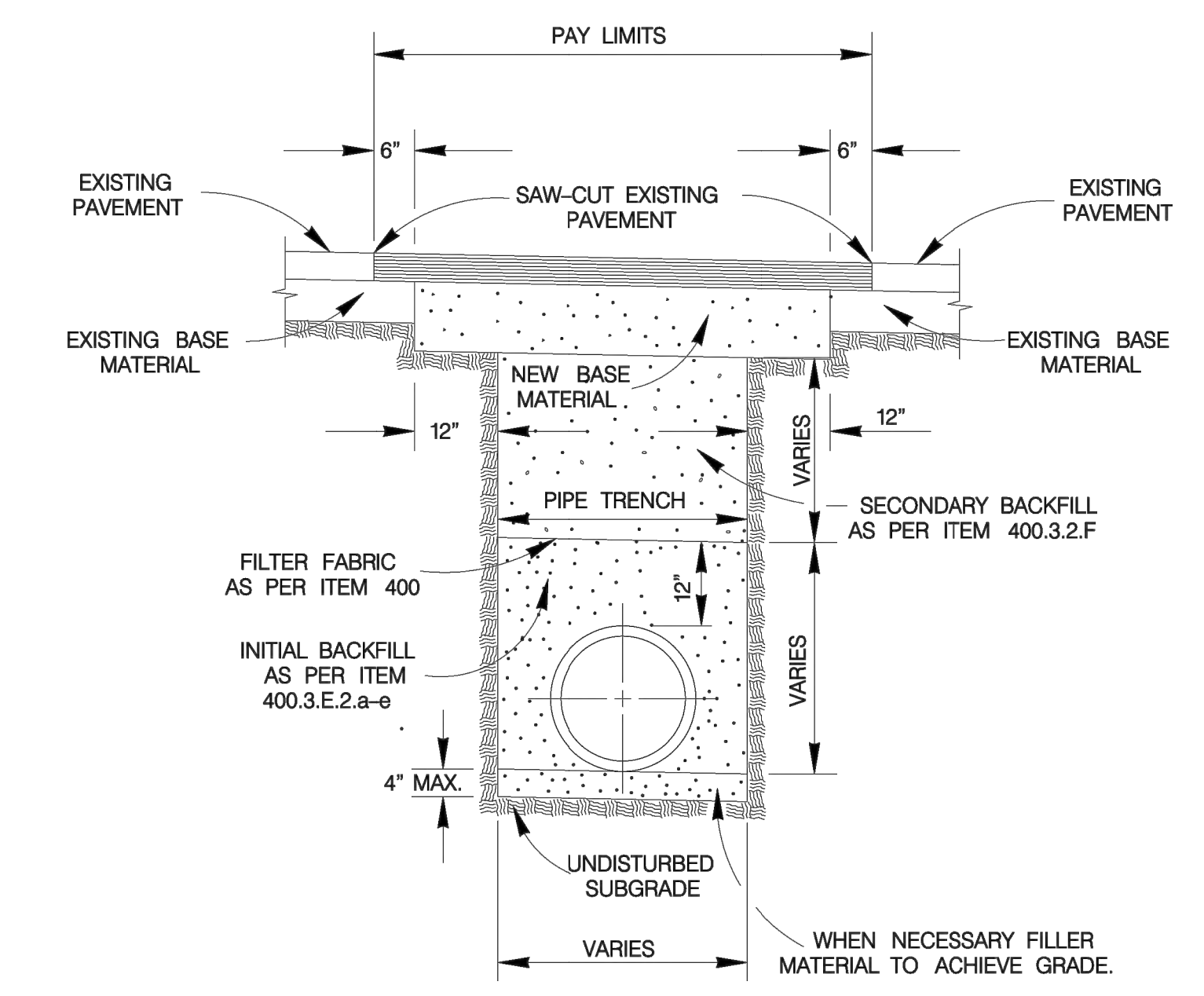
- NOTES :
- EXCAVATION FOR THICKENED PAVEMENT SECTION WILL BE PAID UNDER ITEM NO.104 "STREET EXCAVATION".
  - BASE MATERIALS :
    - A) IF THE MEASUREMENT FOR THE HMAC MATERIAL IS PER TON, THICKENED PAVEMENT SECTION WILL BE PAID FOR UNDER ITEM NO.205, TYPE "B" - PER TON.
    - B) IF THE MEASUREMENT FOR THE HMAC MATERIAL IS PER SQUARE YARD, NO EXTRA PAYMENT WILL BE MADE FOR THE THICKENED PAVEMENT.



PAVEMENT JUNCTION DETAILS  
 SCALE : 1"=2'

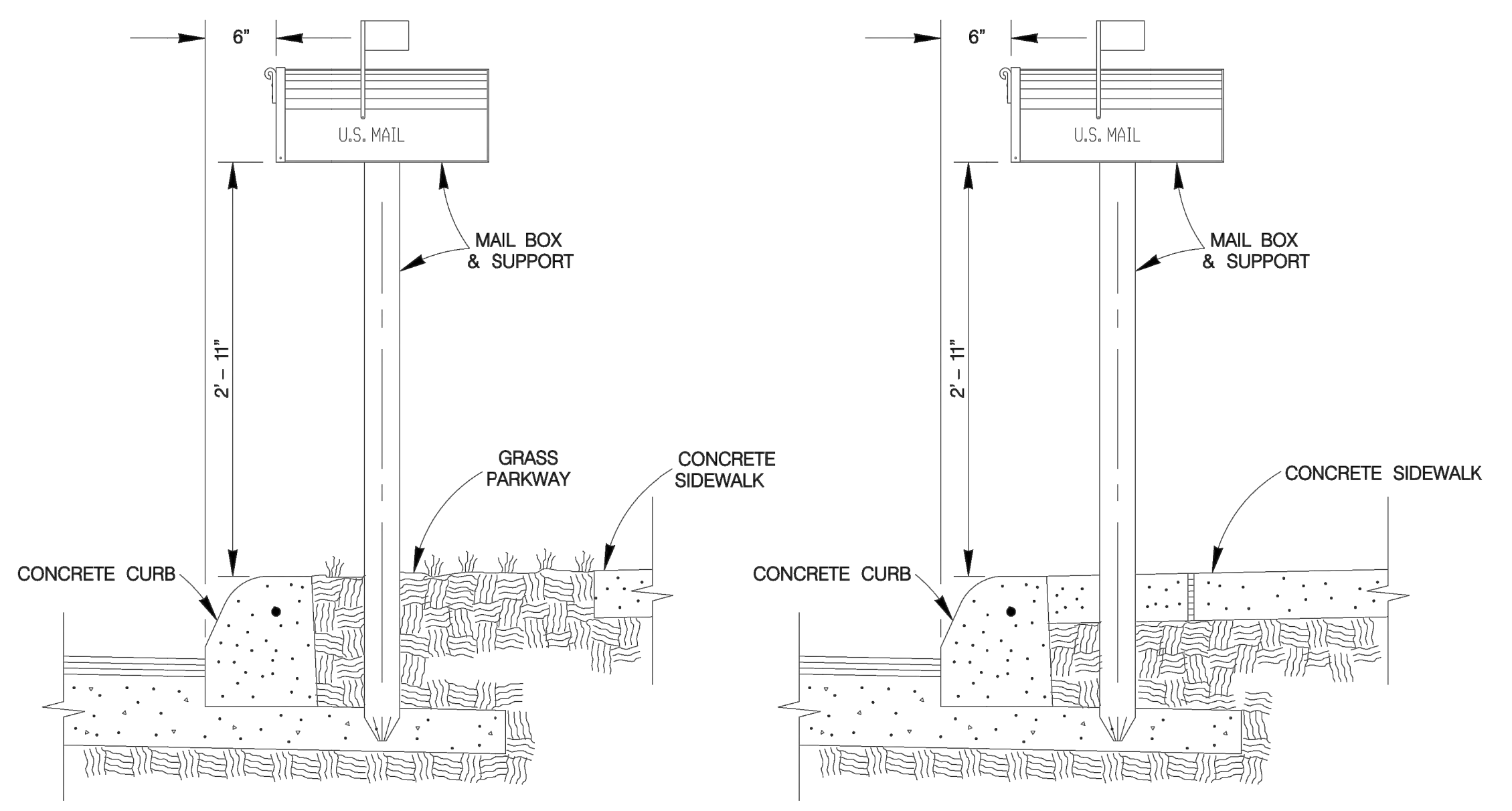


TYPICAL BASE REPLACEMENT FOR BRICK SURFACED STREET SECTION  
 ITEM 511.3  
 SCALE : 1"=4'



- NOTES :
- FOR LOCAL TYPE "A" & "B" STREETS (RESIDENTIAL) USE 6" ASPHALT CONCRETE BASE TYPE "B" WITH 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT.
  - FOR ARTERIAL & SECONDARY STREETS (COMMERCIAL) USE 12.5" TYPE "B" HOT MIX ASPHALTIC CONCRETE PAVEMENT LEVELING-UP COURSE & 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE.

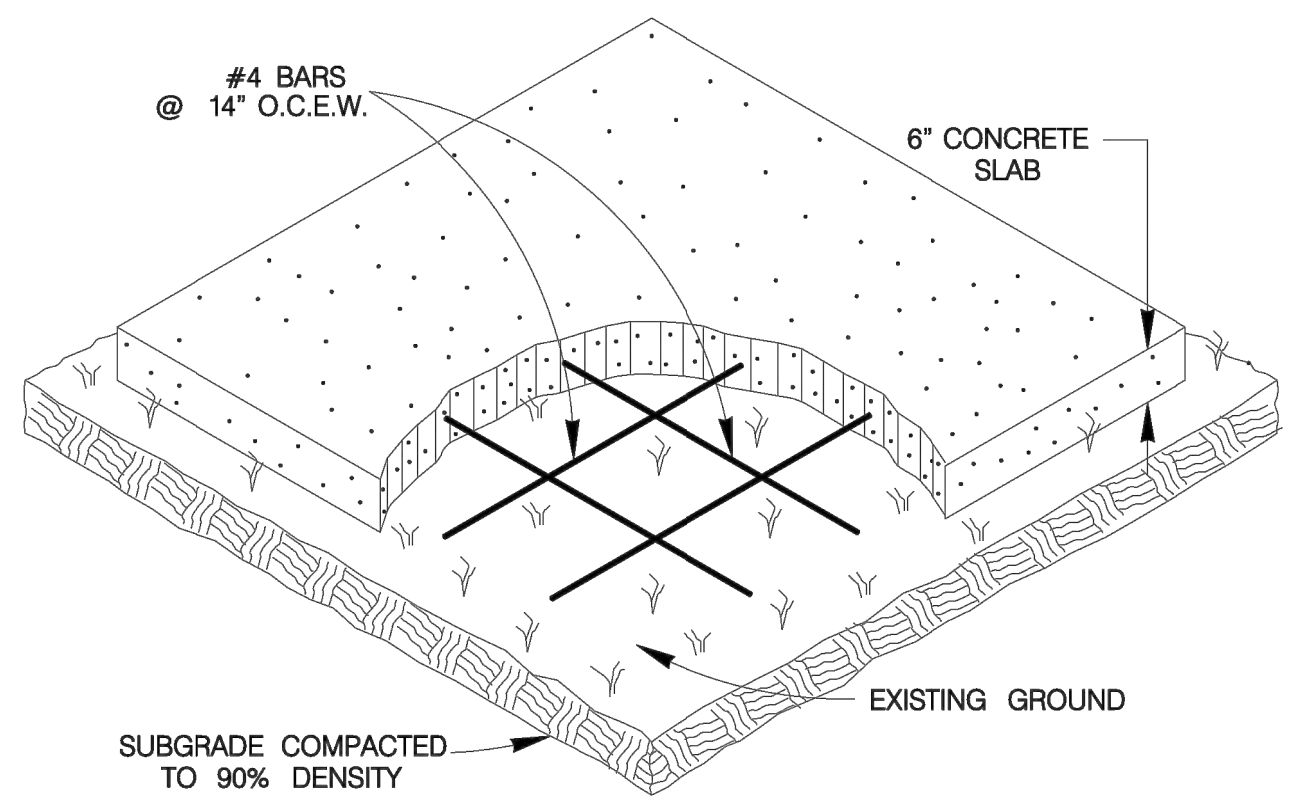
TYPICAL PAVEMENT REPLACEMENT  
 ITEM 511  
 SCALE : 1"=4'



MAIL BOX PERPENDICULAR TO CURB  
 WHEN SIDEWALK IS DETACHED FROM CURB  
 SCALE : 1"=2'

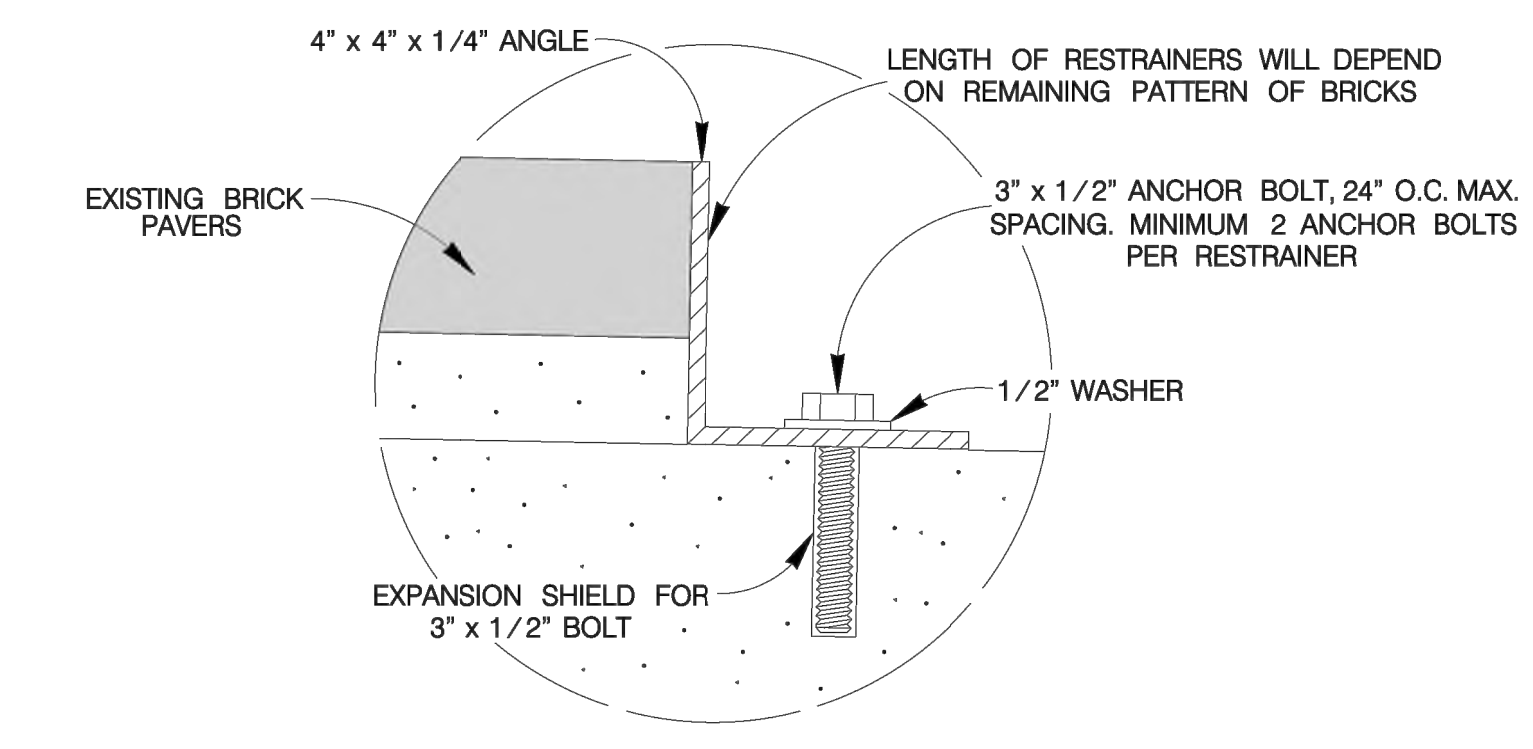
MAIL BOX PERPENDICULAR TO CURB  
 WHEN SIDEWALK IS ATTACHED TO CURB  
 SCALE : 1"=2'

MAIL BOX LOCATION  
 ITEM 513.1



- MAIL BOX PAD NOTES :
- THE CONTRACTOR WILL CONSTRUCT SLABS FOR "TEMPORARY MAIL BOX COLLECTION PAD" FOR THE UNITED STATES POSTAL SERVICE WITH LOCATIONS AND SIZES SPECIFIED BY THE CITY ENGINEER DURING CONSTRUCTION.
  - THE CONSTRUCTION OF SLABS SHALL CONFORM TO ITEM 513 "REMOVING AND RELOCATING MAILBOXES".
  - PAYMENT WILL BE MADE UNDER ITEM 513.2 "COMMUNITY MAILBOX SLAB - PER SQUARE YARD".
  - UNIT PRICE WILL INCLUDE REMOVAL OF "TEMPORARY MAIL BOX COLLECTION PAD" SLABS AT THE END OF THE PROJECT. NO SEPARATE PAY ITEM.

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

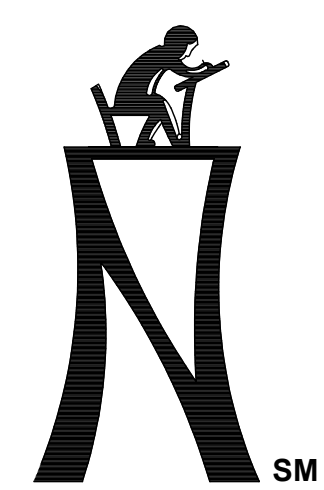


BRICK RESTRAINER DETAIL  
 SCALE = 1 : 6

FEBRUARY 2010  
 CITY OF SAN ANTONIO  
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

MISCELLANEOUS CONSTRUCTION STANDARDS II

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



**KCI TECHNOLOGIES, INC.**  
 2808 W. BITTERS ROAD, SUITE 218  
 SAN ANTONIO, TEXAS 78246  
 PHONE: (210) 641-9899  
 FAX: (210) 641-6440  
 REGISTRATION # 10573 / #101943-65



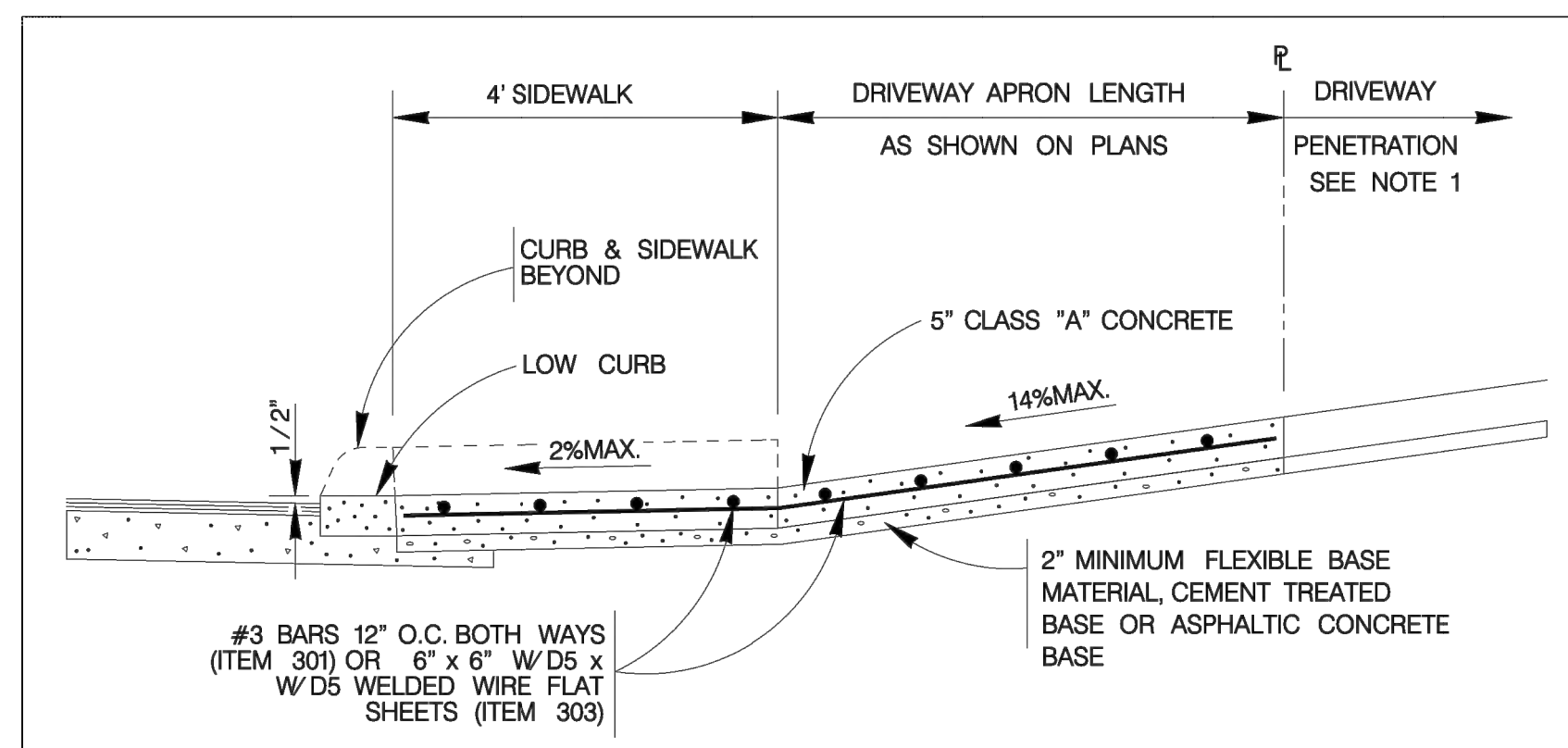
THE SEAL APPEARING ON THIS DOCUMENT WAS OBTAINED BY PAUL A. MARTIN, P.E. NO. 105075 ON JANUARY 31, 2024 DATE

**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
 RFCSP # 2024-005  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

