

PART 1 - GENERAL

- 1.01 **DESCRIPTION OF WORK:** Includes all clearing and grubbing, removal of obstructions, general excavating, grading and filling, and any related items necessary to complete the grading for the entire project in accordance with these specifications.
- 1.02 **SUBSURFACE SOIL DATA:** Subsurface soil investigations shall be obtained from the owner. The contractor is expected to examine the site and determine for himself the character of materials to be encountered. No additional allowance will be made for rock removal, site clearing, grading, filling, compaction, disposal, or removal of any unclassified materials.
- 1.03 **CLEANING AND GRUBBING:**

- A. General: Clearing and grubbing will be required for all areas shown on the drawings to be excavated or on which fill is to be constructed.
- B. Clearing: Clearing shall consist of removal and disposal of trees and other vegetation as well as down timber, snags, brush, existing foundations, slabs, and rubbish within the area to be cleared.
- C. Grubbing: Stumps, matted roots, and roots larger than (2) inches in diameter shall be removed from within six (6) inches of the surface of areas on which fills are to be constructed except in roadways. Materials as described above within 18 inches of finished subgrade of roadways in either cut or fill sections shall be removed. Areas disturbed by grubbing will be filled as specified herein for EMBANKMENT.
- D. Grass & Topsoil: Grass, grass roots, and incidental topsoil shall not be left beneath a fill area, nor shall this material be used as fill material. Grass, grass roots, and topsoil may be stockpiled and later used in the top six (6) inches of fill over roadways and building pads.

1.04 **EARTH EXCAVATION**

- A. Earth excavation shall consist of the excavation and removal of suitable soils for use as embankment as well as the satisfactory disposal of all vegetation, existing man-made fill, debris, and deleterious materials encountered within the area to be graded and/or in a borrow area.
- B. Excavated areas shall be continuously maintained such that the surface shall be smooth and have sufficient slope to allow water to drain from the surface.

PART 2 - PRODUCTS

2.01 **EMBANKMENT**

- A. General: Embankments shall consist of a controlled fill constructed in areas indicated on the grading plans.
- B. Materials:

1. Physical Characteristics: Embankment fill material shall consist of soils that conform to the following physical characteristics:
- | Sieve Size (Square Opening) | Percent Passing By Weight |
|-----------------------------|---------------------------|
| 3 inch | 100 |
| No. 4 | 50-100 |
| No. 200 | 10-50 |
- The plasticity index of the material, as determined in accordance with ASTM D4318, shall not exceed 12. Results of our investigation indicate that most of the on-site soils will meet these requirements, however, some blowing and improved fill may be required. The fill materials shall be free from roots, grass, other vegetable matter, clay lumps, rocks larger than six (6) inches, or other deleterious materials.
2. Borrow: When the quantity of suitable material required for embankments is not available within the limits of the jobsite, the contractor shall provide sufficient materials to construct the embankments to the firm, deviations, and cross sections shown on the drawings from borrow areas. The contractor shall obtain from centers of said borrow areas the right to excavate material, shall pay all royalties and other charges involved, and shall pay all expenses in developing the source, including the cost of right-of-way required for hauling the material.

PART 3 - EXECUTION

3.01 **CONSTRUCTION**

- A. Paved Area Treatment: Paved areas shall be over-excavated to such an extent so as to provide a minimum of 1.0 foot of structural fill beneath all pavements; however, provided that the existing subgrade soils meet the physical characteristics for structural fill, only sandification and compaction to the requirements will be necessary.
1. Inspection: Prior to placement of fill, the paved area shall be inspected approved by a representative of the geotechnical engineer to insure satisfactory removal of native soils and the removal of any existing man-made fill.
2. Scarification: The exposed cut surface, as well as surfaces to receive fill, shall be scarified to a minimum depth of 12-inches and watered as necessary to bring the upper 12-inches close as practicable to optimum moisture content or above. The upper eight (8) inches of the native soils shall then be compacted to a minimum of 95% of maximum dry density as determined in accordance with ASTM D1557. Where vibratory compaction equipment is used, it shall be the contractor's responsibility to insure that the vibration do not damage nearby buildings or other adjacent property.
- B. Compaction: Fill shall be spread in layers not exceeding eight (8) inches, watered as necessary, and compacted Moisture content shall be 2 percent below optimum moisture or higher. A density not less than 95 percent of maximum dry density within the building pad and paved areas shall be obtained for the structural fill. Structural fill, as well as the native soils, within the building pad and paved areas shall be compacted to 90 percent of maximum dry density. Optimum moisture content and maximum dry density for each soil type used shall be determined in accordance with ASTM D1557.
- C. Weather Limitations: Controlled fill shall not be constructed when the atmospheric temperature is below 35 degrees F. When the temperature falls below 35 degrees, it shall be the responsibility of the contractor to protect all areas of completed work against any detrimental effects of ground freezing by methods approved by the geotechnical engineer. Any areas that are damaged by freezing shall be reconditioned, reshaped, and compacted by the contractor in conformance with requirement of this specification without additional cost to the owner.
- D. Slope Protection & Draining: The edges of the controlled fill embankments shall be graded to the contours shown on the drawings and compacted to the density required in paragraph 3.01.B. Slopes steeper than one (1) vertical to three (3) horizontal shall be protected from erosion.