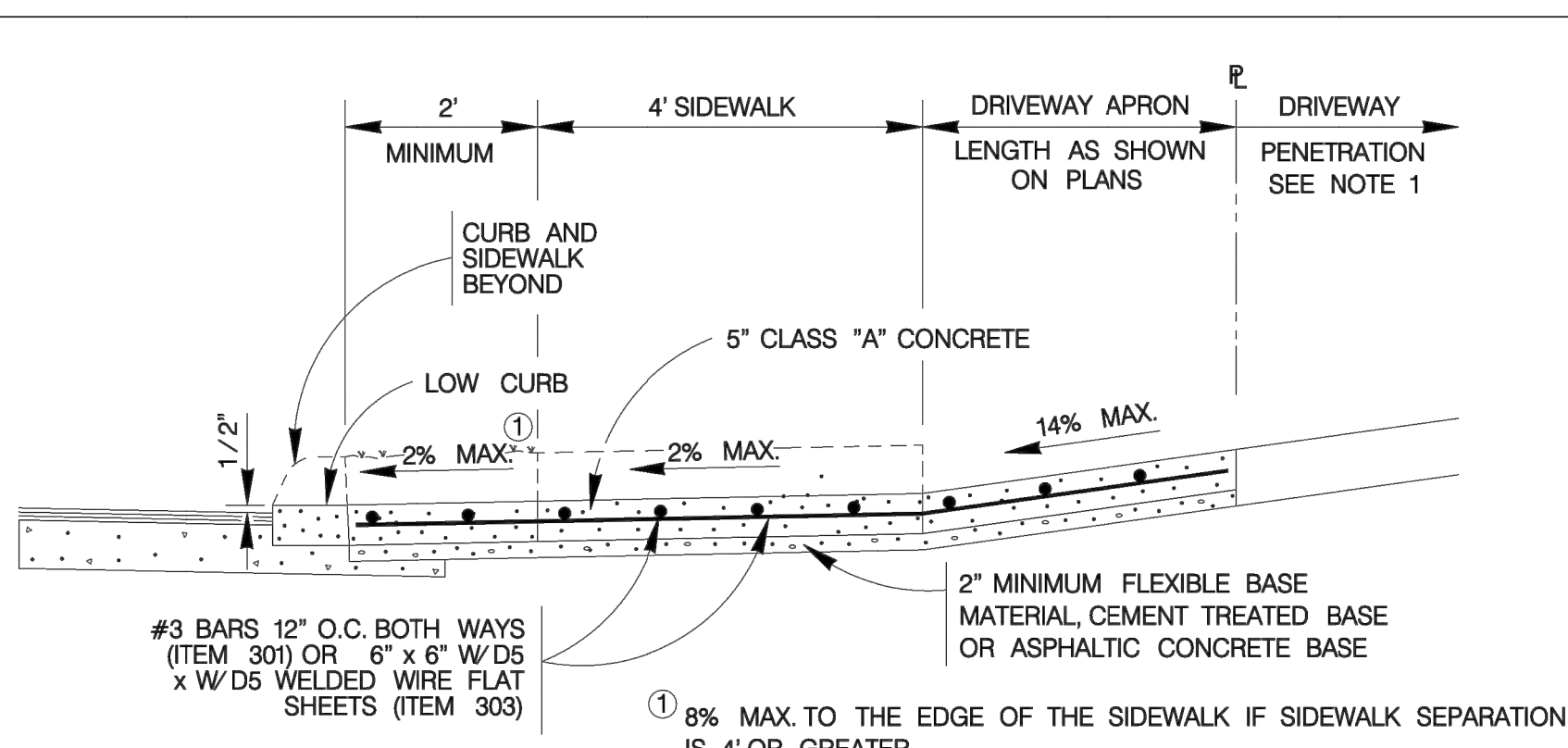
NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 COSA DRIVEWAY DETAILS

KCI JOB NO. 78203504  
 DATE: 01-31-2024  
 DRAWN BY: J.E.  
 CHECKED BY: PAM  
 REVISIONS:

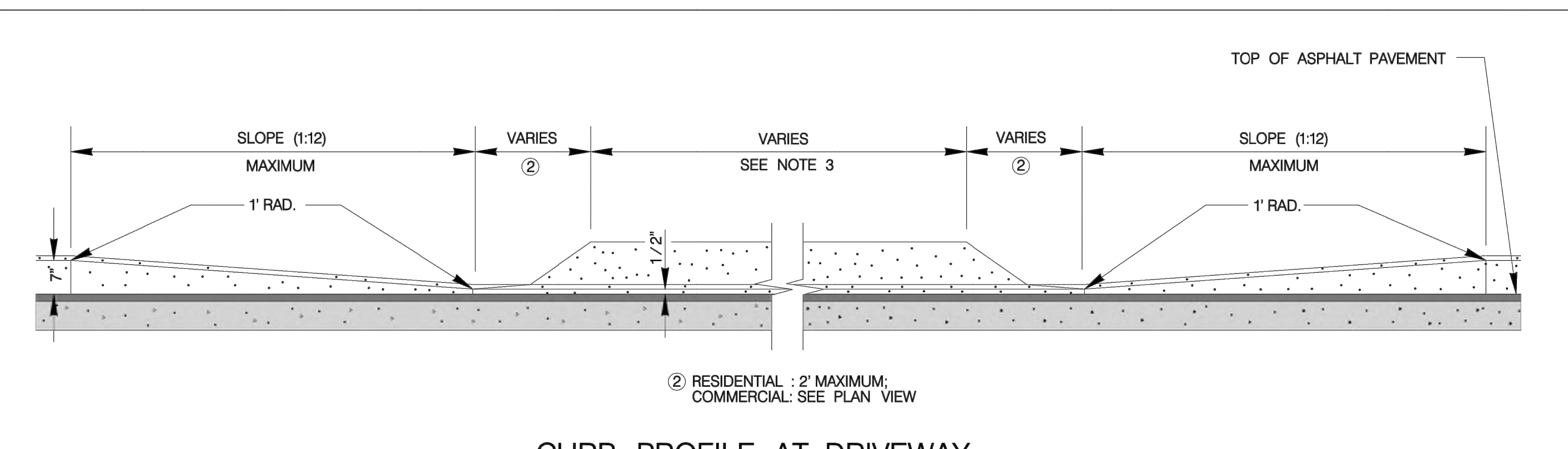
C5.6



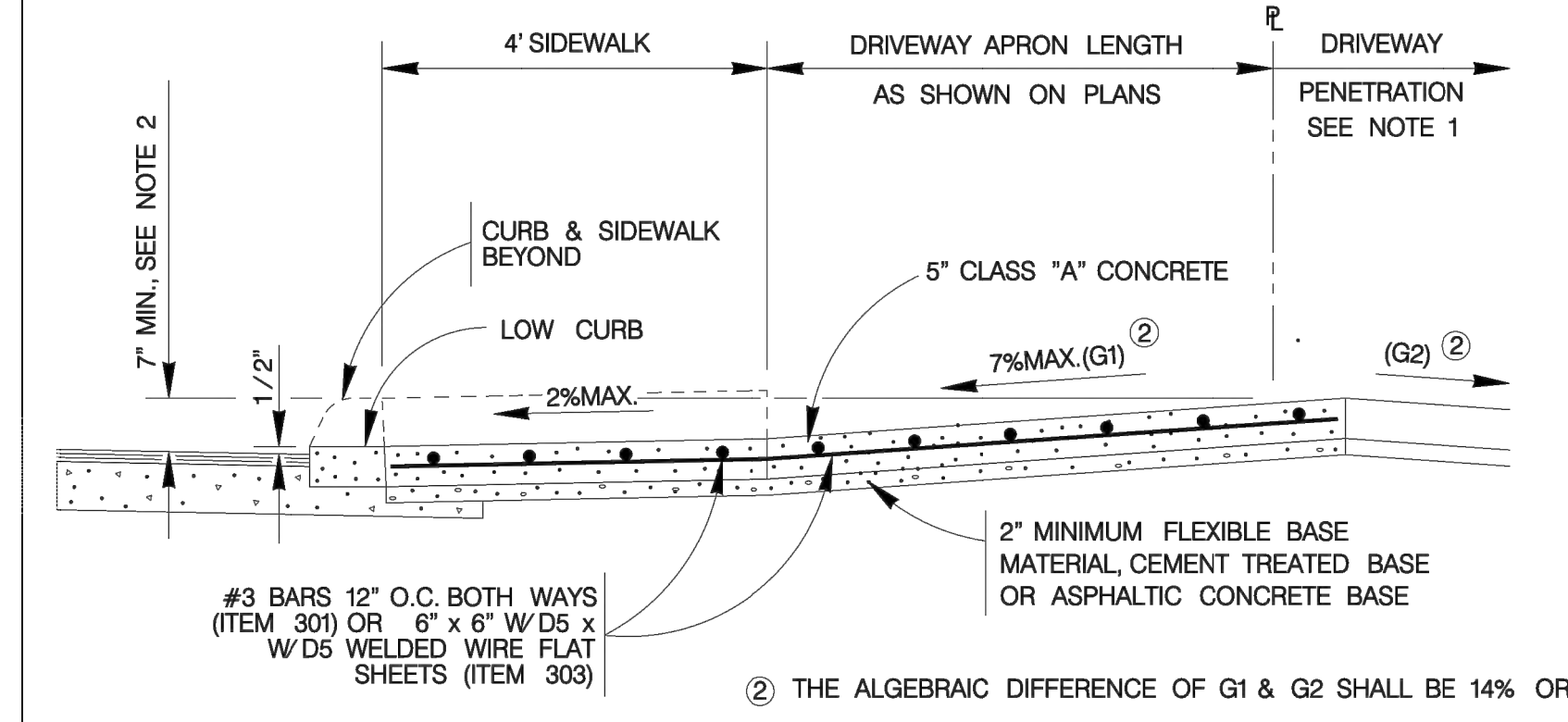
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**  
 WITH SIDEWALK ABUTTING CURB  
 ITEM 503.1



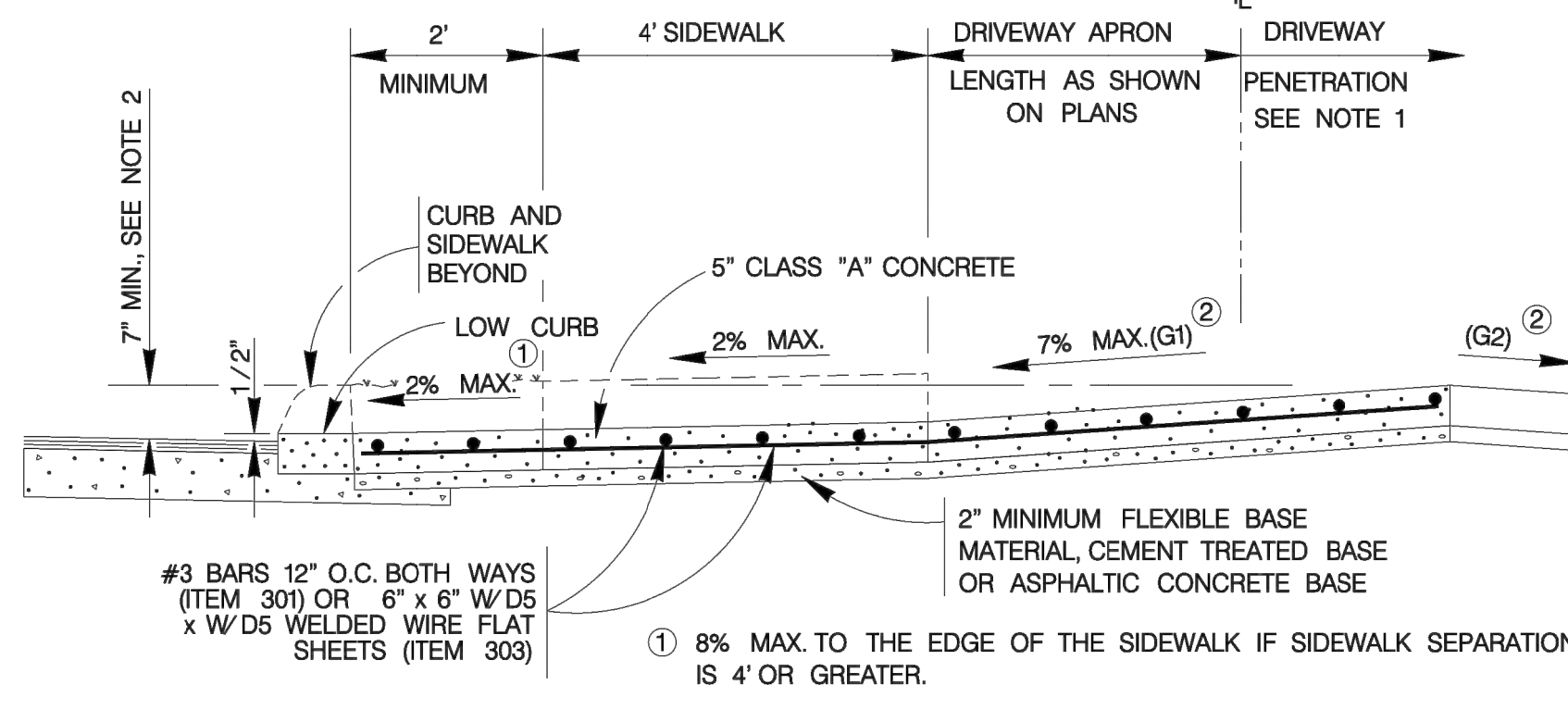
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**  
 WITH SIDEWALK SEPARATED FROM CURB  
 ITEM 503.1



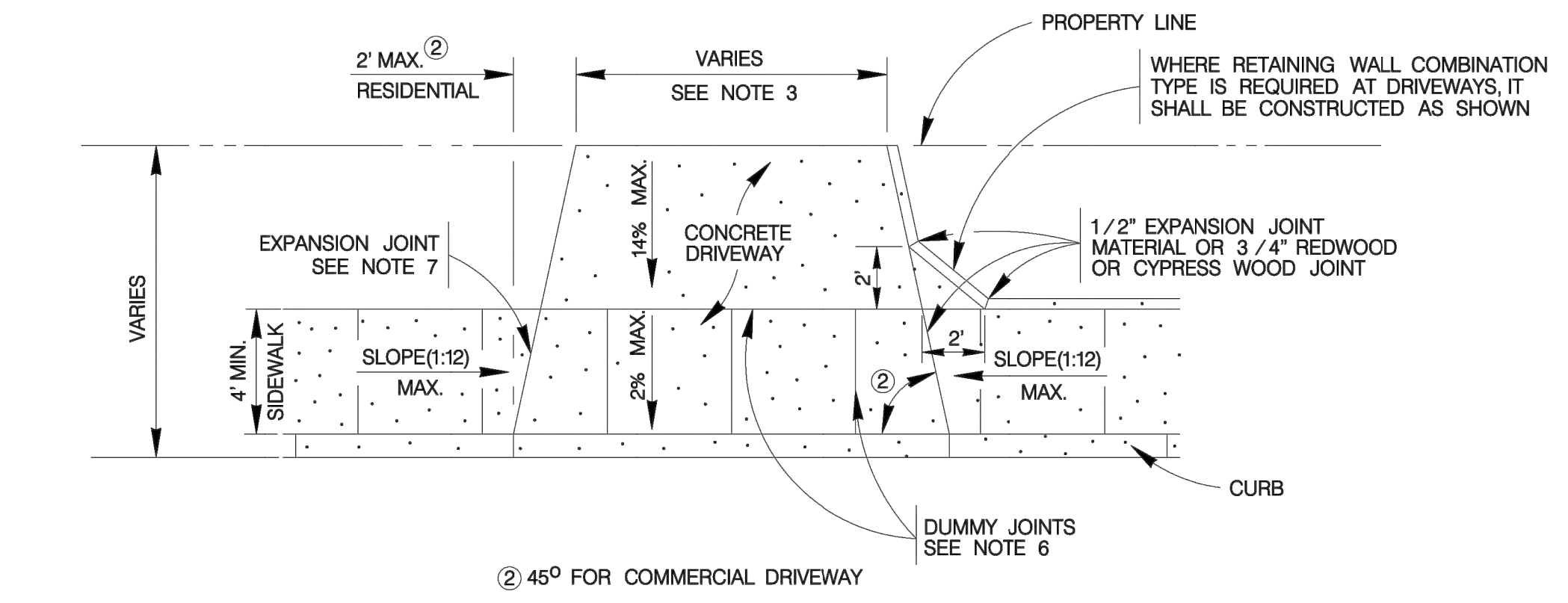
**CURB PROFILE AT DRIVEWAY**  
 WITH SIDEWALK ABUTTING CURB



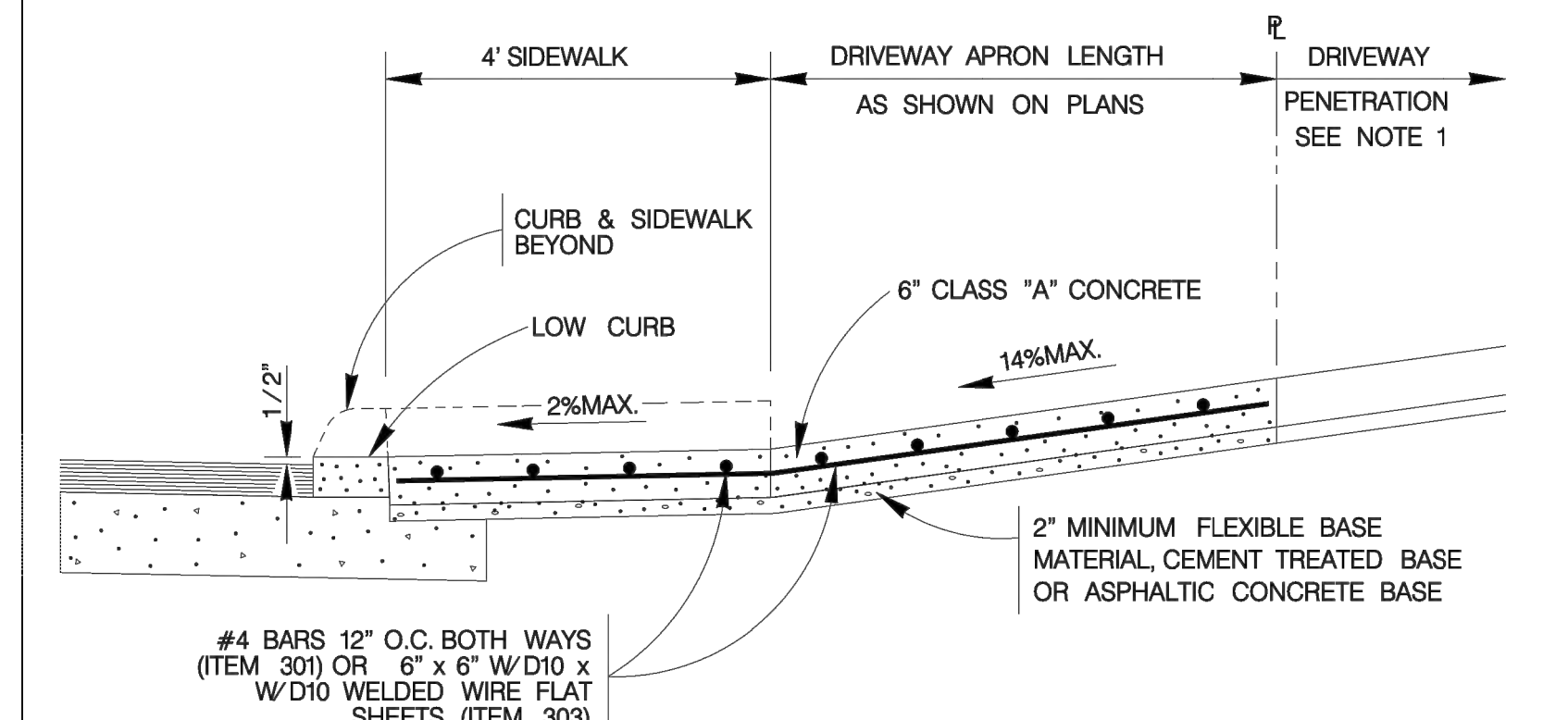
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**  
 WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB  
 ITEM 503.1



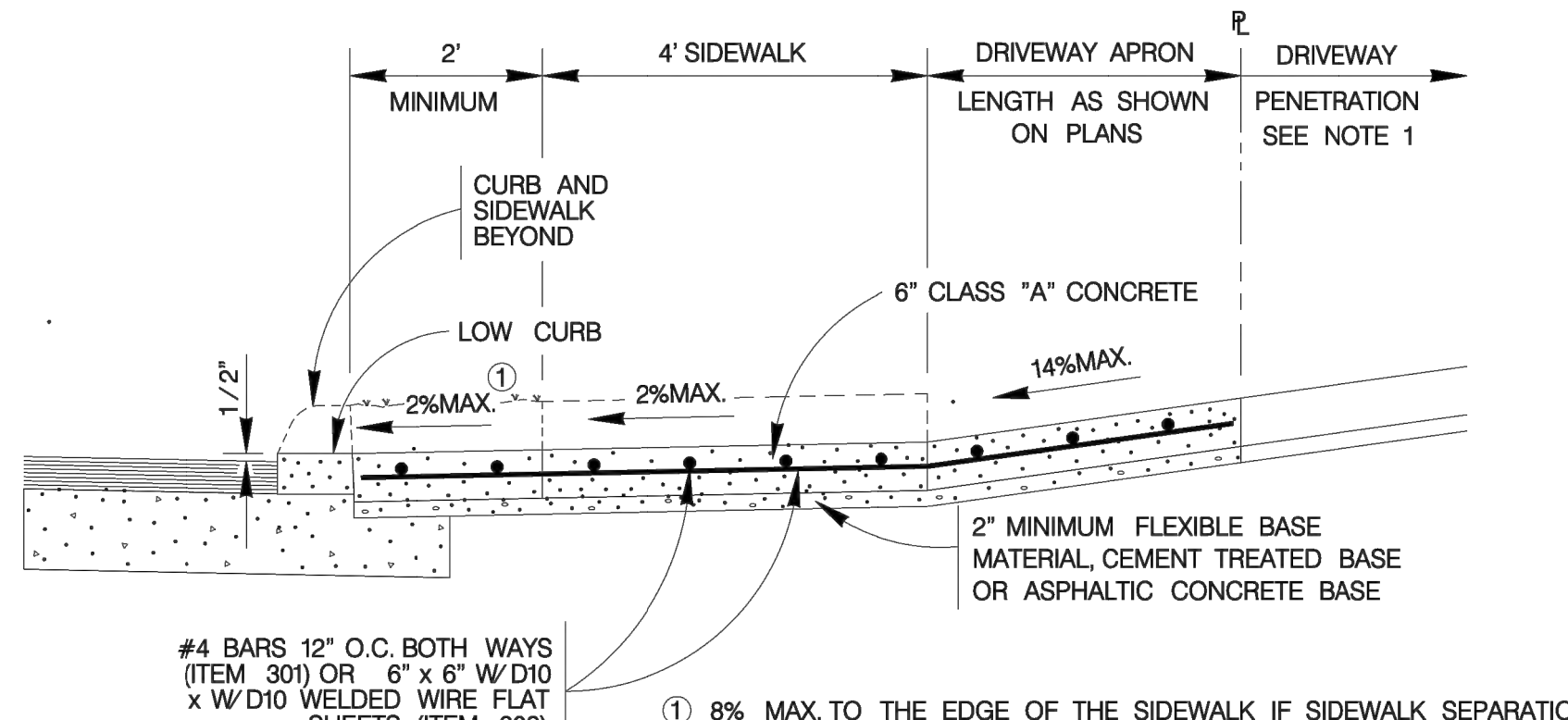
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**  
 WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB  
 ITEM 503.1



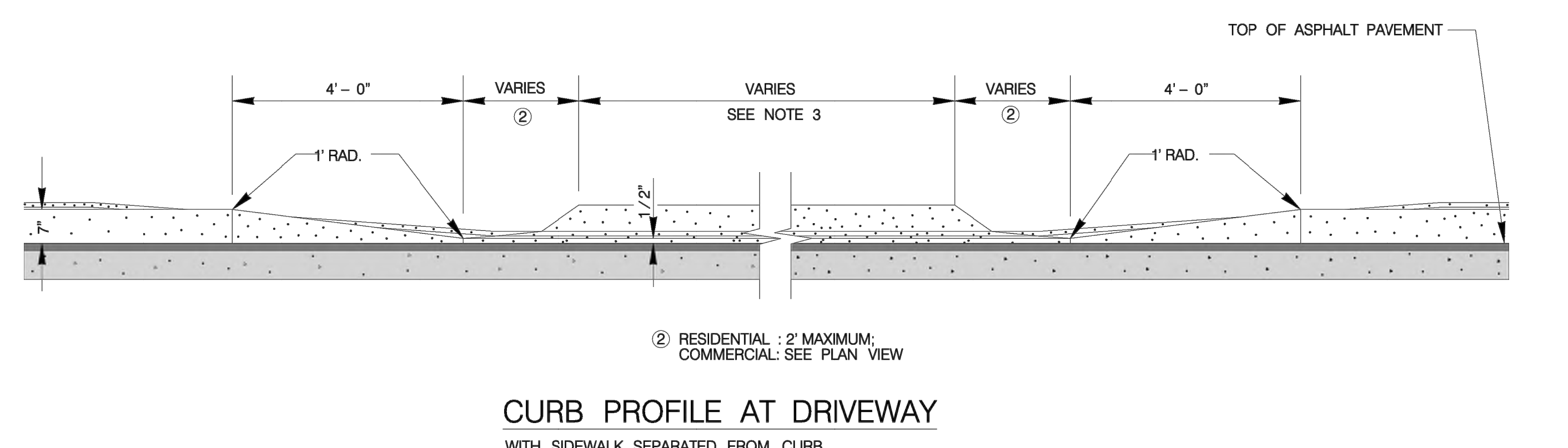
**TYPICAL DRIVEWAY PLAN VIEW**  
 WITH SIDEWALK ABUTTING CURB



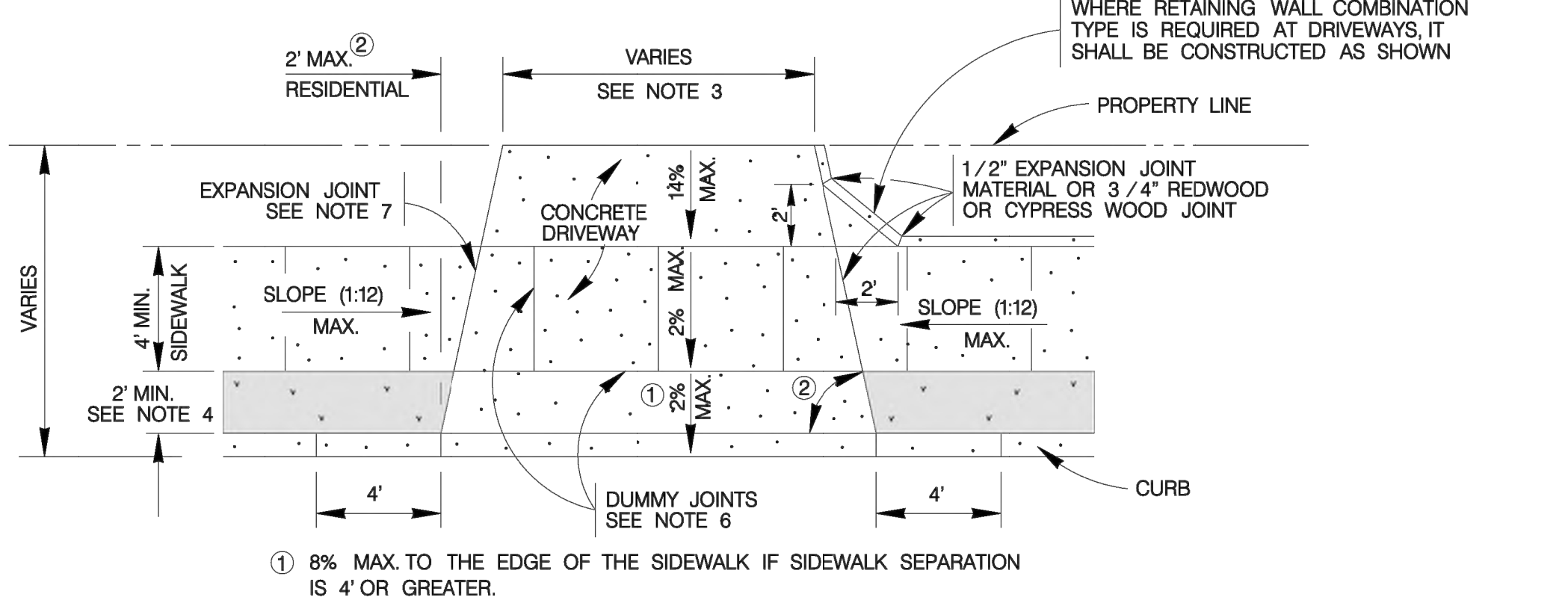
**TYPICAL COMMERCIAL DRIVEWAY SECTION**  
 WITH SIDEWALK ABUTTING CURB  
 ITEM 503.2



**TYPICAL COMMERCIAL DRIVEWAY SECTION**  
 WITH SIDEWALK SEPARATED FROM CURB  
 ITEM 503.2



**CURB PROFILE AT DRIVEWAY**  
 WITH SIDEWALK SEPARATED FROM CURB

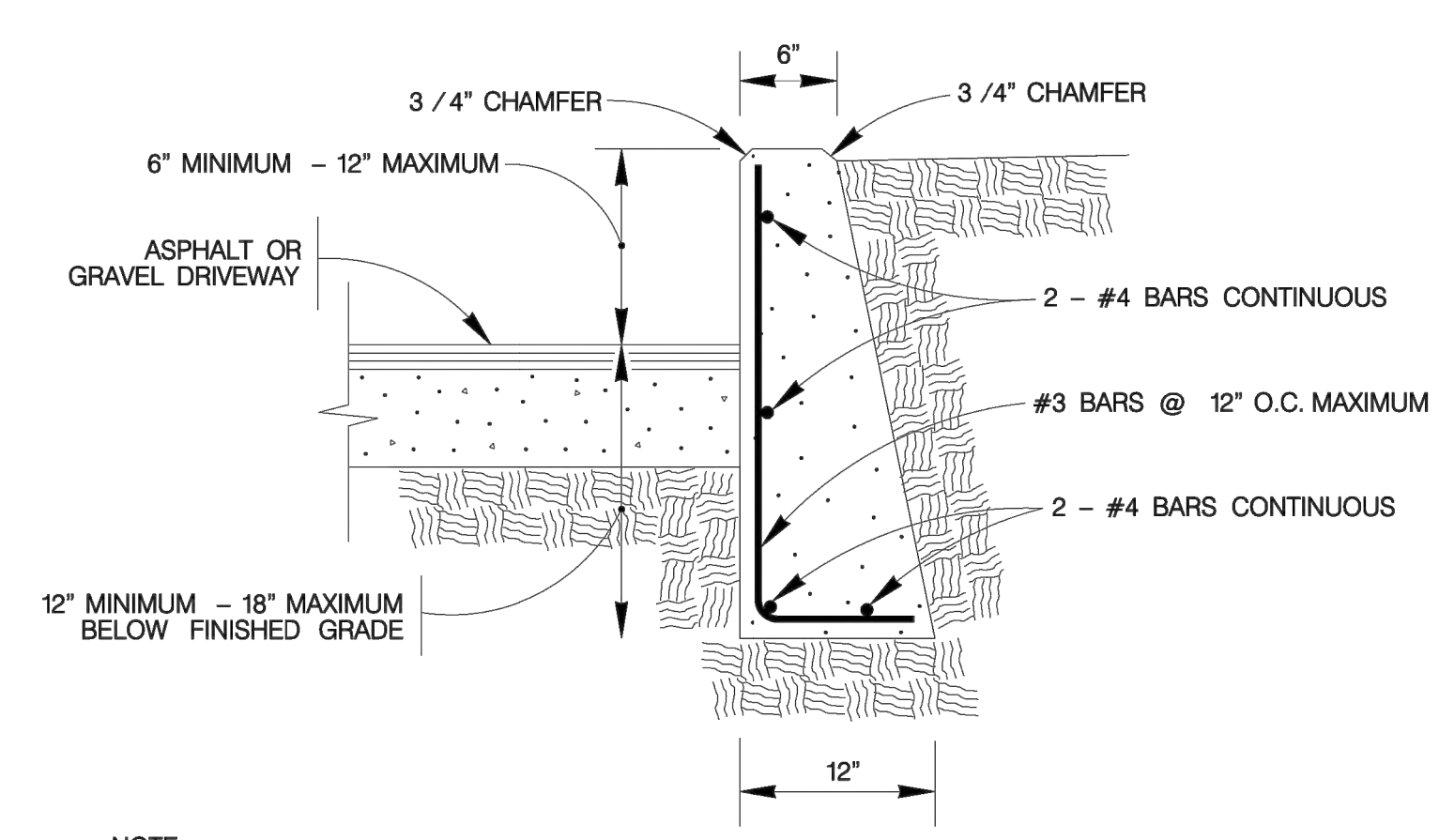


**TYPICAL DRIVEWAY PLAN VIEW**  
 WITH SIDEWALK SEPARATED FROM CURB

**CONCRETE DRIVEWAY NOTES**

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

TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL - ONE WAY	12'	20'
COMMERCIAL - TWO WAY	24'	30'
- FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
- FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
- DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
- A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
- SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE, WHERE SIDEWALKS CROSS DRIVEWAYS. SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.

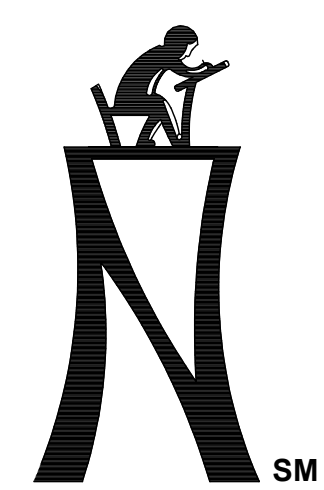


**DRIVEWAY - CONCRETE RETAINING WALL**  
 ON COMPACTED SUBGRADE  
 ITEM 307.1

MAY 2009  
**CITY OF SAN ANTONIO**  
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

**CONCRETE DRIVEWAY STANDARDS**

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



**KCI TECHNOLOGIES, INC.**  
 2808 W. BITTERS ROAD, SUITE 218  
 SAN ANTONIO, TEXAS 78246  
 PHONE: (210) 641-6949  
 FAX: (210) 641-6440  
 REGISTRATION #101943-65



THE SEAL APPEARING ON THIS DOCUMENT WAS VALID FOR THE STATE OF TEXAS UNTIL JANUARY 31, 2024.  
 PAUL A. MARTIN, P.E.  
 REGISTERED PROFESSIONAL ENGINEER  
 NO. #105075  
 OK JANUARY 31, 2024 DATE



**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
 RFCSP # 2024-005  
 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

**NORTHSIDE INDEPENDENT SCHOOL DISTRICT**  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238

KCI JOB NO. 782303504  
 DATE: 01-31-2024  
 DRAWN BY: JAE  
 CHECKED BY: PAM  
 REVISIONS:

C5.7

**TRENCH EXCAVATION SAFETY PROTECTION**

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

- NOTES:
- HANDRAILS SHALL BE PROVIDED ALONG BOTH SIDES OF RAMP SEGMENTS. THE INSIDE HANDRAIL ON SWITCHBACK OR DOUGLE RAMP SHALL ALWAYS BE CONTINUOUS.
  - IF HANDRAILS ARE NOT CONTINUOUS, THEY SHALL EXTEND AT LEAST 12" BEYOND THE TOP AND BOTTOM RAIL OF THE RAMP SEGMENT AND SHALL BE PARALLEL WITH THE FLOOR OR GROUND SURFACE.
  - THE CLEAR SPACE BETWEEN THE HANDRAIL AND THE WALL SHALL BE 1-1/8".
  - GRIPPING SURFACE SHALL BE CONTINUOUS.
  - TOP OF HANDRAIL GRIPPING SURFACES SHALL BE MOUNTED BETWEEN 34" AND 36" ABOVE RAMP SURFACES.
  - ENDS OF RAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST.
  - HAND RAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

THE FOLLOWING SECTION OF DETAILS PROVIDES INFORMATION ON REQUIREMENTS FOR DISABLED ACCESSIBILITY. THE REQUIREMENTS COMBINE MINIMUM REQUIREMENTS OF STATE AND FEDERAL AGENCIES. THE PURPOSE OF THIS SECTION IS TO HELP AVOID INSTALLATION OF MATERIALS ON CONSTRUCTION PROJECTS THAT WOULD LIMIT ACCESSIBILITY. THE SCOPE OF THIS SECTION IS LIMITED TO THE INDIVIDUALS WORKING ON THE PROJECT SHOULD FAMILIARIZE THEMSELVES WITH TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAG) FOR ADDITIONAL INFORMATION AND REQUIREMENTS. COPIES OF THESE DOCUMENTS MAY BE OBTAINED BY CONTACTING THE FOLLOWING:

TAS: OFFICE OF THE SECRETARY OF STATE  
 TEXAS REGISTER DIVISION  
 810 BOX 13824  
 AUSTIN, TEXAS 78711-3824  
 (512) 463-5569  
 FAX (512) 463-5581  
 TDD (800) 735-2989

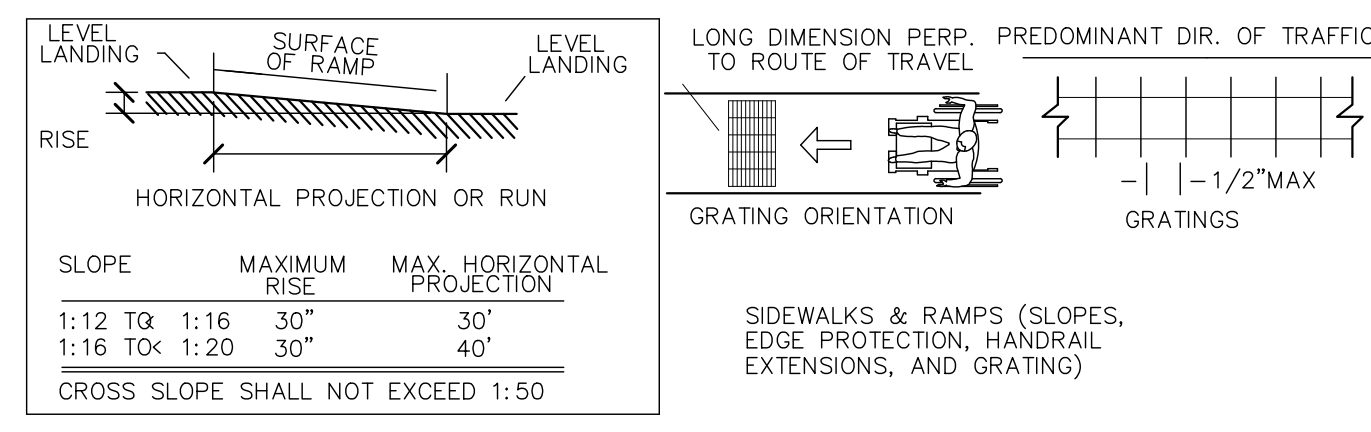
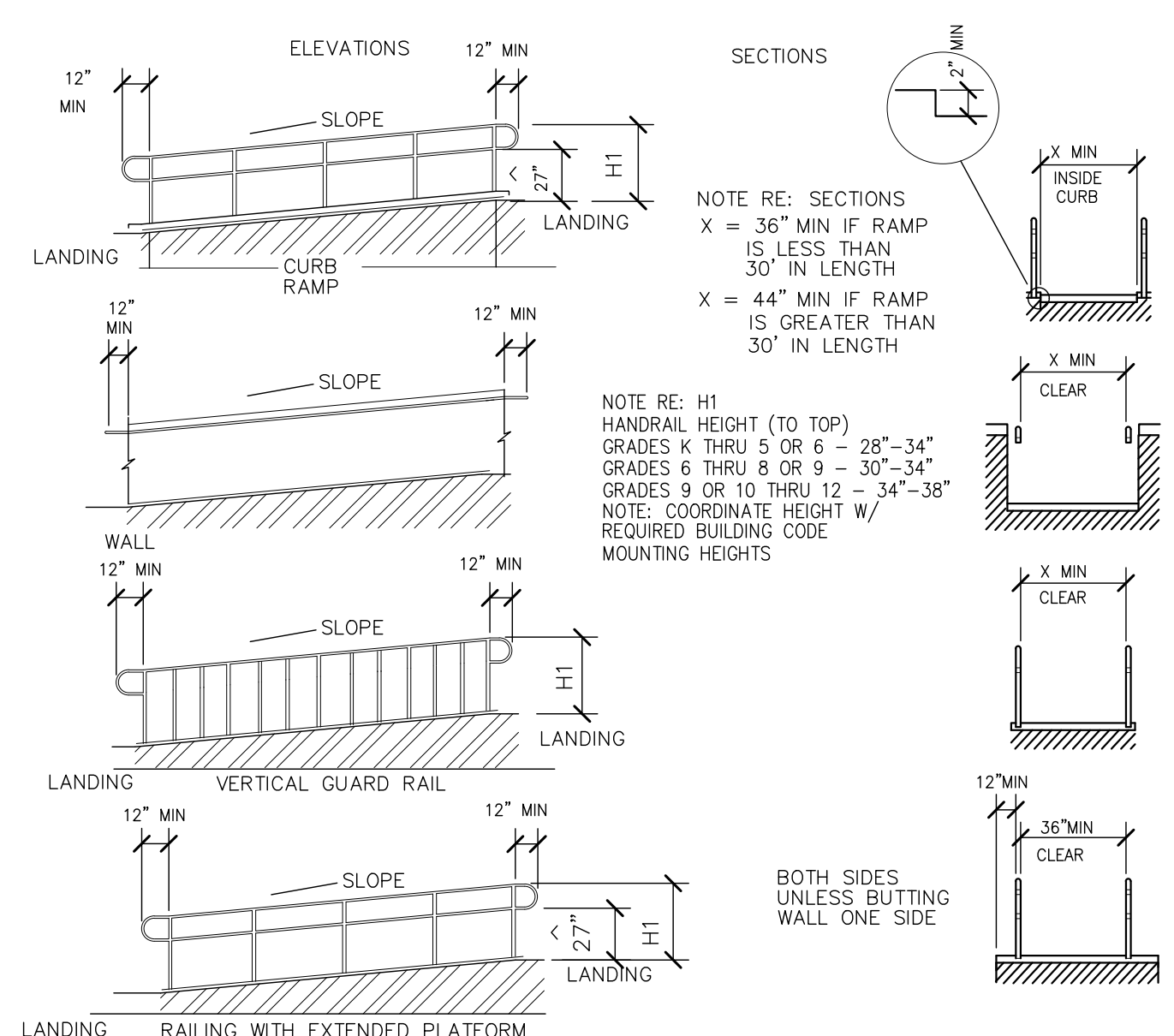
ADAG: SOUTHWEST DISABILITY AND BUSINESS TECHNICAL ASSISTANCE CENTER FOR REGION VI  
 2323 S. SHEPHERD, SUITE 1000  
 HOUSTON, TEXAS 77019  
 (800) 949-4232  
 TDD: (713) 520-5136  
 (713) 520-5232  
 FAX: (713) 520-5785

IN THE EVENT THE INFORMATION ON THE PLAN SHEETS DOES NOT MEET THE MINIMUM REQUIREMENTS OF THE SECTION, THEN THE INFORMATION SHALL BE PRESENTED TO THE ENGINEER FOR CLARIFICATION PRIOR TO CONSTRUCTION OF SPECIFIC AREA OF WORK.

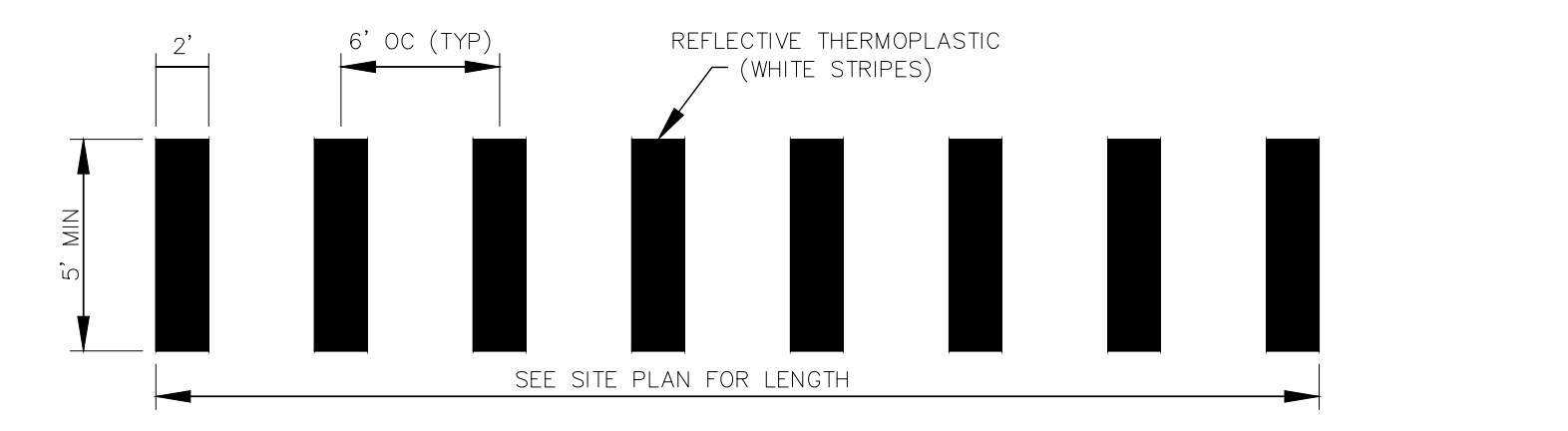
**ELIMINATION OF ARCHITECTURAL BARRIERS REFER TO TEXAS ACCESSIBILITY STANDARDS**

In accordance with accessibility requirements, the following standards shall be included when bidding on projects involving renovations of or new facilities for public accommodation or commercial facilities. Any items not conforming to these or any other standards, codes, or ordinances shall be brought to the attention of the project Civil Engineer and Registered Accessibility Specialist. In the event the information listed in this document conflicts with any portion of the work described in the Contract Documents, the contractor shall notify the Civil Engineer and Registered Accessibility Specialist, in writing, of this need for a solution to resolve the conflict. The mounting heights indicated are for items that require accessibility by disabled individuals. Contractor to coordinate installation heights with other materials for neat, finished out and finished appearance within and outside of buildings within the property and extending out into the ROW along the frontage of his property. Items for disabled individual use shall be mounted at height indicated within plans or noted in the construction documents.