3.02 **INSPECTION & TEST**

- A. Field Inspection & Testing: The contractor shall employ the services of a registered, licensed geotechnical engineer to observe and test all controlled earthwork. The geotechnical engineer shall provide continuous on-site observation to experienced personnel during construction of controlled earthwork. The contractor shall notify the engineer at least two (2) working days in advance of any field operations of controlled earthwork, or of any suspension of operations after stoppages. Tests of fill materials and embankments will be made at the following suggested minimum rates:
- One (1) field density test for each 500 square yards of original ground surface prior to placing fill or constructing floor slabs.
 - One (1) field density test for each 250 cubic yards of fill placed or each layer of fill for each work area, whichever is the greater number for tests.

3. One (1) moisture-density curve for each type of material used, and indicated by sieve analysis and plasticity index.
- B. Report of Field Density Tests: The geotechnical engineer shall submit, daily, the results of field density tests required by these specifications.
- C. Costs of Test & Inspection: The costs of tests, inspection and engineering, as specified in this section of the specifications, shall be borne by the contractor.

PART 1 - GENERAL

- 1.01 **DESCRIPTION OF WORK:** Within areas of paving, either concrete or asphalt, and extending not less than 12 inches beyond limits of paving, construct a stabilized aggregate base course on a prepared subgrade or a previously constructed select-material base course.
- 1.02 **SUBMITTALS**

- A. Materials List: Provide a listing identifying types and sources of materials proposed for this work.
- B. Testing Laboratory Reports: Submit laboratory test reports for base course materials. No material may be used until certified copies of lab test results have been approved by Engineer. Test aggregate, binders, and additives for compliance with requirements of this section and reference specification under which they are furnished.
- 1.03 **TESTING:** Testing required of Contractor shall be performed by an independent Testing Laboratory selected by Contractor and approved by Engineer.

- 1.04 **STOCKPILING MATERIAL:** Stockpile only in manner and location to prevent segregation or contamination of material. Unless otherwise approved, use material off of stockpiles from top to prevent vegetation through shuffling of piles.
- 1.05 **DESIGN MIX:** Actual composition of base course mix shall be determined by Testing Laboratory. Mix, along with laboratory certification that it meets requirements of this specification, shall be submitted to Engineer for approval. After approval, make no change in design mix without prior approval of Engineer.

- 1.06 **WEATHER LIMITATIONS:** Construct base course only when temperature is above 40 degrees F and rising. When temperature is below 35 degrees F protect areas of completed base course against detrimental effects.
- 1.07 **EQUIPMENT:** All equipment shall be Contractor option, suitable for particular purpose for which it is used, capable of producing specified result.
- 1.08 **MUNICIPAL STANDARDS:** Stabilized aggregate base course work done on municipal property under this contract shall conform to appropriate municipal specifications.

PART 2 - PRODUCTS

2.01 **AGGREGATE**

- A. Aggregate base course material shall meet the following gradation requirements when tested in accordance with the ASTM C 136 test method.
- | Sieve Size (Square Opening) | Percent Passing By Weight |
|-----------------------------|---------------------------|
| 1 inch | 100 |
| 3/4 inch | 99-100 |
| No. 4 | 40-70 |
| No. 10 | 55-60 |
| No. 200 | 8-14 |
- B. The base course material shall have a plasticity index of no greater than 5 when tested in accordance with ASTM D4318. The aggregate shall have a percent of wear of no greater than 50 when tested in accordance with the ASTM D1511 test methods. The base course material shall be compacted to at least 95 percent of the ASTM D1557 maximum dry density or 70 percent of the ASTM D4253 relative density, as applicable.
- 2.02 **OTHER ADDITIVES:** Other additives shall be added to base course material only after the prior approval of Engineer.