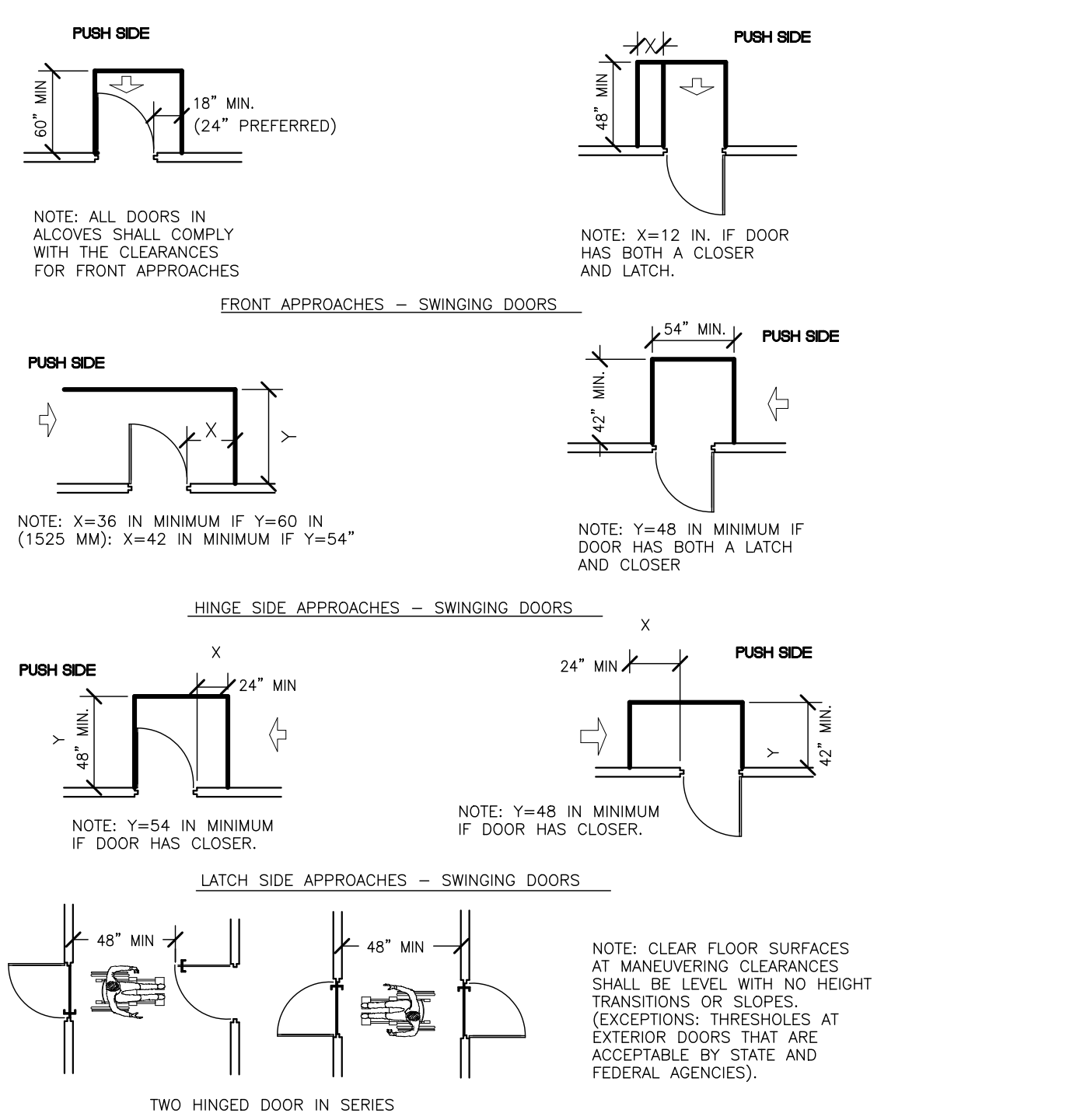
- DOORS AND OPENINGS:**
  - Raised Thresholds and Floor Level Changes at Doorways: Changes in level at doors shall not exceed one-half inch (1/2") in height and shall be beveled with a slope no greater than 1:2.
  - Door Hardware: Handles, pulls, latches, locks, and other operating devices on doors shall have a shape that is easy to grasp with one hand and does not require light grasping, light pinching, or twisting to operate. The force required to activate door hardware shall be no greater than five lbs. Acceptable designs include lever-operated mechanisms, push-type mechanisms, and U-shaped handles. When sliding doors are fully open, operating hardware shall be exposed and usable from both sides. Doors to hazardous areas such as loading platforms, boiler rooms, mechanical and electrical rooms, stage, and other areas that might be dangerous to a blind person, shall be made detectable to the touch by a beveled surface on the door handle, pull, or other operating hardware. This beveled surface may be made by knurling or roughening (no tape allowed). Such beveled surfaces shall not be provided for emergency exit doors or any doors other than those to hazardous areas.
  - Door Closer: If a door has a closer, then the sweep period of the closer shall be adjusted so that from an open position at (a) 90 degrees, the door will take at least three seconds to move to an open position of approximately 12 degrees; or (b) 70 degrees, the door will take at will take at least three seconds to move to a joint 3 inches from the latch, measured to the leading edge of the door.
  - Door Opening Force: The maximum force for pushing or pulling open a door shall comply with this paragraph. For hinged doors, the force shall be applied perpendicular to the door at the door opener or 30 inches from the hinged side, whichever is farther from the hinge. For sliding or folding doors, the force shall be applied parallel to the door at the door pull or latch.
    - Exterior hinged doors shall not exceed 8.5 lbf. Slight increase in opening force shall be allowed where 8.5 lbf is insufficient to compensate for air pressure differentials.
    - Sliding doors, folding doors, and interior hinged doors shall not require a force exceeding five lbf.
    - Fire doors may be adjusted to meet the minimum opening force allowed by the governing authority or applicable building code.
- CONTROLS AND OPERATING MECHANISMS:**
  - All controls and devices having general use mechanical or electrical operating mechanisms which are expected to be operable by occupants, visitors, or other users of a building or facility, shall comply with this subsection. Such mechanisms may include, but are not limited to, thermostats, light switches, alarm activating units, ventilators, electrical outlets, poppartswel dispensers, etc.
    - Clear Floor Space: A clear floor space that allows a forward or parallel approach by a person using a wheelchair shall be provided at all controls, dispensers, receptacles, and other operable equipment. The space shall never be less than an area 30 x 48 inches.
    - Height: The highest operable part of any control, dispenser, receptacle, and other operable equipment shall be no higher from the floor than heights indicated on attached sketches for forward and side approach except where the use of special equipment dictates otherwise. Electrical and communications systems receptacles on walls shall be mounted no less than fifteen inches (15") above the floor.
    - Operation: controls and operating mechanisms shall be operable with one hand and shall not require light grasping, pinching, or severe twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf.
- SIGNAGE:**
  - Wherever signage is used for emergency information or general circulation directions for the identification of rooms and spaces, at least one unit of signage shall be provided for each function and each room or space that is identified.
    - Character Proportion: Letters and numbers on signs shall have width-to-height ratio between 3.5 and 1:1, and a stroke width-to-height ratio between 1.5 and 1:10, using an upper case "X" for measurement.
    - Color Contrast: Characters and symbols shall have contrast with their background.
    - Tactile Characters and Symbols: Characters, symbols, or pictographs on signs required to be tactile, shall be raised 1/32 in. minimum. Letters and numbers shall be sans serif characters; shall be at least 5/8 in. high, but should be no higher than 2 in.; and shall be proportioned in accordance with subparagraph 3.A.1. above.
    - Mounting Height and Location: Room identification signs shall be mounted on the wall surface on the latch (strike) side of doors between approx. 54 in. (54") and 66 in. (66") above the finish floor and within 8 in. (8") from the outside edge of the door frame. Other signs for directional information only shall be mounted between 54" and 66" above finish floor.



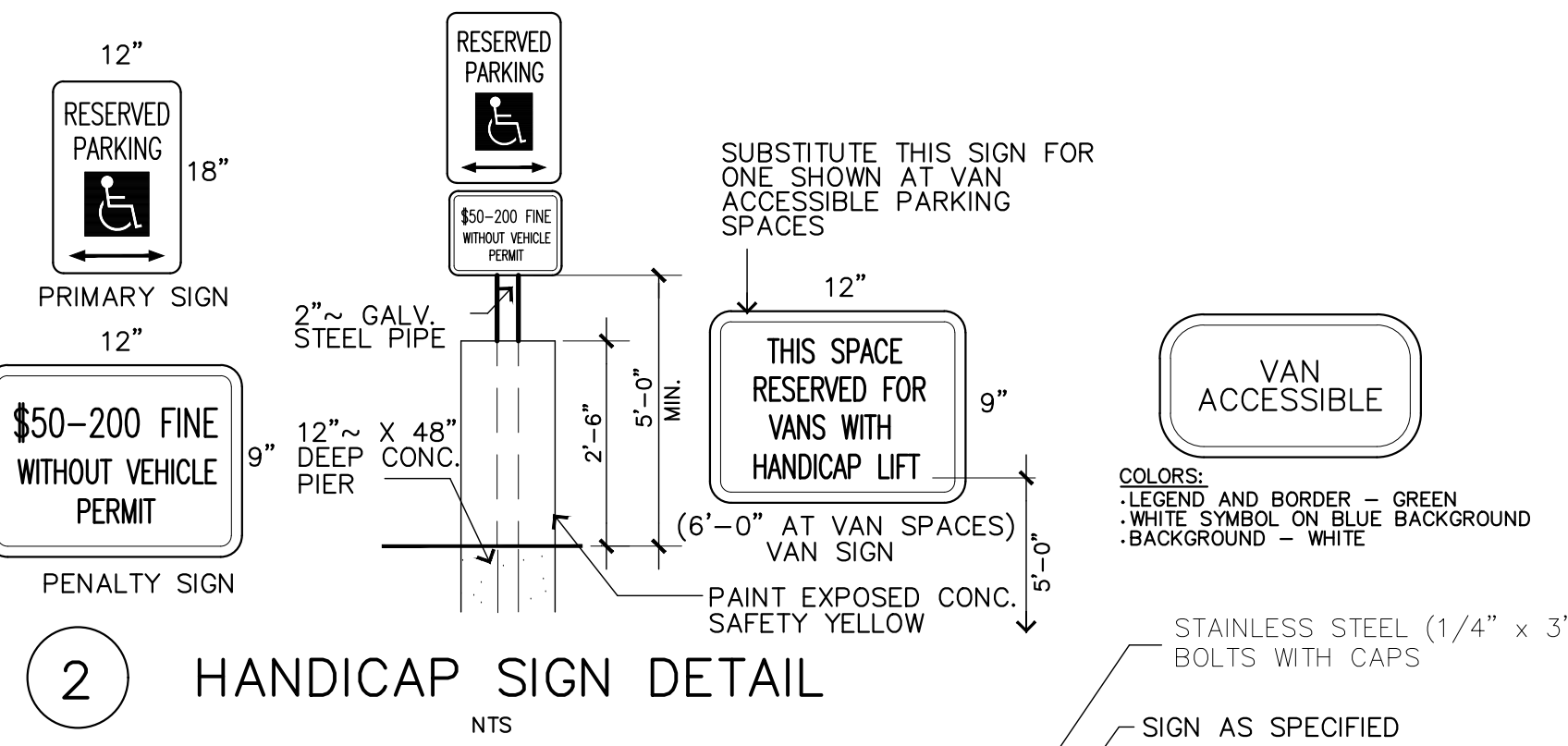
**4 SIDEWALKS & RAMPS**  
 NTS



**7 PEDESTRIAN CROSS WALK STRIPING**  
 NTS

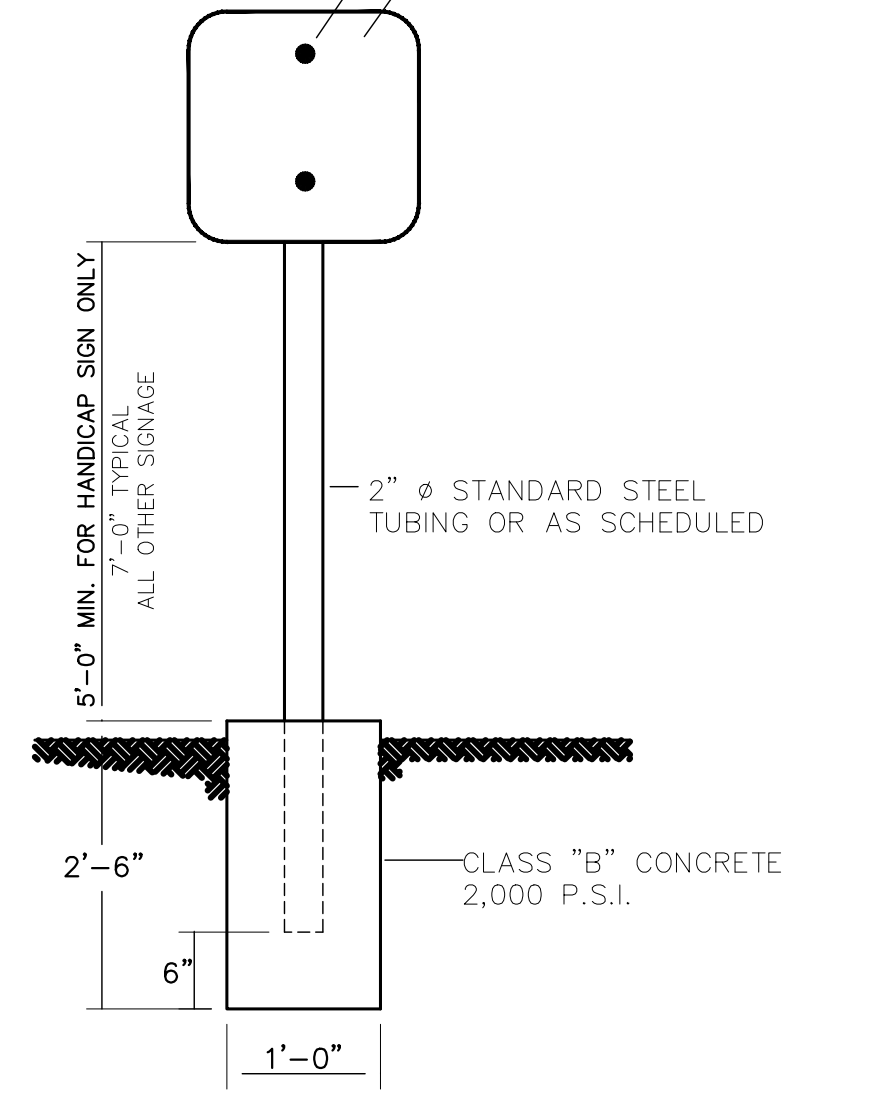


**8 MANEUVERING CLEARANCES @ DOORS / GATES**  
 NTS



**2 HANDICAP SIGN DETAIL**  
 NTS

**PROJECT ADA NOTE:**  
 HANDICAP SYMBOL PAINTED IN THE FIELD ON THE PAVEMENT FOR EACH ADA SPACE SHALL BE COORDINATED WITH OWNER PRIOR TO INSTALLATION. LOCATION ON PLAN VIEW OF THE SITE AND GRADING PLAN IS REPRESENTATIVE OF WHERE THE ADA PARKING SPOTS SHOULD BE. ALSO, "NO PARKING" LETTERING IN THE STRIPED ACCESS AISLE SHALL BE COORDINATED WITH OWNER PRIOR TO INSTALLATION.

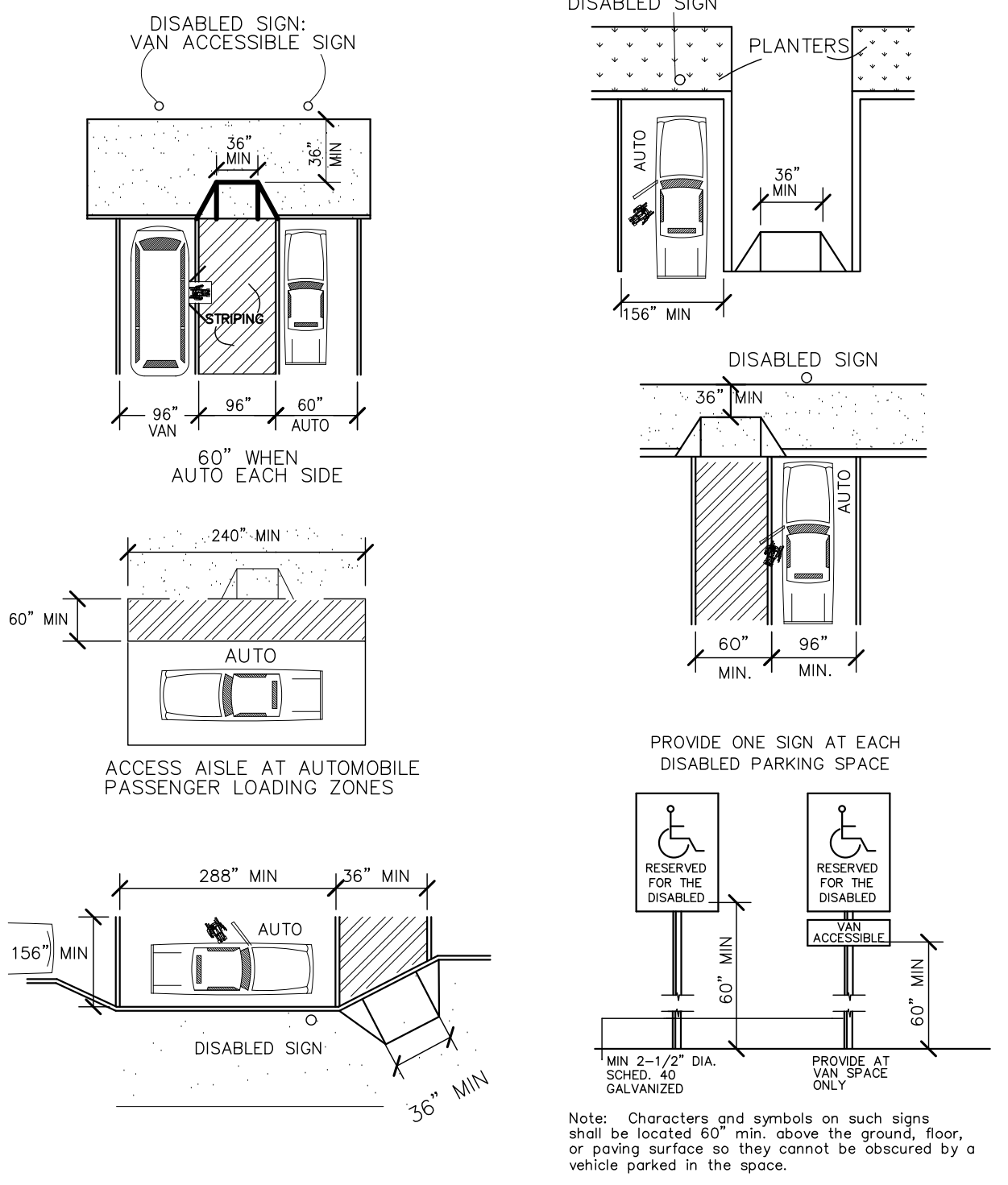


**3 SIGN PIPE SUPPORT**  
 NTS

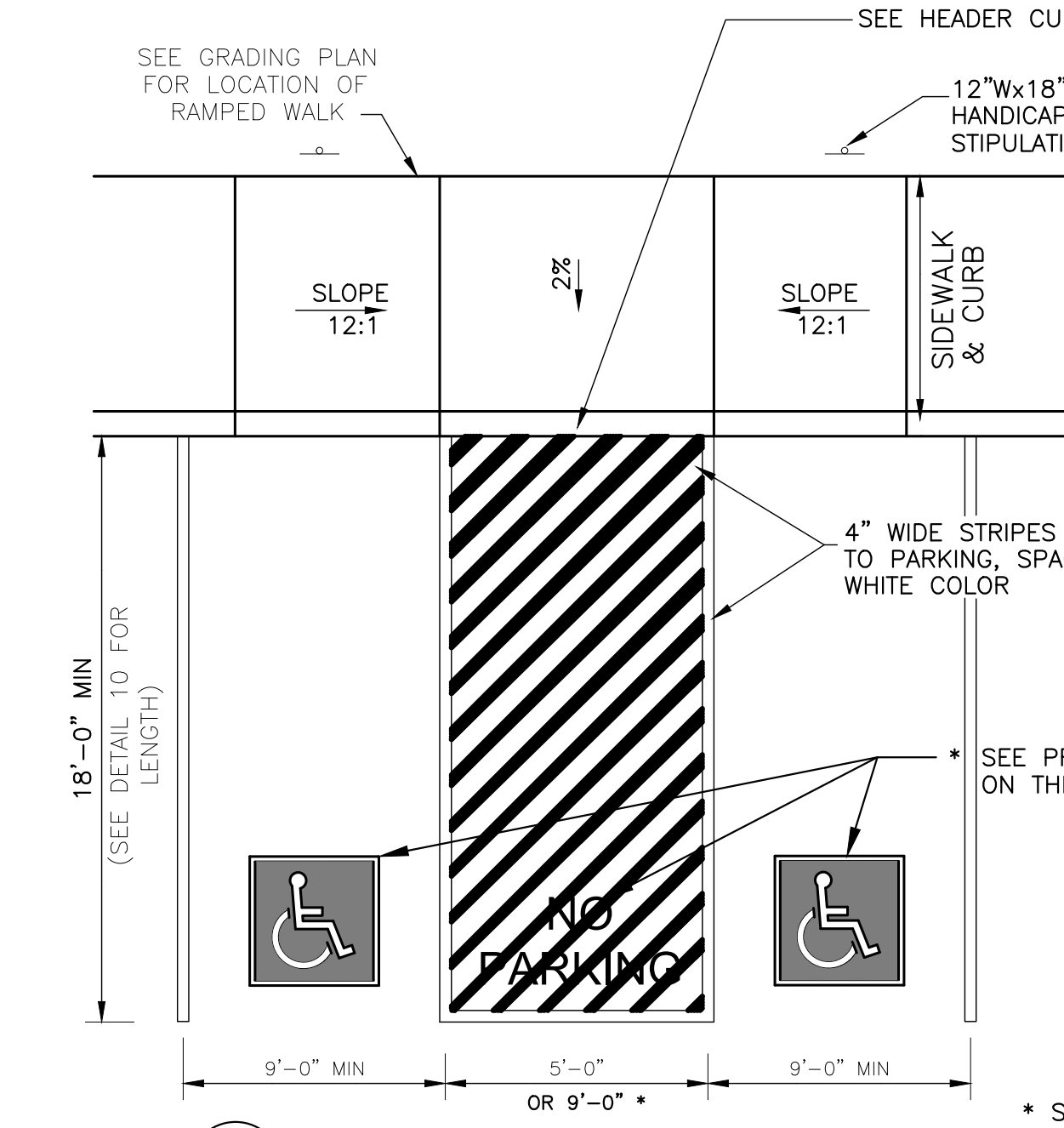
**Table 2, Section 4.1.2 TDLR Architectural Barriers Act "Accessible Parking Space Requirements"**

Total Parking In Lot	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of Total
1001 and Over	20 Plus 1 for each 100 over 1000

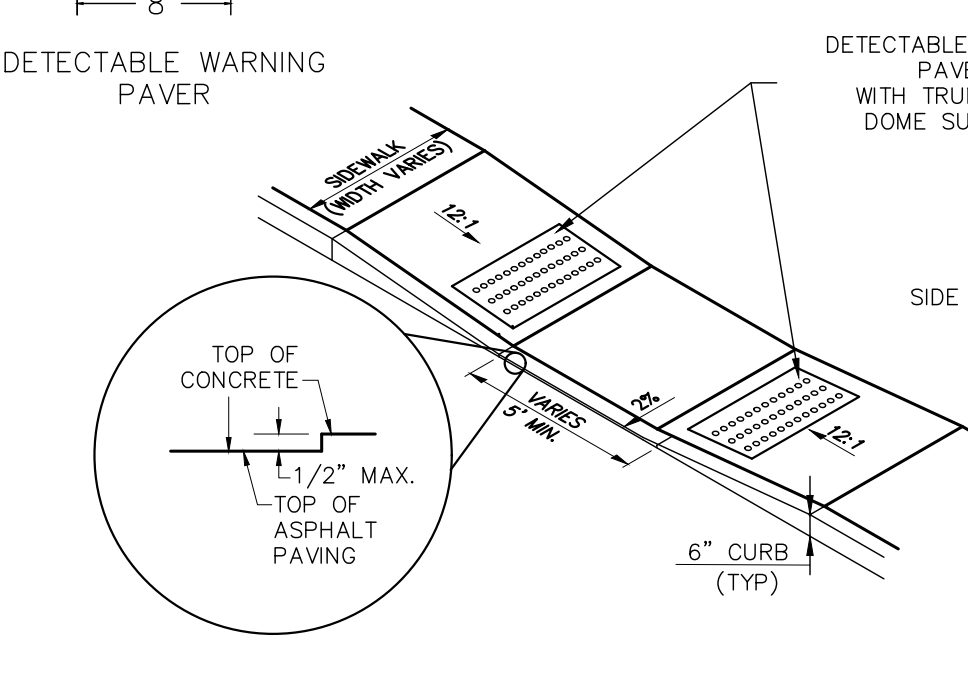
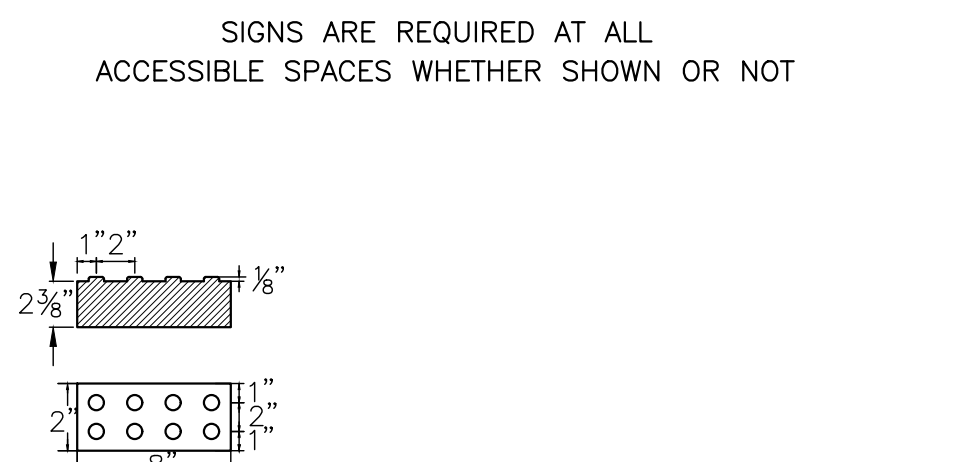
One in every eight accessible spaces, but not less than one, shall be served by an access aisle 96" wide minimum and shall be designated "van accessible" as required by 4.6.4. The vertical clearance at such spaces shall comply with 4.6.5. All such spaces may be grouped on one level of a parking structure.



**1 SIGNAGE**  
 NTS



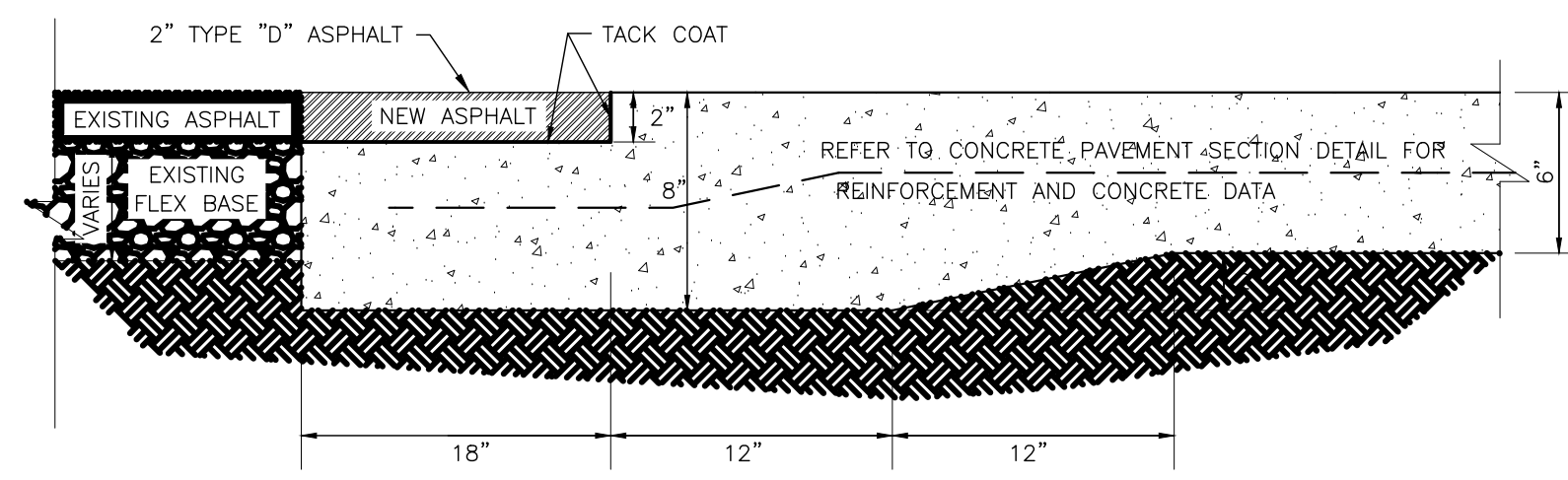
**5 HANDICAP MARKINGS**  
 NTS



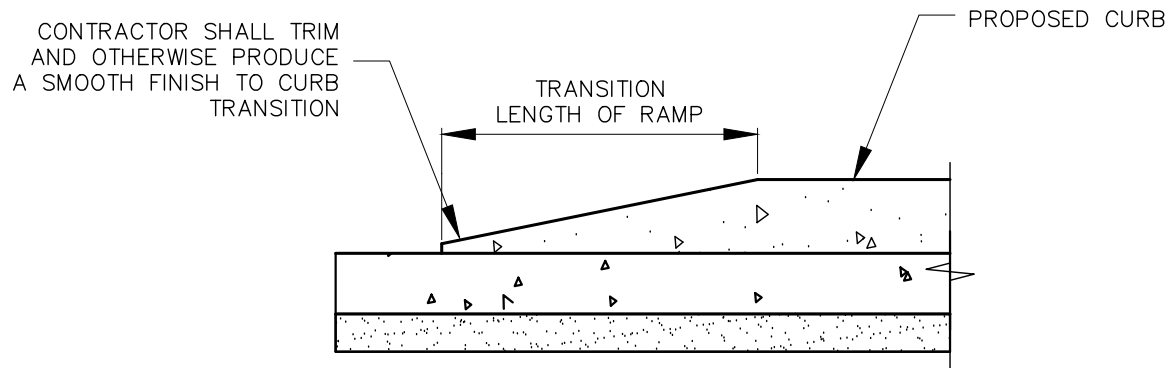
**6 HC CURB RAMP DETAIL**  
 NTS

1" MORTAR BED (SHALL CONFORM TO APPLICABLE SPECIFICATIONS)  
 EXPANSION JOINT AS REQUIRED  
 SIDE FLARE (TYP)  
 2" SAND CUSHION  
 MIN. 4"

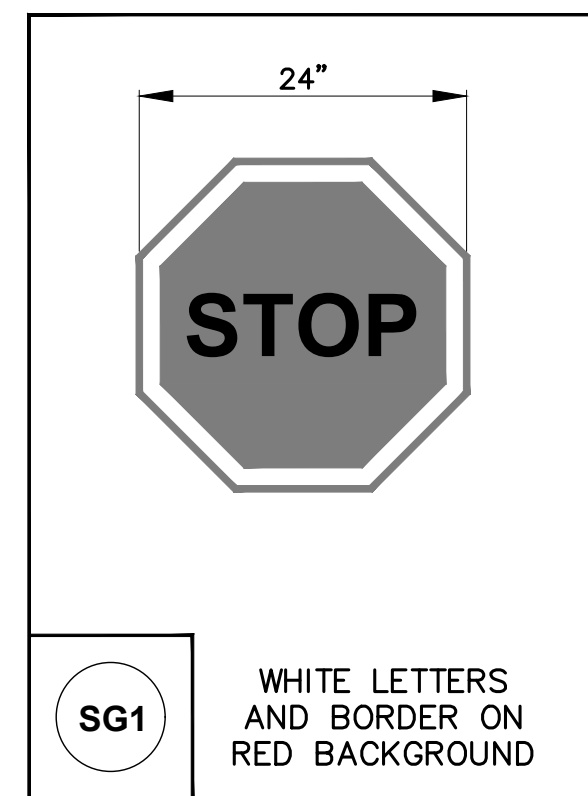




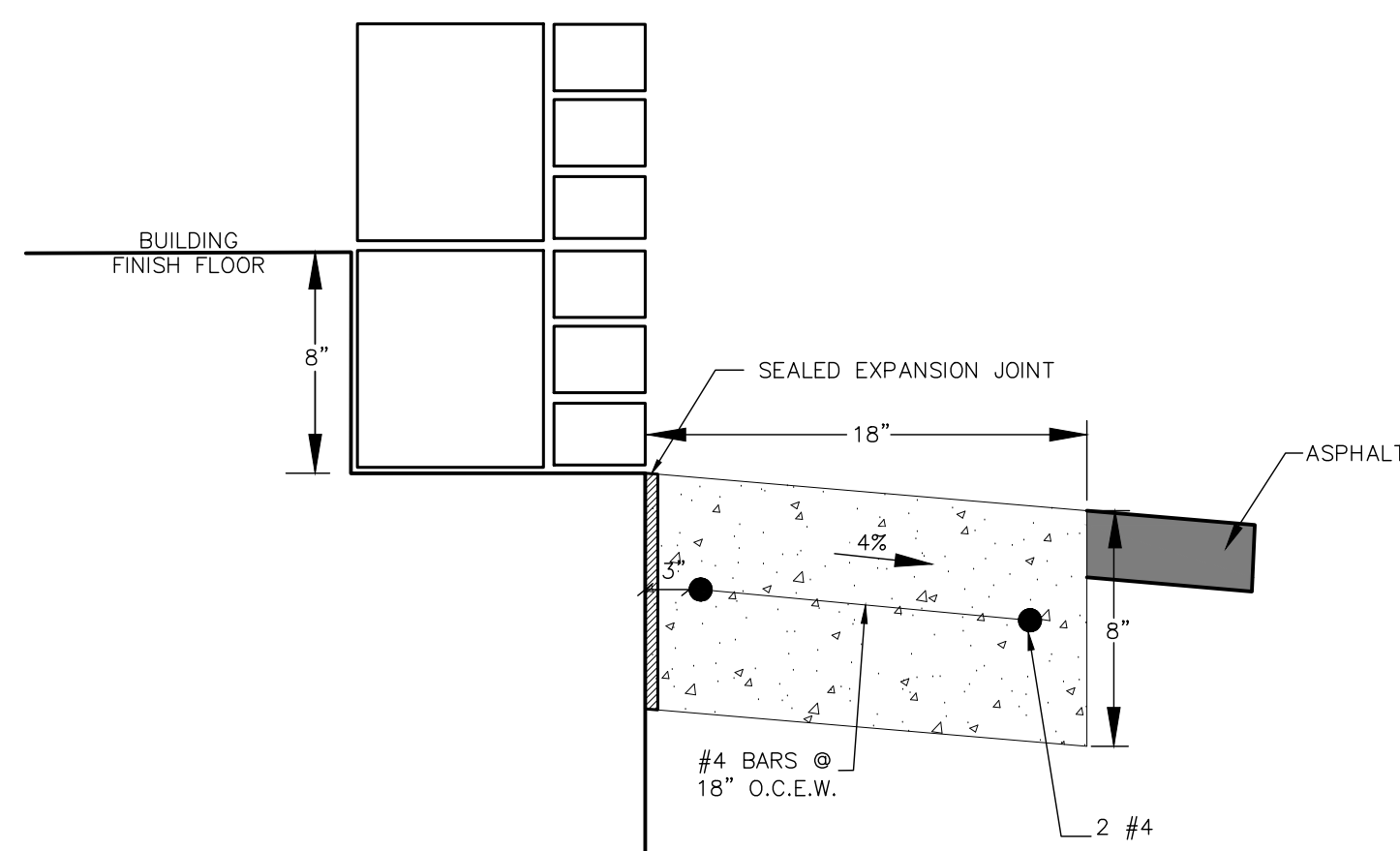
1 CONCRETE/ASPHALT PAVEMENT JUNCTION DETAIL  
N.T.S.



2 TAPERED CURB TRANSITION DETAIL  
N.T.S.



3 STOP SIGN DETAIL  
N.T.S.



4 18" RIBBON CURB DETAIL  
N.T.S.

ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.  
REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60, A705 GRADE 60 OR A647 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS.  
"STANDARD STRUCTURAL DESIGN IS BASED" ON AASHTO HS 20 WHEEL LOADING.  
WATER TABLE IS AT 3'-0" BELOW GRADE FOR STANDARD STRUCTURAL DESIGN.  
THE STANDARD DESIGN IS BASED ON THE TOP AT GRADE AND THE BASE AT 8'-0" MAX. BELOW GRADE.  
THE STRUCTURE SHALL BE PLACED ON A COMPACTED GRANULAR BASE TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURES.  
SPECIAL DESIGNS BASED ON OTHER LOADINGS OR DEEPER INSTALLATION DEPTHS ARE AVAILABLE ON REQUEST.  
KNOCKOUTS OR PIPE OPENINGS CAN BE PROVIDED IN THE SIZE AND LOCATIONS REQUIRED.

APPROXIMATE CENTER SECTION WEIGHTS  
2'-0" INSIDE 2800 LBS.  
2'-6" INSIDE 2700 LBS.  
3'-0" INSIDE 2600 LBS.  
3'-6" INSIDE 2700 LBS.  
4'-0" INSIDE 2800 LBS.

APPROXIMATE BOTTOM SECTION WEIGHTS  
3'-6" INSIDE 4900 LBS.  
MINIMUM EXCAVATION 6'-0"x4'-0"

THINWALL KNOCKOUTS LOCATION AS REQUIRED  
MAXIMUM OPENING WIDTH IS 30" WITH 24" MAXIMUM WIDTH IN ADJACENT WALL.

Oldcastle Precast  
G133  
3'-0"x3'-0" GRATE INLET  
FILE NAME: 33G1.dwg  
ISSUE DATE: March, 2005  
1900 Billing Road San Antonio, TX 78214  
Phone: (210) 923-4523 Fax: (210) 921-0473  
www.oldcastleantonia.com

ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI.  
REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60, A705 GRADE 60 OR A647 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS.  
STANDARD STRUCTURAL DESIGN IS BASED ON AASHTO HS 20 WHEEL LOADING.  
WATER TABLE IS AT 3'-0" BELOW GRADE FOR STANDARD STRUCTURAL DESIGN.  
THE STANDARD DESIGN IS BASED ON THE TOP AT GRADE AND THE BASE AT 8'-0" MAX. BELOW GRADE.  
THE STRUCTURE SHALL BE PLACED ON A COMPACTED GRANULAR BASE TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURES.  
SPECIAL DESIGNS BASED ON OTHER LOADINGS OR DEEPER INSTALLATION DEPTHS ARE AVAILABLE ON REQUEST.  
KNOCKOUTS OR PIPE OPENINGS CAN BE PROVIDED IN THE SIZE AND LOCATIONS REQUIRED.

APPROXIMATE CENTER SECTION WEIGHTS  
2'-0" INSIDE 2800 LBS.  
2'-6" INSIDE 3400 LBS.  
3'-0" INSIDE 4100 LBS.  
3'-6" INSIDE 4800 LBS.  
4'-0" INSIDE 5500 LBS.

APPROXIMATE BOTTOM SECTION WEIGHTS  
4'-0" INSIDE 7300 LBS.  
MINIMUM EXCAVATION 7'-0"x4'-0"

THINWALL KNOCKOUTS LOCATION AS REQUIRED  
MAXIMUM OPENING WIDTH IS 48" WITH 36" MAXIMUM WIDTH IN ADJACENT WALL.

Oldcastle Precast  
G144  
4'-0"x4'-0" GRATE INLET  
FILE NAME: 44G1.dwg  
ISSUE DATE: March, 2005  
1900 Billing Road San Antonio, TX 78214  
Phone: (210) 923-4523 Fax: (210) 921-0473  
www.oldcastleantonia.com

Oldcastle Precast WATER 5'-0" x 5'-0" ID Inlet Model IN-55

1'-0" of Riser  
Weight: 1,660 lbs.

Base Slab  
Weight: 3,600 lbs.

SPECIFICATIONS:  
1. Concrete shall be 5000 PSI at 28 day compressive strength.  
2. Structure conforms to ASTM C913-02.  
3. Design: HS-25 traffic loading.

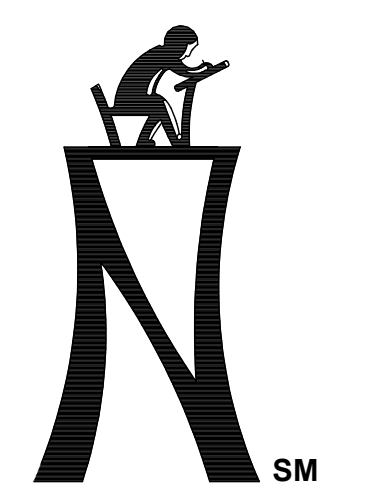
GENERAL NOTES:  
1. Sections to be made in 6" increments.

Mid Atlantic Region For more information about our products please visit us on the web at: [www.oldcastle.com](http://www.oldcastle.com)  
© 2013 Oldcastle Precast, Inc. 888-9 Oldcastle (888-969-3227)

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

SEPTEMBER 2009  
CITY OF SAN ANTONIO  
DEPARTMENT OF PUBLIC WORKS  
TRAFFIC ENGINEERING STANDARDS  
STANDARD PAVEMENT MARKINGS  
(ARROWS)

DATE	PROJECT NO.	DATE
DRAWN BY	CHECKED BY	DATE
DATE	DATE	DATE



KCI TECHNOLOGIES, INC.  
2808 W. BITTERS ROAD, SUITE 218  
SAN ANTONIO, TEXAS 78246  
PHONE: (210) 641-9899  
FAX: (210) 641-6440  
REGISTRATION #10-073 / #101943-65



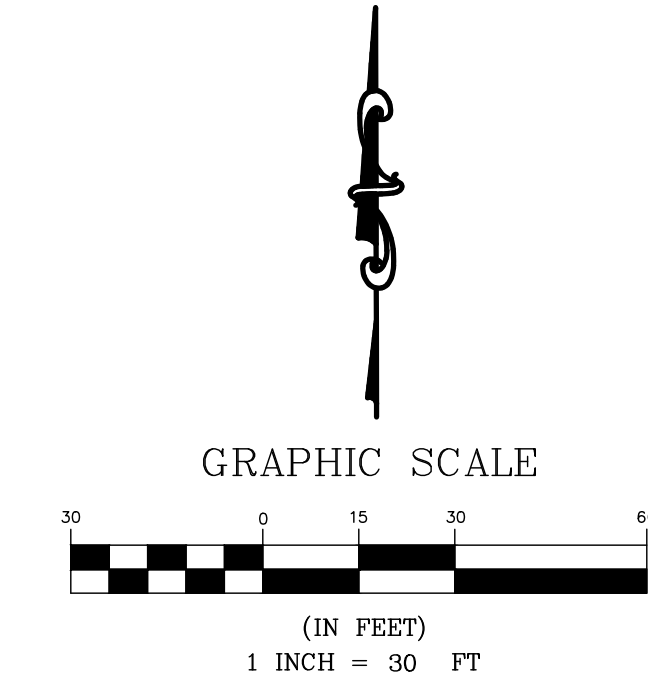
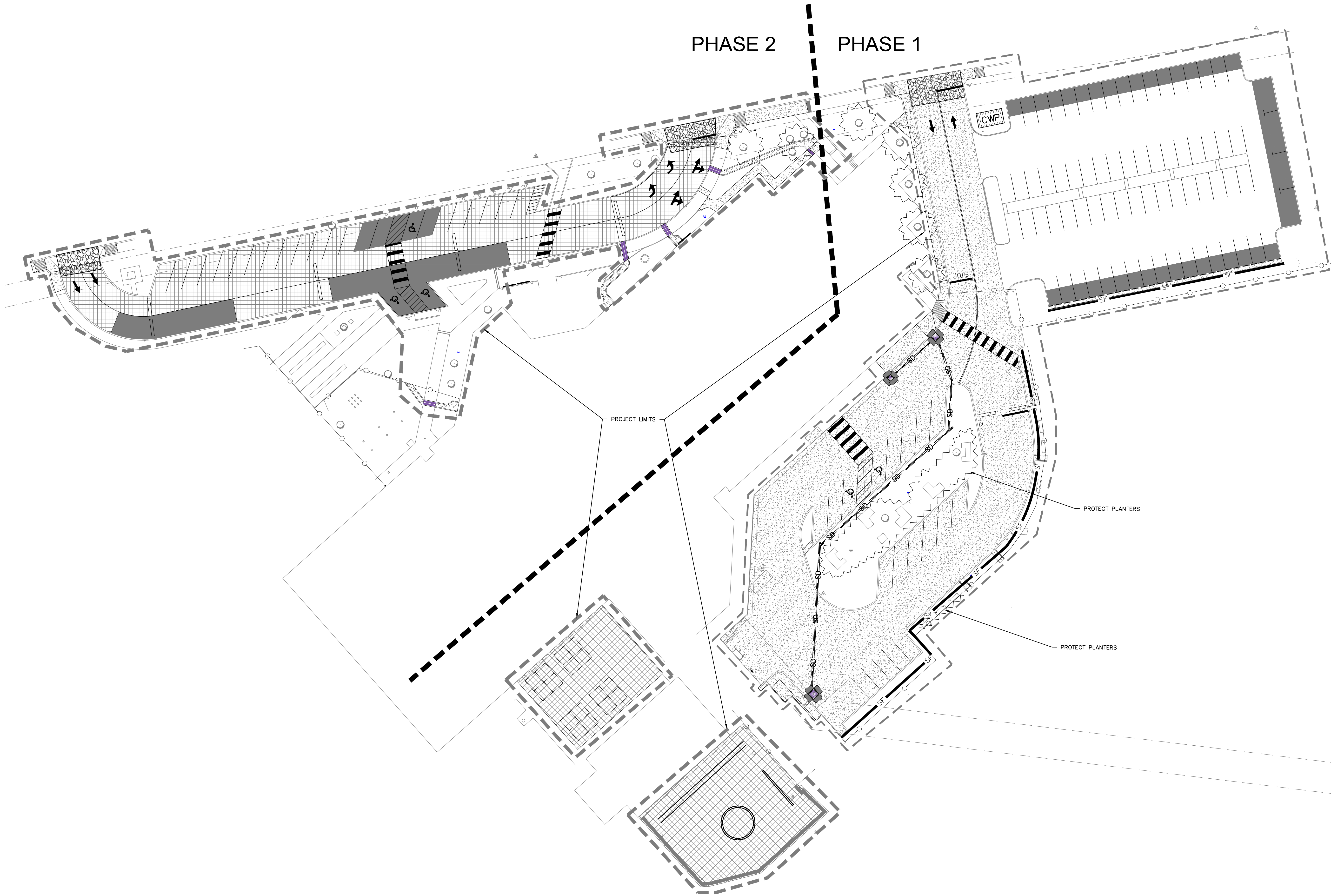
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY PAUL A. MARTIN, P.E. NO. #105075  
OK JANUARY 31, 2024 DATE



PAVING UPGRADES AT LLOYD M. KNOWLTON ES  
RFCSP # 2024-005  
9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
5900 EVERS ROAD, BUILDING C  
SAN ANTONIO, TX 78238  
CIVIL DETAILS

KCI JOB NO. 782203504  
DATE: 01-31-2024  
DRAWN BY: JAE  
CHECKED BY: PAM  
REVISIONS:



**SWPPP LEGEND**

- SILT FENCING
- CONSTRUCTION ENTRANCE/EXIT
- CONCRETE TRUCK WASHOUT PIT
- GRAVEL BAGS OR EROSION CONTROL LOGS
- TREE PROTECTION
- PROJECT LIMITS
- NEW CONCRETE PAVEMENT
- MILL AND OVERLAY ASPHALT PAVEMENT
- FULL DEPTH ASPHALT RECONSTRUCTION

**NOTES:**  
1. NOT ALL TREES ARE SHOWN, HOWEVER ALL TREES MUST BE PROTECTED.

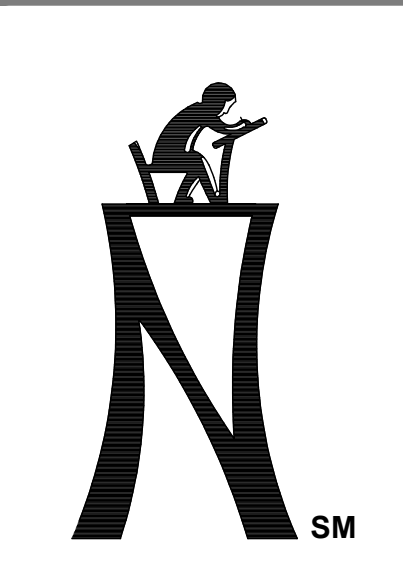
SITE DESCRIPTION	
<b>PROJECT LOCATION:</b> KNOWLTON ELEMENTARY SCHOOL 5500 TIMBER PATH SAN ANTONIO, TEXAS 78250	<b>TOTAL PROJECT AREA:</b> 12.474 ACRES <b>TOTAL AREA TO BE DISTURBED:</b> 2.94 ACRES
<b>PROJECT DESCRIPTION:</b> EROSION AND REPLACING SIDEWALKS, DRIVEWAYS, CURBS, SIGNAGE, AND A NEW STORM DRAIN LINE.	<b>WEIGHTED RUNOFF COEFFICIENT:</b> 0.623 <b>(BEFORE CONSTRUCTION):</b> 0.623 <b>(AFTER CONSTRUCTION):</b> 0.624
<b>MAJOR SOIL DISTURBING ACTIVITIES:</b> PARTIAL SITE GRADING, COMPACTED BASE AND GRAVEL, AND DRIVEWAY CONSTRUCTION.	<b>EXISTING CONDITION OF SOIL AND VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER:</b> GRASS WITH MATURE TREES IN ESTABLISHED SCHOOL
	<b>NAME OF RECEIVING WATERS:</b> SULPHUR CREEK

EROSION AND SEDIMENT CONTROLS	
<b>SOIL STABILIZATION PRACTICES:</b> <input checked="" type="checkbox"/> TEMPORARY SEEDING <input checked="" type="checkbox"/> PERMANENT PLANTING, SOODING, OR SEEDING <input checked="" type="checkbox"/> MULCHING <input checked="" type="checkbox"/> SOIL RETENTION BLANKET <input checked="" type="checkbox"/> BUFFER ZONES <input checked="" type="checkbox"/> PRESERVATION OF NATURAL RESOURCES OTHER:	<b>OTHER EROSION &amp; SEDIMENT CONTROLS:</b> <b>MAINTENANCE:</b> All erosion and sediment controls will be maintained in good working order. If a repair is necessary, it will be done at the earliest site possible, but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment. The areas adjacent to drainageways shall have priority followed by erosion protecting storm sewer inlets. <b>INSPECTION:</b> An inspection will be performed by the owner or contractor's representative every week or as often as every half inch or more of rain (as recorded on a rain-measuring rain gauge to be located at the Project Site). An Inspection and Maintenance Report will be made per each inspection. Based on the inspection results, the controls shall be revised per the inspection report.
<b>STRUCTURAL PRACTICES:</b> <input checked="" type="checkbox"/> SILT FENCES <input checked="" type="checkbox"/> HAY BALES <input checked="" type="checkbox"/> ROCK BERMING <input checked="" type="checkbox"/> DIVERSION, INTERCEPTOR, OR PERIMETER DIKES <input checked="" type="checkbox"/> DIVERSION, INTERCEPTOR, OR PERIMETER SWALES <input checked="" type="checkbox"/> DIVERSION DIKE AND SWALE COMBINATIONS <input checked="" type="checkbox"/> PIPE SLOPE DRAINS <input checked="" type="checkbox"/> PAVED FLUMES <input checked="" type="checkbox"/> ROCK BEDDING AT CONSTRUCTION EXIT <input checked="" type="checkbox"/> TIBER MATTING AT CONSTRUCTION EXIT <input checked="" type="checkbox"/> CHANNEL LINERS <input checked="" type="checkbox"/> SEDIMENT TRAPS <input checked="" type="checkbox"/> SEDIMENT BARRIERS <input checked="" type="checkbox"/> STORM INLET SEDIMENT TRAP <input checked="" type="checkbox"/> STONE OUTLET STRUCTURES <input checked="" type="checkbox"/> CURBS AND GUTTERS <input checked="" type="checkbox"/> STORM SEWERS <input checked="" type="checkbox"/> VELOCITY CONTROL DEVICES <input checked="" type="checkbox"/> GRAVEL FILTER BAGS	<b>WASTE MATERIALS:</b> All waste materials will be collected and stored in a security labeled metal dumpster. The dumpster will meet all state and local city solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied as necessary or as required by local regulations and the trash will be hauled to a local dump. No construction waste material will be buried on site. <b>HAZARDOUS WASTE (INCLUDING SPILL REPORTING):</b> At a minimum, any products in the following categories are considered to be hazardous: paints, solvents, cleaning, masonry surfaces, cleaning agents, asphalt products, chemical additives for soil stabilization or concrete curing compounds & sealers. In the event of a hazardous material spill, the spill coordinator shall be contacted immediately.
<b>NARRATIVE - SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:</b> PHASE I: 1. INSTALLATION OF SWPPP MEASURES PHASE II: 1. PARTIAL DEMOLITION AND SITE GRADING - OF VEGETATION IN AREAS NOT COVERED BY PAVING. PHASE III: 1. COMPACTED BASE & PAVEMENT (PARKING AND DRIVEWAY CONSTRUCTION) PHASE IV: 1. REMOVAL OF TEMPORARY BMP'S AFTER REESTABLISHMENT	<b>SANITARY WASTE:</b> All sanitary waste will be collected from portable units as necessary, or as required by local regulations by a Licensed Sanitary Waste Management Contractor. <b>OFFSITE VEHICLE TRACKING:</b> <input checked="" type="checkbox"/> HAIL ROADS DAMPENED FOR DUST CONTROL <input checked="" type="checkbox"/> EXCESS DIRT ON ROAD REMOVED ON A REGULAR BASIS <input checked="" type="checkbox"/> STABILIZED CONSTRUCTION ENTRANCE OTHER: <b>REMARKS:</b>

**SWPPP PLAN**  
SCALE: 1" = 30'

**NOTES:**  
THE SCALE OF THIS SWPPP PRECLUDES SHOWING THE FULL EXTENT OF THE SITE GRADING. FINISH CONTOURS ARE SHOWN. ADDITIONAL INFORMATION ON THE GRADING AND VEGETATIVE RESTORATION MAY BE FOUND ON THE SITE AND GRADING PLANS.  
THE SWPPP PROGRAM SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION OF THE ENTIRE PROJECT.

**SWPPP REQUIREMENTS:**  
PRIOR TO START OF ANY CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL OBTAIN A SWPPP PERMIT FROM BEXAR COUNTY PUBLIC WORKS AND SUBMIT AN NOI TO TCEQ AND THE SAN ANTONIO WATER SYSTEM. POST REQUIRED SITE NOTICES, AND IMPLEMENT THE SWPPP MEASURES APPLICABLE TO THAT PHASE OF WORK. THE MINIMUM SWPPP MEASURES FOR THIS PROJECT ARE LISTED BELOW AND ABOVE. THE CONTRACTOR MAY MODIFY THESE MEASURES AS LONG AS THE SAME LEVEL OF PROTECTION IS PROVIDED.  
EXISTING TREES AND VEGETATION ALONG FENCE LINES AND IN TREE PRESERVATION AREAS SHALL REMAIN UNLESS NOTED OTHERWISE ON LANDSCAPE OR DEMOLITION PLANS.  
CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAINTAINING CONSTRUCTION ENTRANCES, CONCRETE WASHOUT PITS, TRASH AND RECYCLING CONTAINERS AND RESTROOM FACILITIES.  
**SITE WORK:**  
- PROVIDE SILT FENCE WHERE SHOWN  
- REVEGETATE AREAS NOT SCHEDULED FOR PAVEMENT, BUILDINGS, OR AREAS ADDRESSED ON LANDSCAPE PLANS.  
**CONSTRUCTION ENTRANCE(S)**  
CONTRACTOR SHALL CONSTRUCT CONSTRUCTION ENTRANCE(S) AS REQUIRED TO PREVENT TRACKING OF SOIL ONTO ADJACENT STREETS.  
**CONCRETE WASHOUT "PITS"**  
CONTRACTOR SHALL ESTABLISH WASHOUT FACILITIES AS REQUIRED FOR CONCRETE WASHOUT WASTE. FACILITIES MAY BE PITS, TANKS, OR OTHER FACILITIES DESIGNED FOR THIS PURPOSE.



**KCI TECHNOLOGIES, INC.**  
2808 W. BITTERS ROAD, SUITE 216  
SAN ANTONIO, TEXAS 78246  
PHONE: (210) 641-9899  
FAX: (210) 641-6440  
REGISTRATION #10573 / #101943-65



THE SEAL APPEARING ON THIS DOCUMENT WAS FOR PAUL A. MARTIN, P.E. NO. #105075  
OK JANUARY 31, 2024 DATE

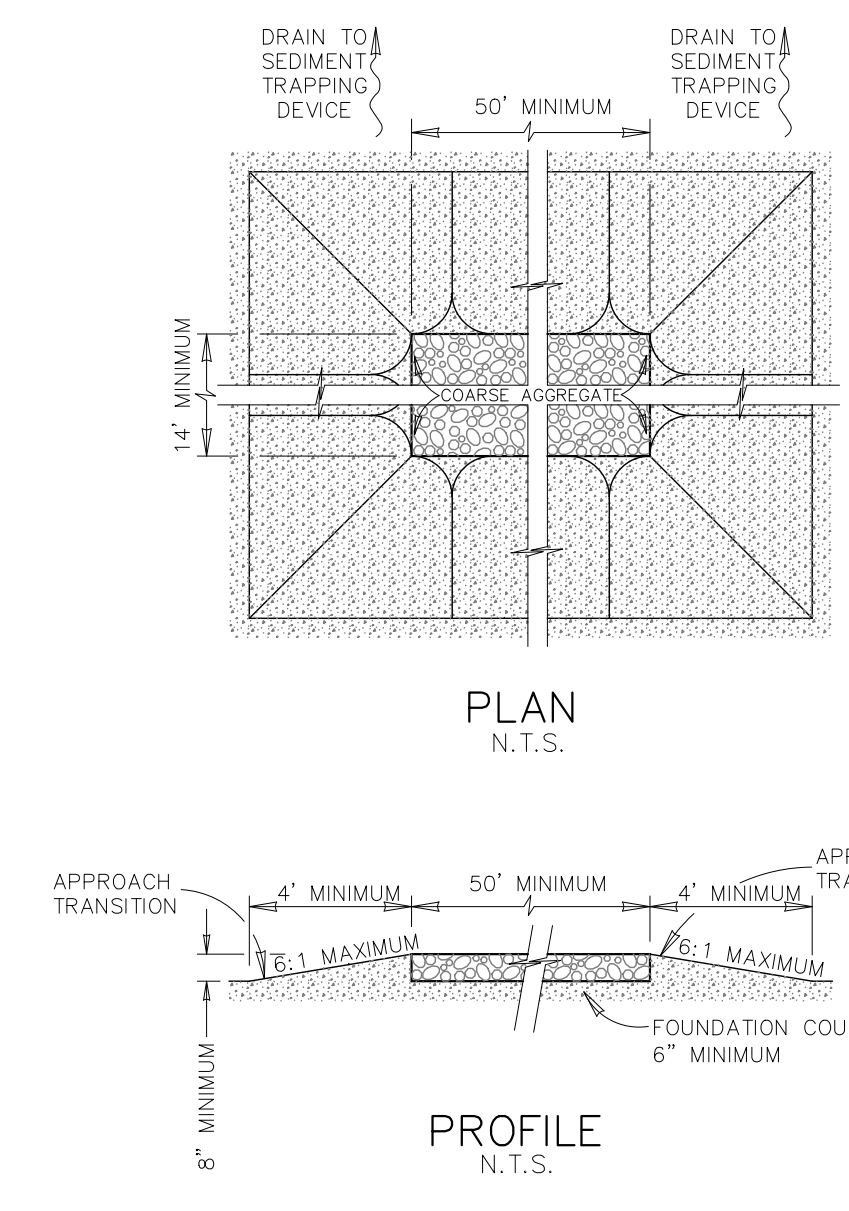


**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
RFCSP # 2024-005  
9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

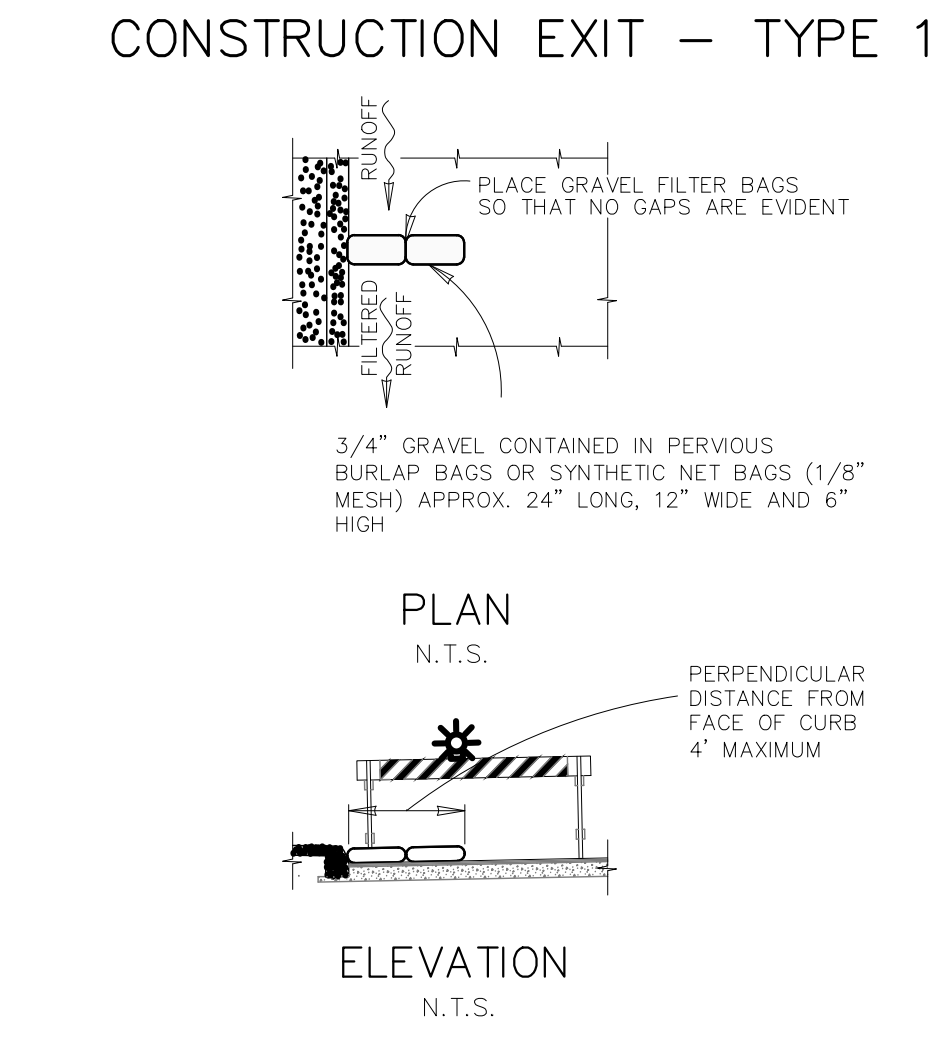
**NORTHSIDE INDEPENDENT SCHOOL DISTRICT**  
5900 EVERS ROAD, BUILDING C  
SAN ANTONIO, TX 78238

**KCI JOB NO.:** 78203504  
**DATE:** 01-31-2024  
**DRAWN BY:** JAE  
**CHECKED BY:** PAM  
**REVISIONS:**

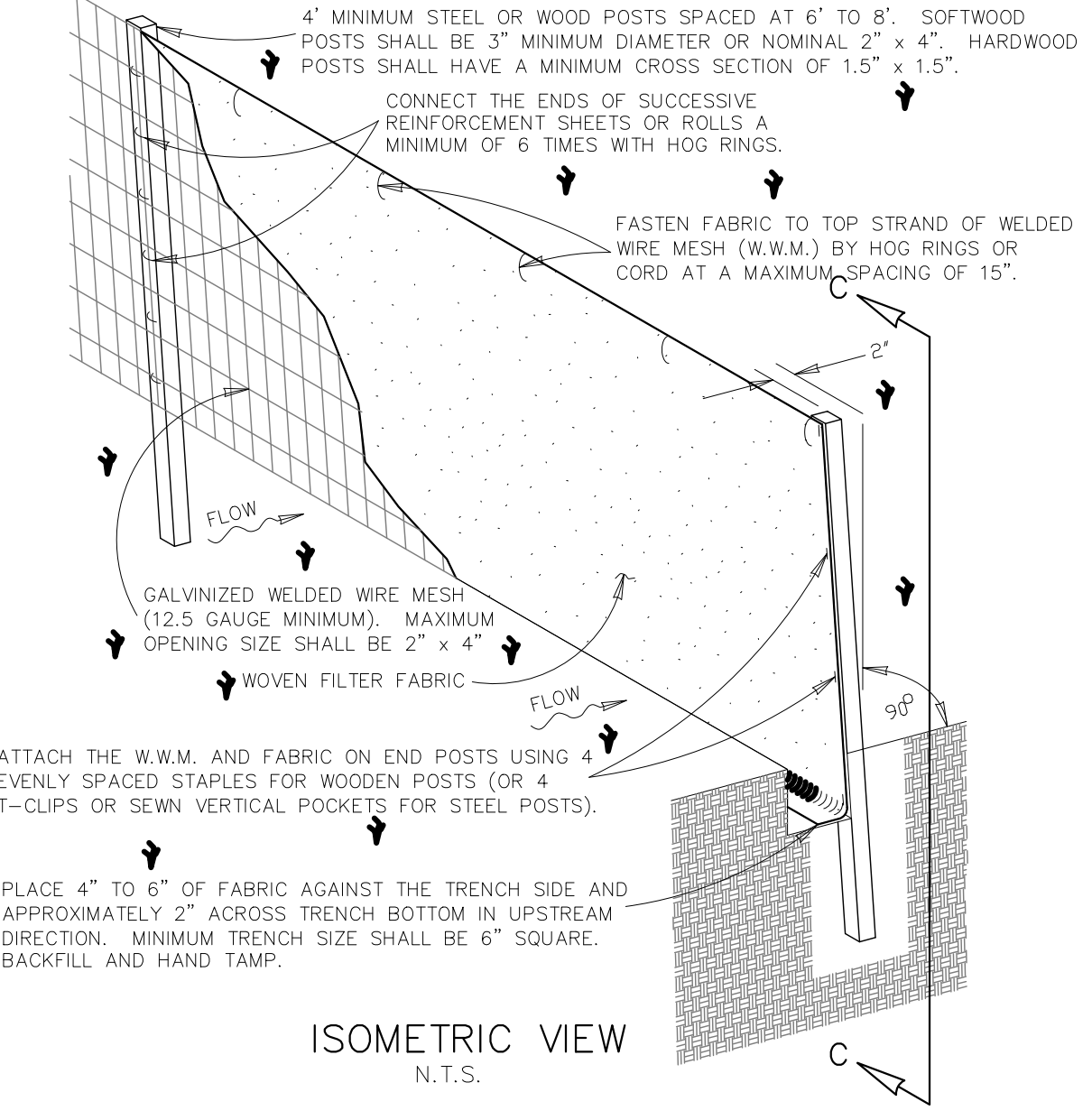
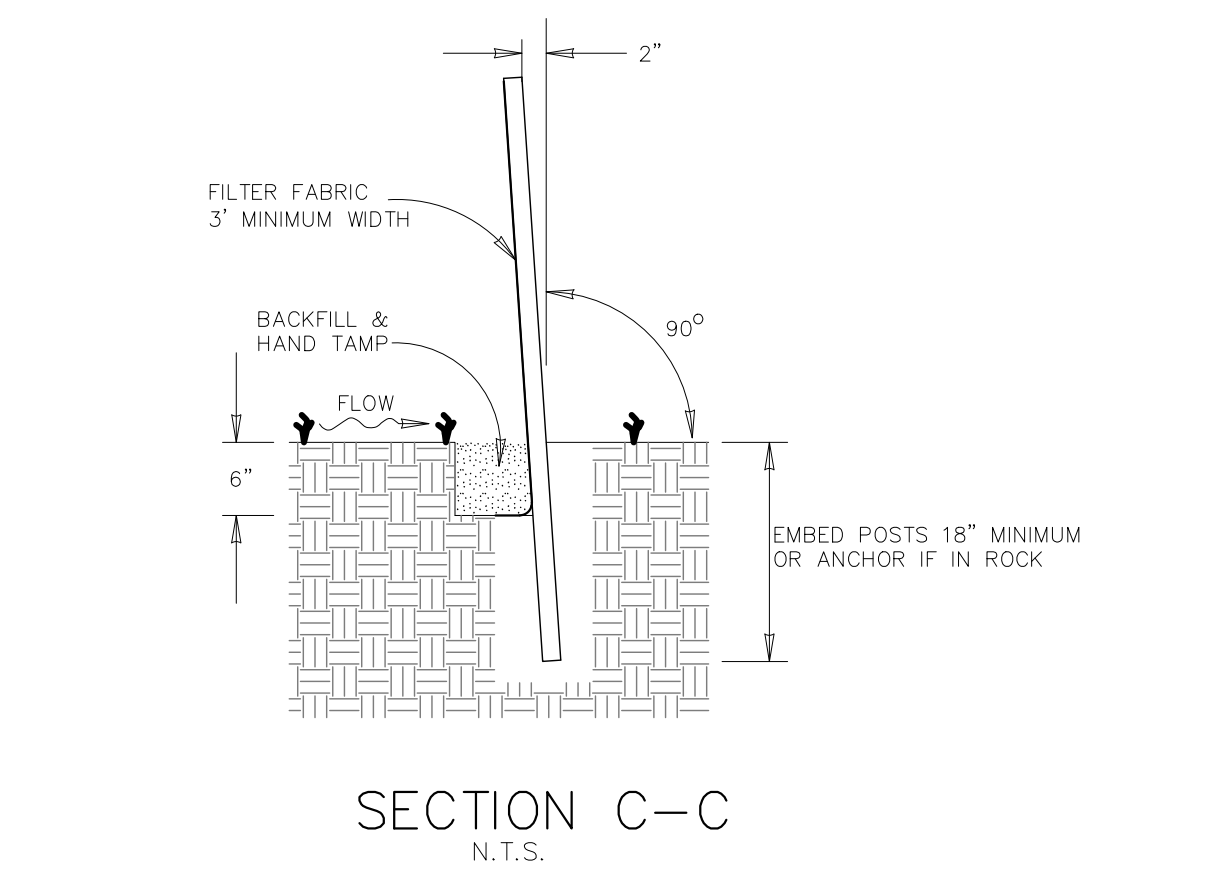
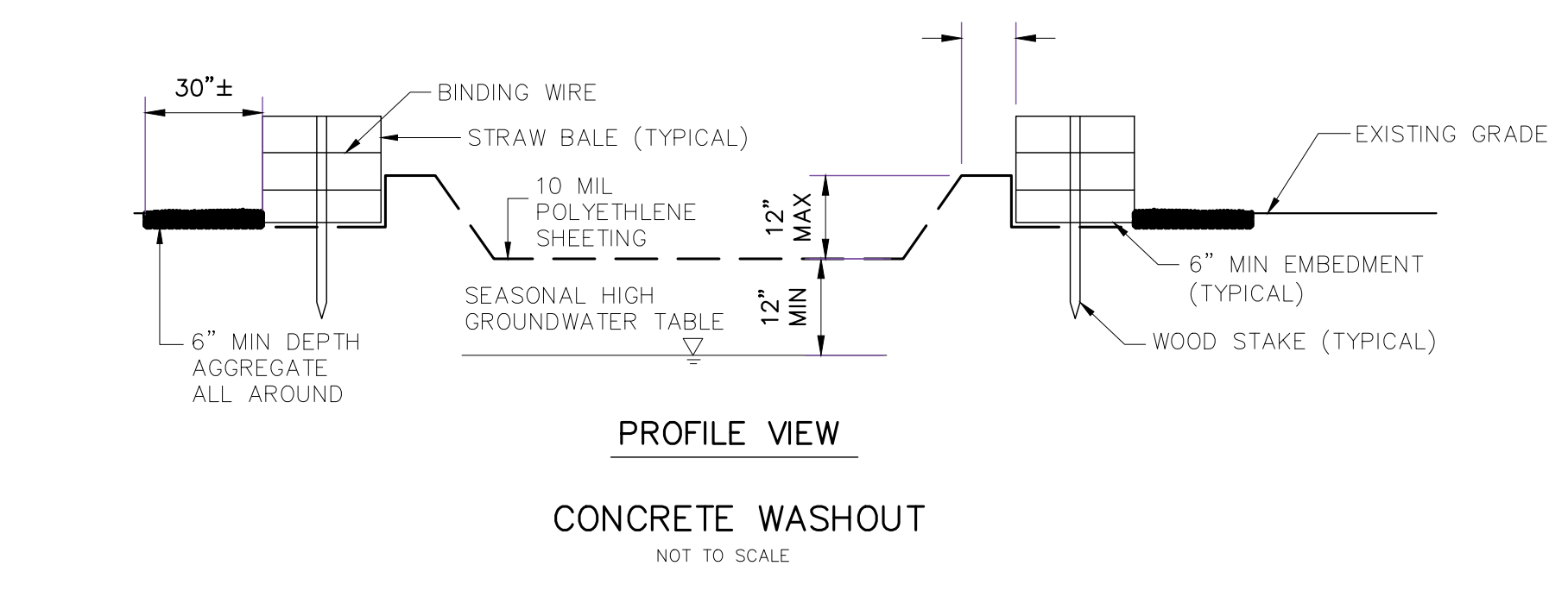
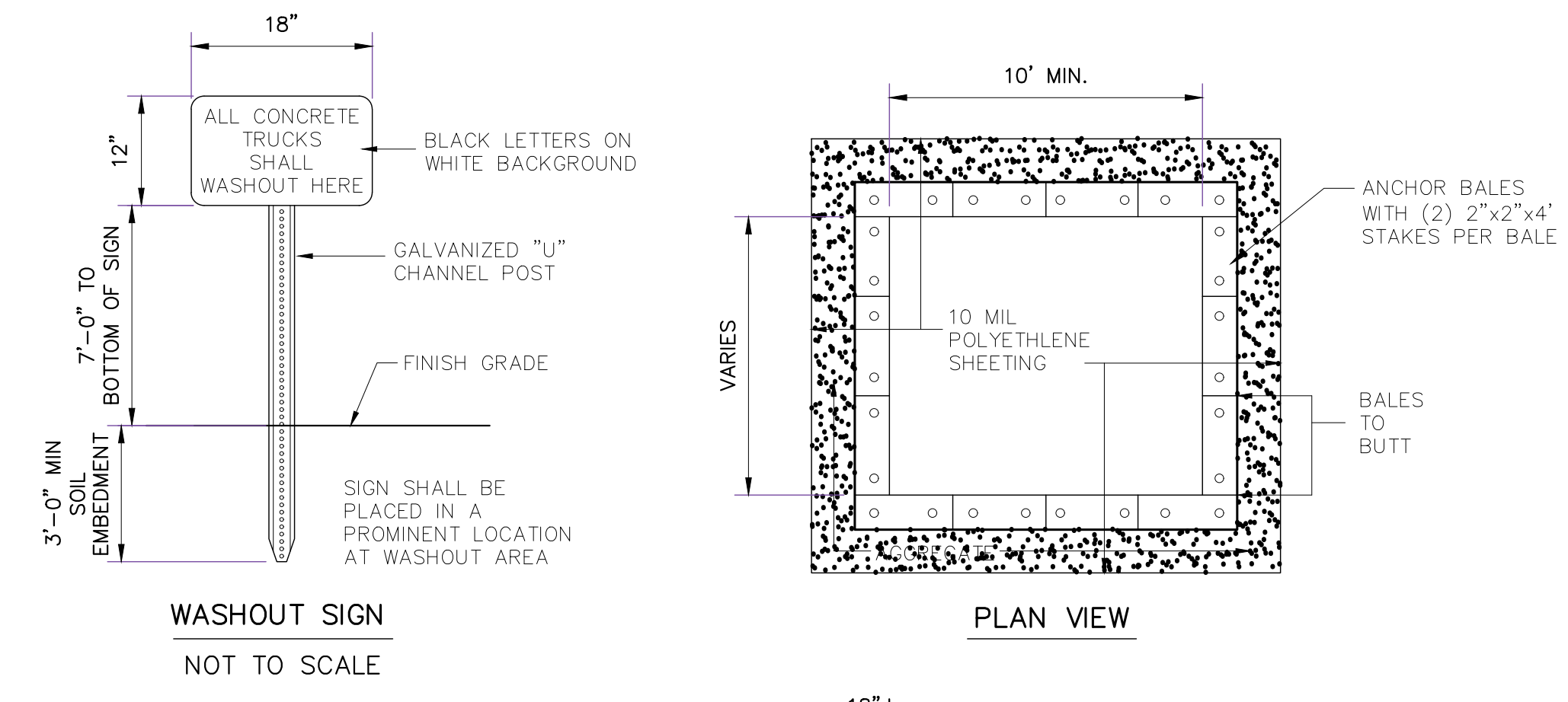
OVERALL SWPPP  
C6.0



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

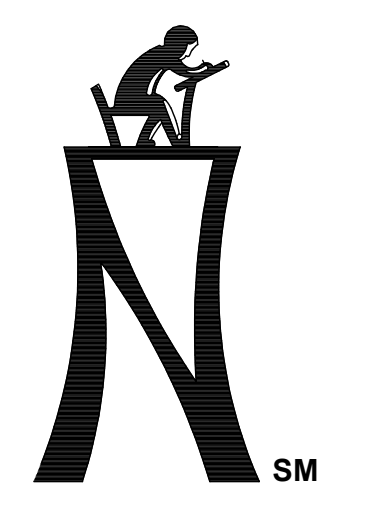


NOTE:  
STRADDLE GRAVEL FILTER BAGS WITH TYPE 1 BARRICADES MOUNTED WITH TYPE "A" FLASHING WARNING LIGHT. SEE BARRICADE CONSTRUCTION SIGN DETAILS. PLACE FLASHING LIGHTS AWAY FROM GUTTER, FLUSH WITH OUTSIDE EDGE OF BAG CONFIGURATION.



- SEDIMENT CONTROL FENCE USAGE GUIDELINES
- A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUN-OFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED. SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 100 GPM / FT SQUARED. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES.
- GENERAL NOTES
1. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

**TEMPORARY SEDIMENT CONTROL FENCE**



**KCI TECHNOLOGIES, INC.**  
2805 W. BITTERS ROAD, SUITE 218  
SAN ANTONIO, TEXAS 78238  
PHONE: (210) 641-9899  
FAX: (210) 641-6440  
REGISTRATION #10573 / #101943-65

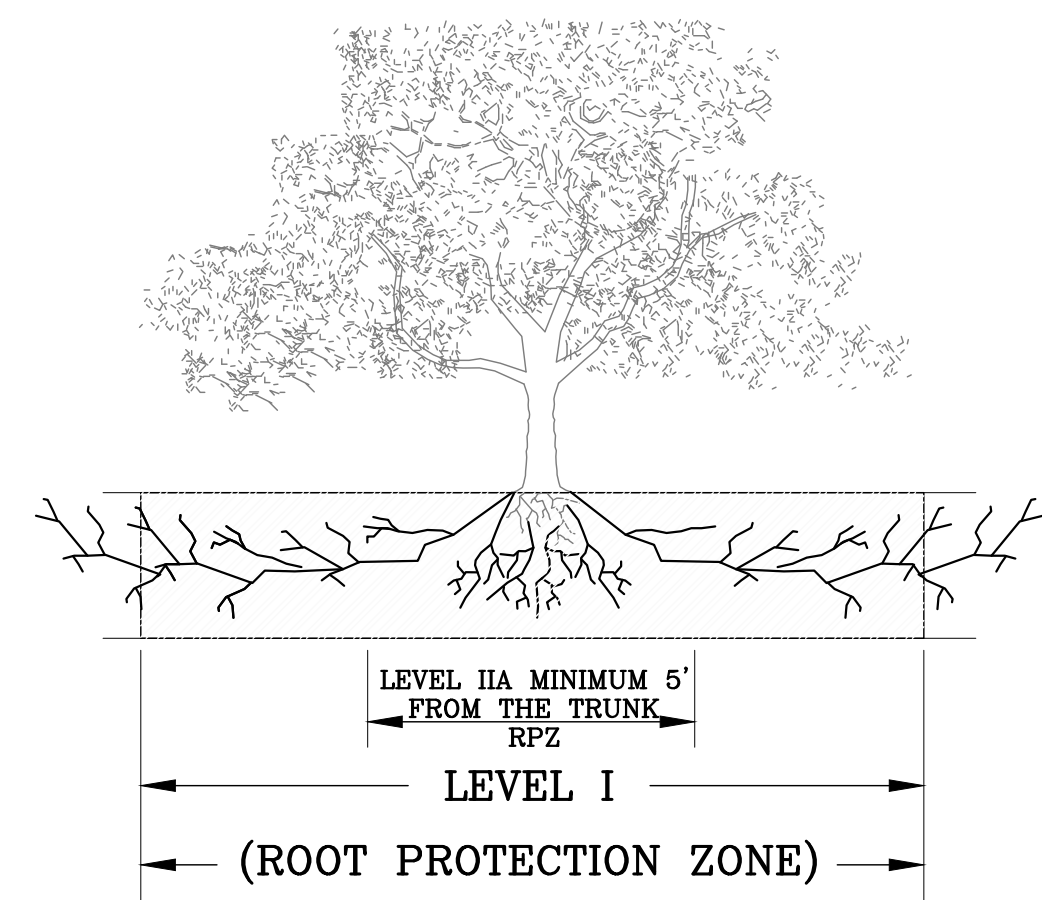


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OK JANUARY 31, 2024 DATE

**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
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NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
5900 EVERS ROAD, BUILDING C  
SAN ANTONIO, TX 78238  
SWPPP DETAILS

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DRAWN BY: JAE  
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REVISIONS:

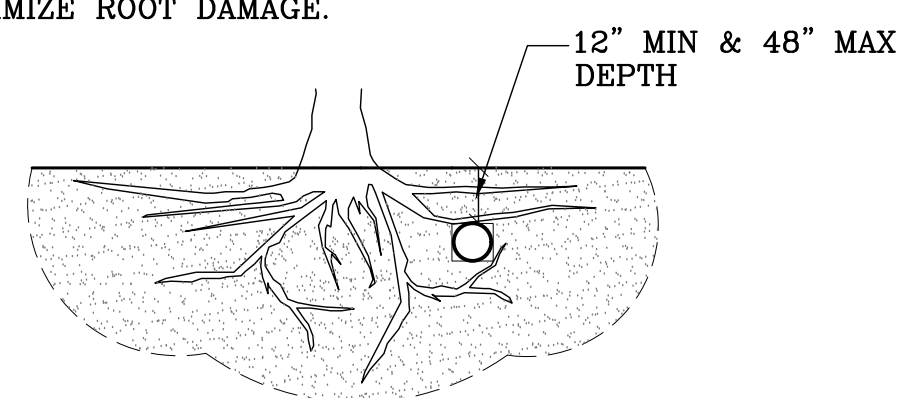


**1.1.1 ELEVATION**  
N. T. S.

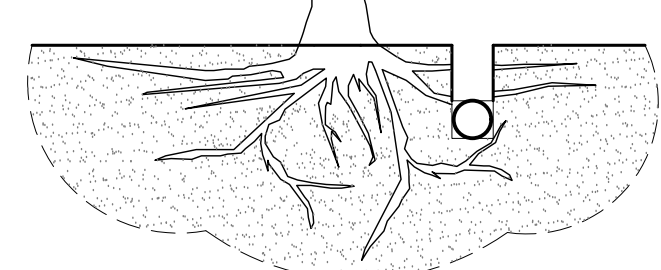
ROOT PROTECTION ZONE—THE ROOT PROTECTION ZONE IS A CIRCULAR AREA AROUND A TREE THAT IS THE SAME LIMITS AS THE DRIP LINE OF THE TREE.

TREES THAT ARE MARKED TO BE PRESERVED ON A SITE PLAN AND FOR WHICH UTILITIES MUST PASS THROUGH THEIR ROOT PROTECTION ZONES MAY REQUIRE TUNNELING AS OPPOSED TO OPEN TRENCHES. THE DECISION TO TUNNEL WILL BE DETERMINED ON A CASE BY CASE BASIS BY THE ENGINEER.

TUNNELS SHALL BE DUG THROUGH THE ROOT PROTECTION ZONE IN ORDER TO MINIMIZE ROOT DAMAGE.

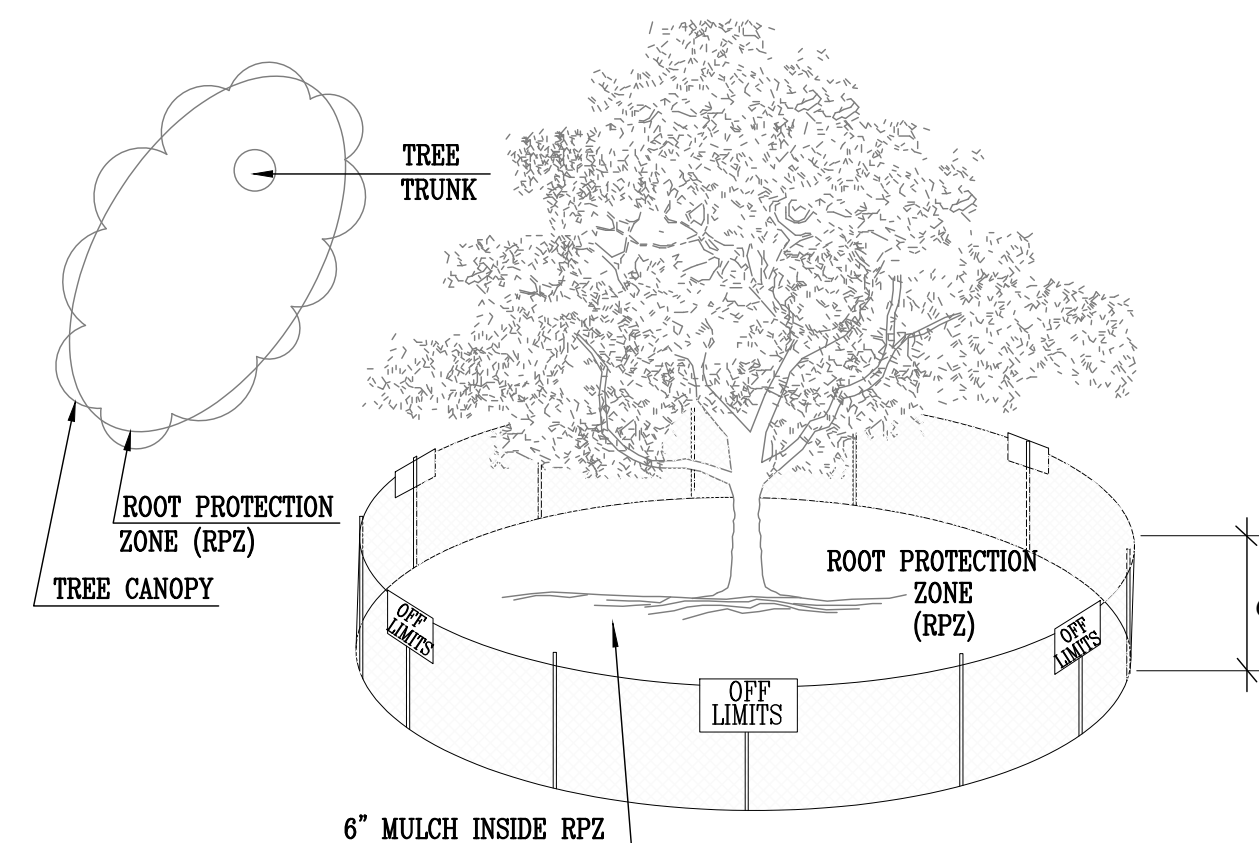


TUNNEL TO MINIMIZE ROOT DAMAGE (TOP) AS OPPOSED TO SURFACE-DUG TRENCHES IN ROOT PROTECTION ZONE WHEN THE 5' MINIMUM DISTANCE FROM TRUNK CAN NOT BE ACHIEVED.



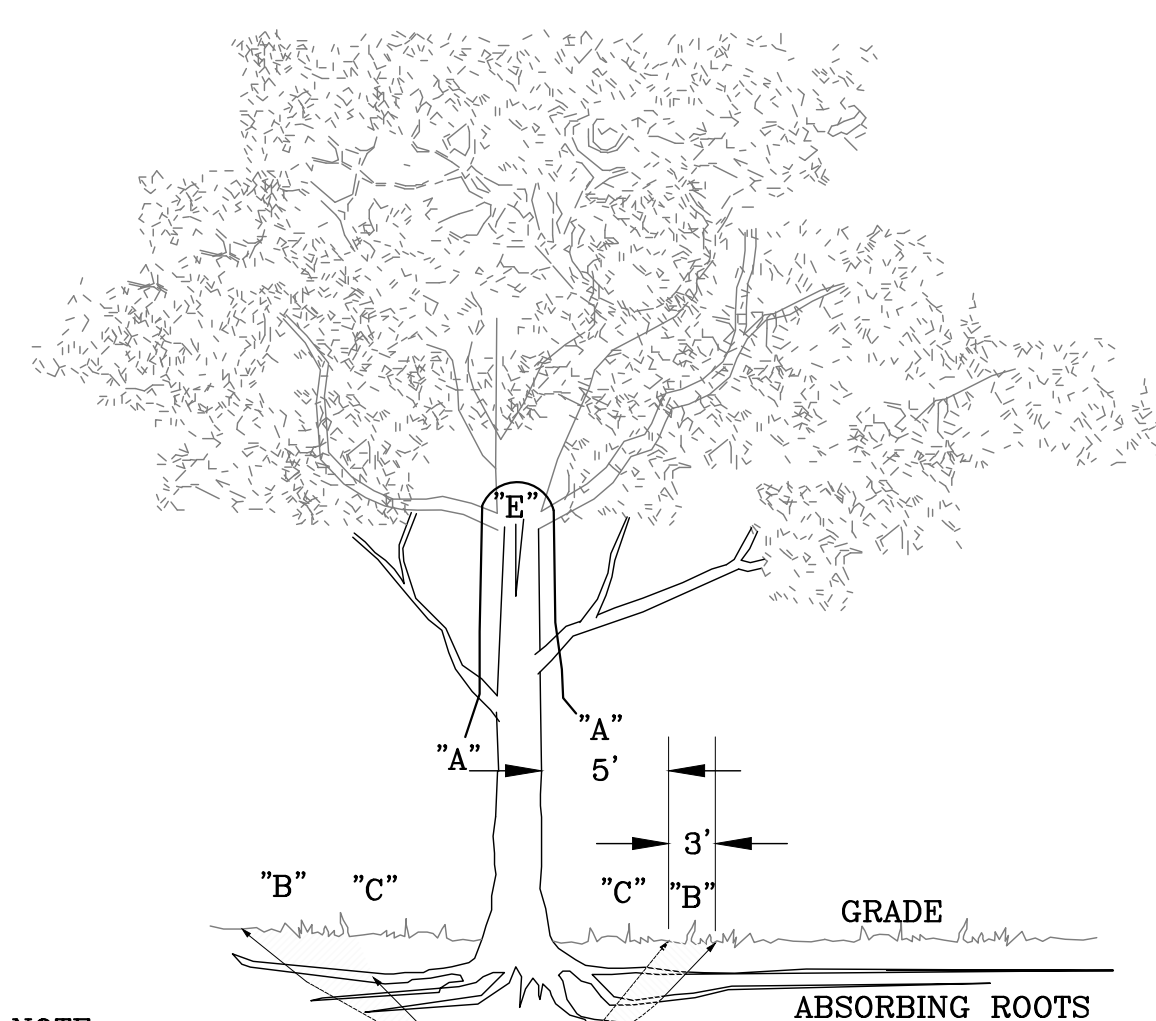
OPEN TRENCHING MAY BE USED IF EXPOSED TREE ROOTS DO NOT EXCEED 3" OR ROOTS CAN BE BENT BACK.

**1.2 BORING THRU TREE ROOT ZONE**  
N. T. S.



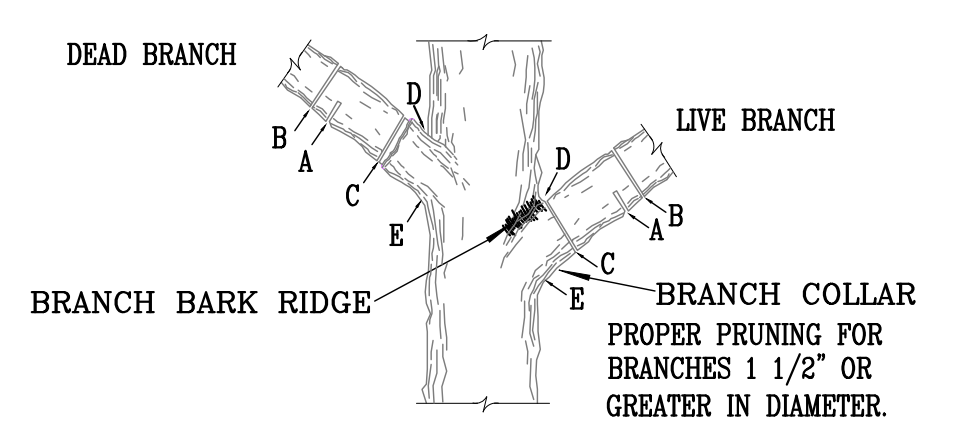
**1.1.2 LEVEL I & FENCE PROTECTION**  
N. T. S.

NOTE:  
1. THE FENCING SHOWN ABOVE IS DIAGRAMMATIC ONLY AND WILL CONFORM TO THE DRIP LINE AND LIMITED TO PROJECT BOUNDARY.  
2. FENCING MATERIAL IS TO BE ORANGE SNOW FENCING WITH T-POSTS AT A MINIMUM.  
3. POST MUST BE INSTALLED IN THE GROUND TO SUPPORT FABRIC ADEQUATELY.



**1.1.3 LEVEL II A FENCE PROTECTION**  
N. T. S.

NOTE  
1. OPTION USED FOR TIGHT CONSTRUCTION AREAS OR WHEN CONSTRUCTION OCCURS IN ROOT PROTECTION ZONE.  
2. FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

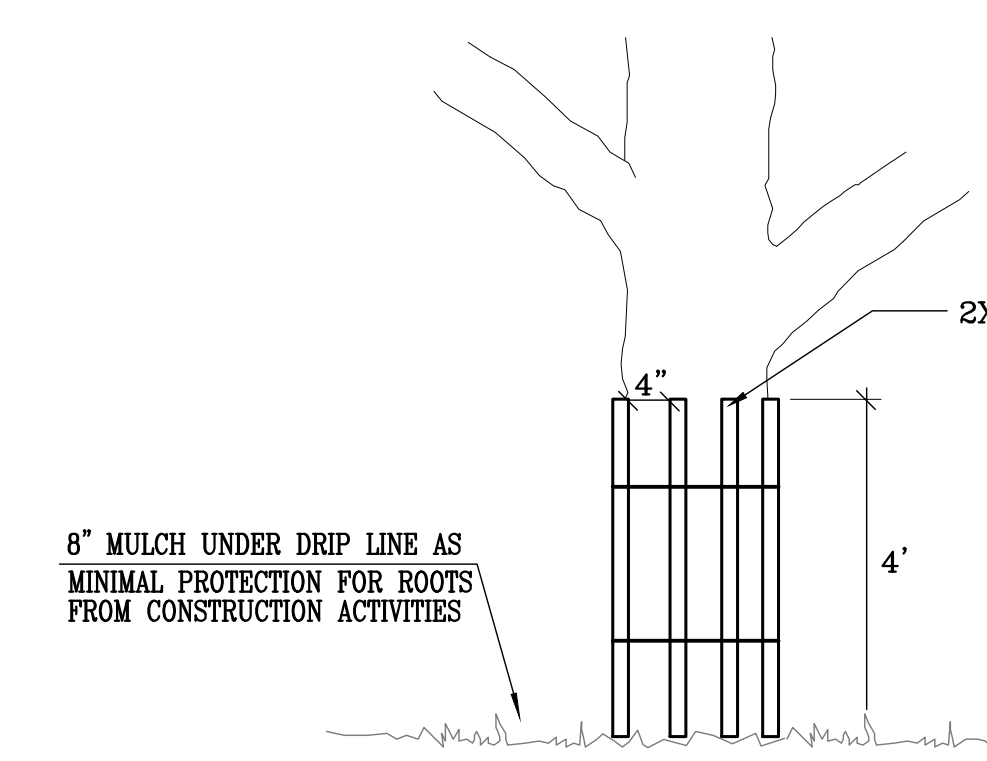


NOTE: DO NOT CUT FROM D TO E.

- A. FIRST CUT - TO PREVENT THE BARK FROM BEING PEELLED WHEN THE BRANCH FALLS.
- B. SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
- C. FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
- D. BRANCH RIDGES - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.

FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 20 MIN TO PREVENT THE SPREAD OF OAK WILT.

**1.4 BRANCH PRUNING DETAIL**  
N. T. S.



NOTE  
WRAP TREE TRUNK WITH 2"x4" STUDS AND ROPE OR BAND IN PLACE AS NEEDED TO PROTECT TREES IN WORK AREAS.

**1.1.4 LEVEL II B FENCE PROTECTION**  
N. T. S.

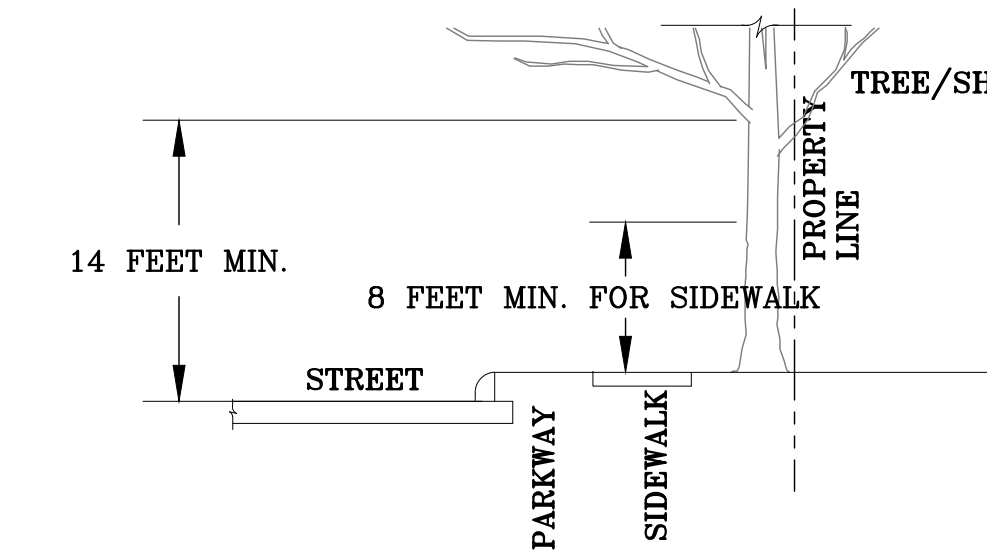


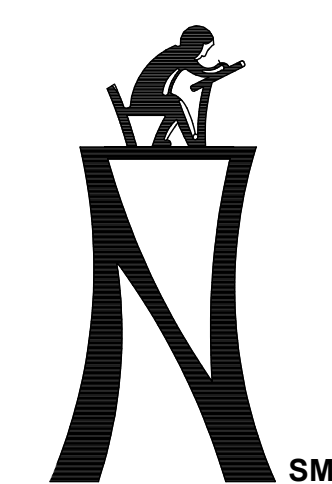
FIGURE No.2:

A MINIMUM BRANCH CLEARANCE OF 14 FEET ABOVE STREET ELEVATION MUST BE MAINTAINED FROM THE PROPERTY LINE TO THE CURB LINE AS PRESCRIBED BY PROJECT MANAGER.

**1.5 BRANCH CLEARANCE DETAIL**  
N. T. S.

**GENERAL TREE PROTECTION NOTES**

1. ALL THE TREES WITH A DIAMETER GREATER THAN 3 INCHES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS TRIMMED AND PRUNED ACCORDING TO 1.2 AND 1.4 TREE PRUNING, SOIL AMENDING AND FERTILIZATION, UNLESS SPECIFIED TREES SHALL RECEIVE LEVEL 2 PROTECTION AS PER 1.1.3 AND 1.1.4. TREES TO RECEIVE LEVEL 1 PROTECTION AS PER 1.1.2 ARE SHOWN ON TREE PROTECTION TABLE ON THIS SHEET.
2. ALL TREES SHALL REMAIN UNLESS NOTED ON THE PLANS.
3. NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
4. TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.
5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE ENGINEER.
6. THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS IS EQUAL TO THE DRIP LINE OF THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER, IMMEDIATELY TO PREVENT OAK WILT.
7. ACCESS TO FENCED AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER.
8. GRADING, IF REQUIRED, SHALL BE LIMITED TO A 3 INCH CUT OR FILL WITHIN THE FENCED ROOT ZONE AREAS.
9. TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND AS DIRECTED BY THE PROJECT MANAGER OR ENGINEER.
10. TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE ENGINEER'S SATISFACTION.
11. EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
12. ANY TREE REMOVAL SHALL BE APPROVED BY THE ENGINEER.



KCI TECHNOLOGIES, INC.  
2808 W. BITTERS ROAD, SUITE 218  
SAN ANTONIO, TEXAS 78236  
PHONE: (210) 641-9899  
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REGISTRATION #105075 / #101943-65



THE SEAL APPEARING ON THIS DOCUMENT WAS FOR PAUL A. MARTIN, P.E. NO. #105075 ON JANUARY 31, 2024 DATE



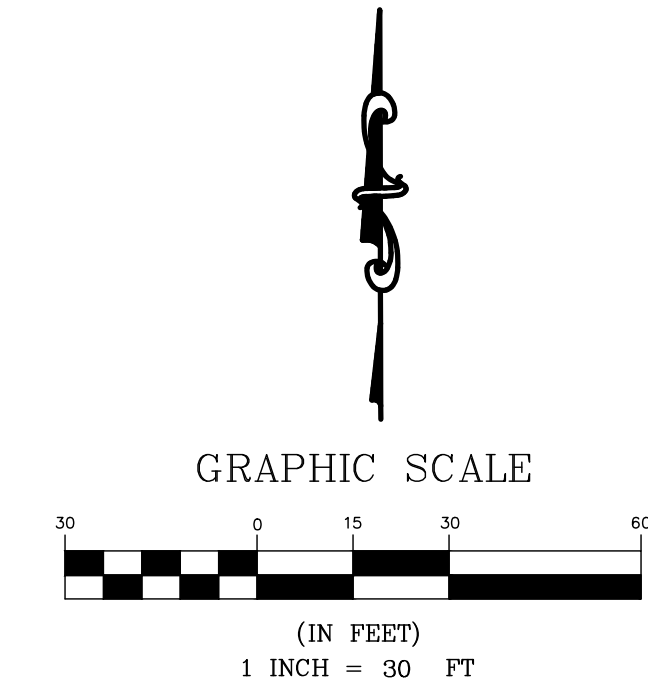
PAVING UPGRADES AT LLOYD M. KNOWLTON ES  
RFCSP # 2024-005  
9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTSIDE INDEPENDENT SCHOOL DISTRICT  
5900 EVERS ROAD, BUILDING C  
SAN ANTONIO, TX 78238  
TREE PROTECTION DETAILS

KCI JOB NO. 782203504  
DATE: 01-31-2024  
DRAWN BY: JAE  
CHECKED BY: PAM  
REVISIONS:

**FIRE LANE MARKING NOTES (SIGNS AND STRIPING):**

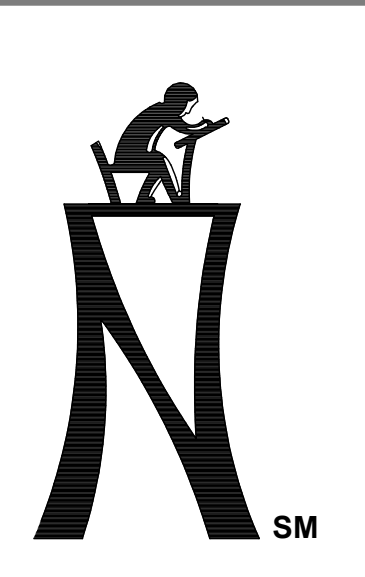
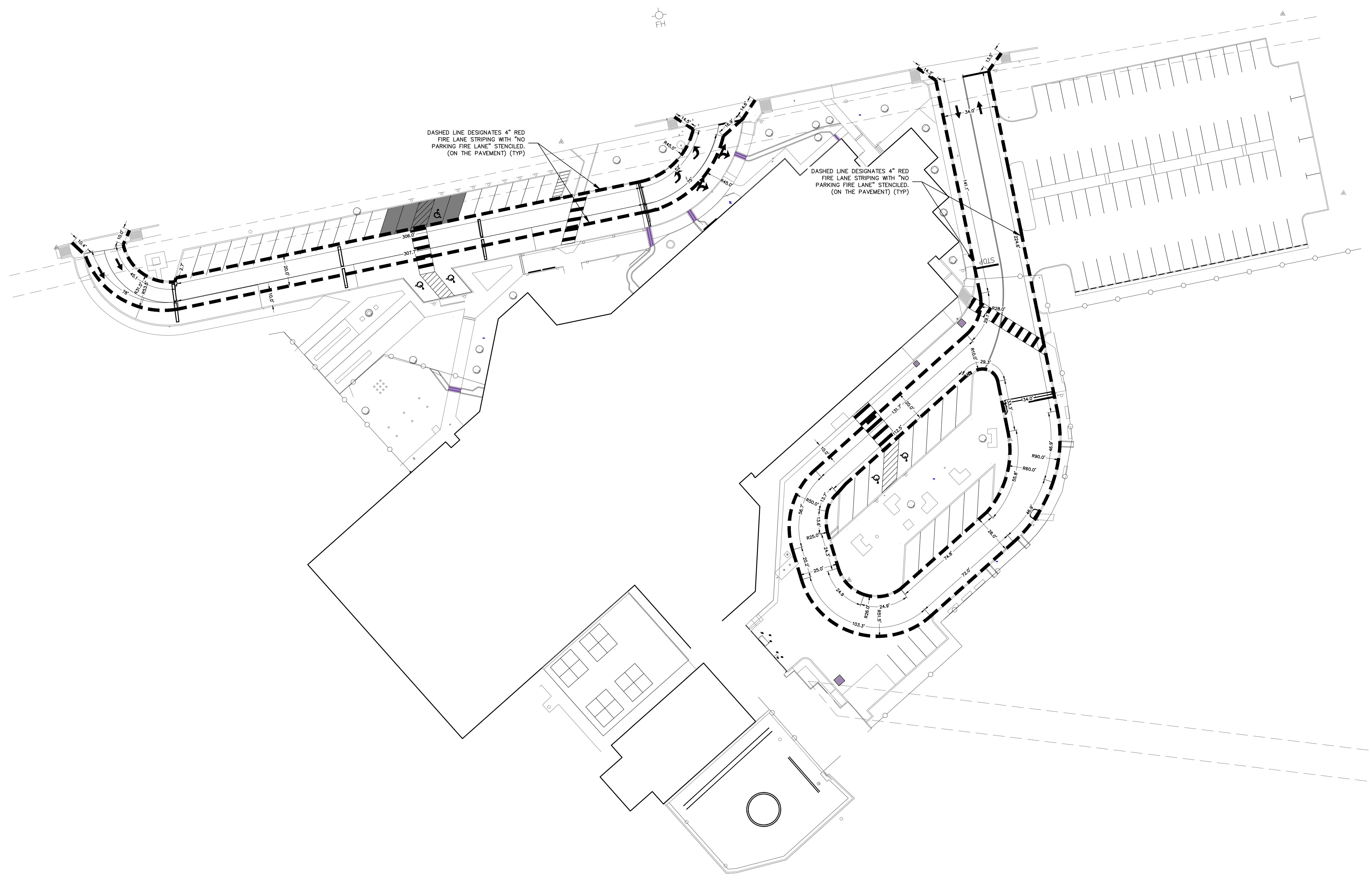
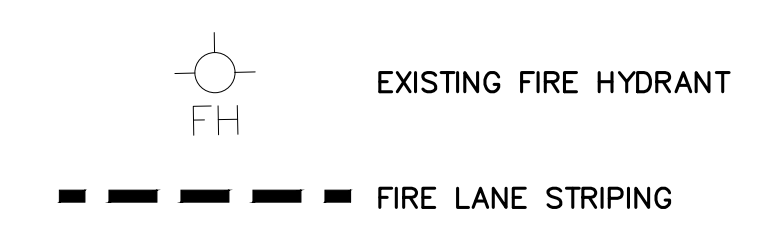
1. CONTRACTOR TO PROVIDE PAVEMENT MARKINGS AS NOTED BELOW:
  - 1.1 A 6" WIDTH RED STRIPE ALONG ASPHALT OR CONCRETE PAVEMENT SURFACES WHERE INDICATED ON THE PLANS. CURBS SHALL BE PAINTED WHERE PRESENT, HOWEVER THE WORDS BELOW DO NOT HAVE TO BE ON SAWTOOTH CURB AND CAN BE PLACED ON THE PAVEMENT IN FRONT OF THE CURB.
  - 1.2 4" TALL WHITE LETTERS READING "FIRE LANE / NO PARKING" SPACED AT 25' INTERVALS THAT DESIGNATE THE "FIRE LANE" INCLUDING ANY HAMMERHEAD TURNAROUNDS OR DEAD END FIRE LANES WHERE SHOWN IN THE BACK OF HOUSE.



**GENERAL NOTES:**

1. REFER TO ARCHITECTURAL PLANS FOR BUILDING INFORMATION.
2. CONTRACTOR SHALL COORDINATE FIRE LANE STRIPING AND SIGNAGE WITH FIRE MARSHAL.
3. SEE THIS SHEET FOR IDENTIFICATION OF EXISTING FIRE LANES AND COVERAGE AREAS.

**LEGEND**



**KCI TECHNOLOGIES, INC.**  
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THE SEAL APPEARING ON THIS DOCUMENT WAS  
 PAUL A. MARTIN, P.E.  
 NO. #105075  
 OK JANUARY 31, 2024  
 DATE

**PAVING UPGRADES AT LLOYD M. KNOWLTON ES**  
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 9500 TIMBER PATH | SAN ANTONIO, TEXAS 78250

NORTHSIDE INDEPENDENT SCHOOL DISTRICT  
 5900 EVERS ROAD, BUILDING C  
 SAN ANTONIO, TX 78238  
 FIRE PROTECTION PLAN

KCI JOB NO. 782203504  
 DATE: 01-31-2024  
 DRAWN BY: JAE  
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 REVISIONS:

C8.0