PART 3 - EXECUTION

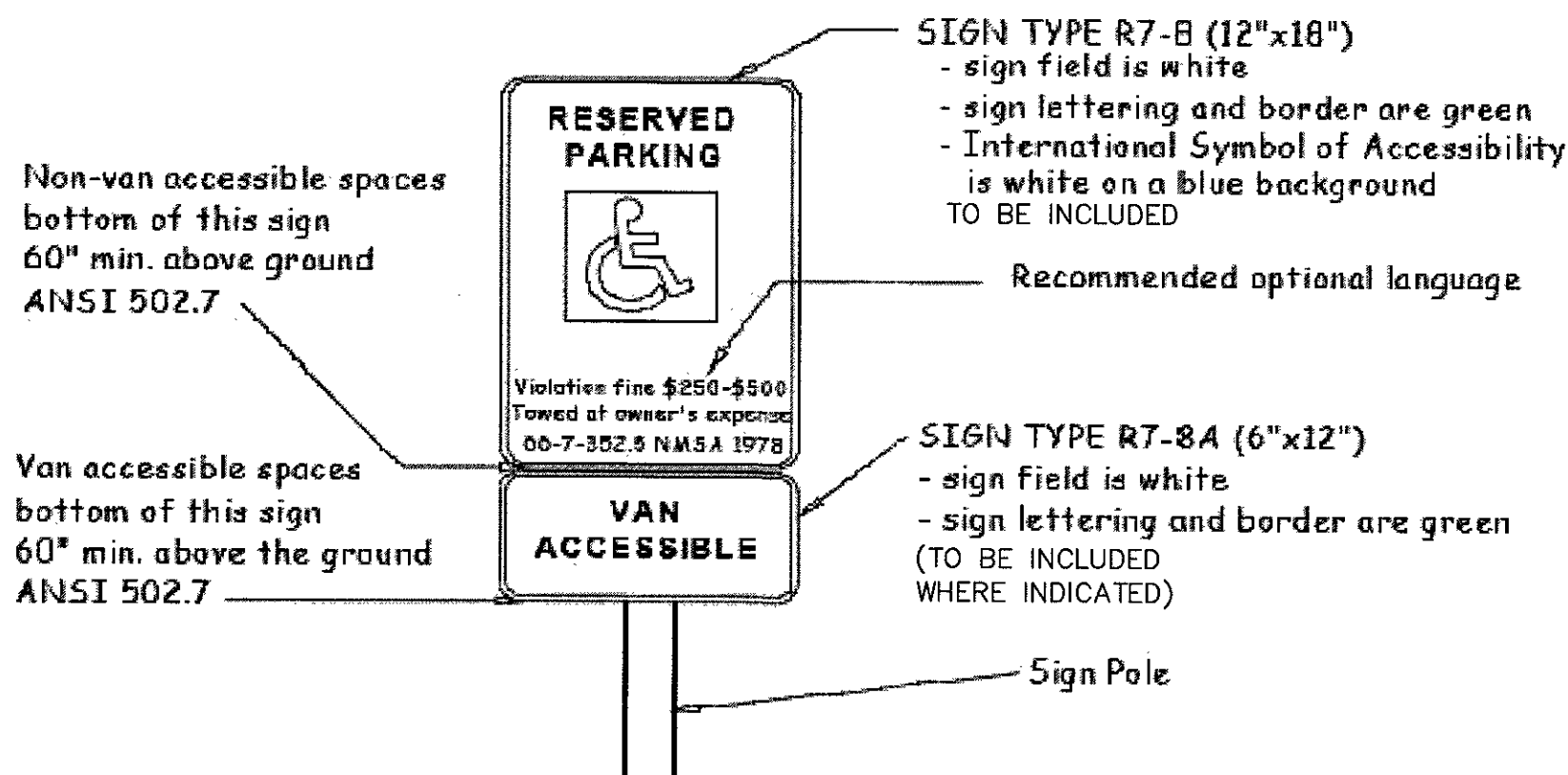
- 3.01 **PREPARATION OF SUBGRADE:** Assure that subgrade is of proper shape, alignment, slope and compaction. Correct ruts, soft-spots and other subgrade imperfections by loosening material and removing it where necessary adding an approved material as needed, including and recompacting in proper line and grade.
- 3.02 **GRADE CONTROL:** Maintain lines and grades shown on drawing by means of grade stakes spaced not over 50 feet apart so that string lines may be stretched between stakes.
- 3.03 **PLACING**
- A. Haul aggregate and binder material, either separately or as a combined mixture, in approved pneumatic-tired vehicles. Place material uniformly in such manner that when mixed, spread and compacted layer of composite material shall conform to gradation and grade control requirements specified and thickness shown on drawings.
1. Thickness over 6-inches: Place and compact in two or more approximately equal layers, no layer more than 6 inches in depth.
- 3.04 **COMPACTING**
- A. Compact with power rollers, rubber tired rollers, or combinations thereof. Use mechanical tampers in inaccessible places. Compact to a density of 95% of Proctor Density.

NOTES

THE ENGINEER HAS UNDERTAKEN LIMITED FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.

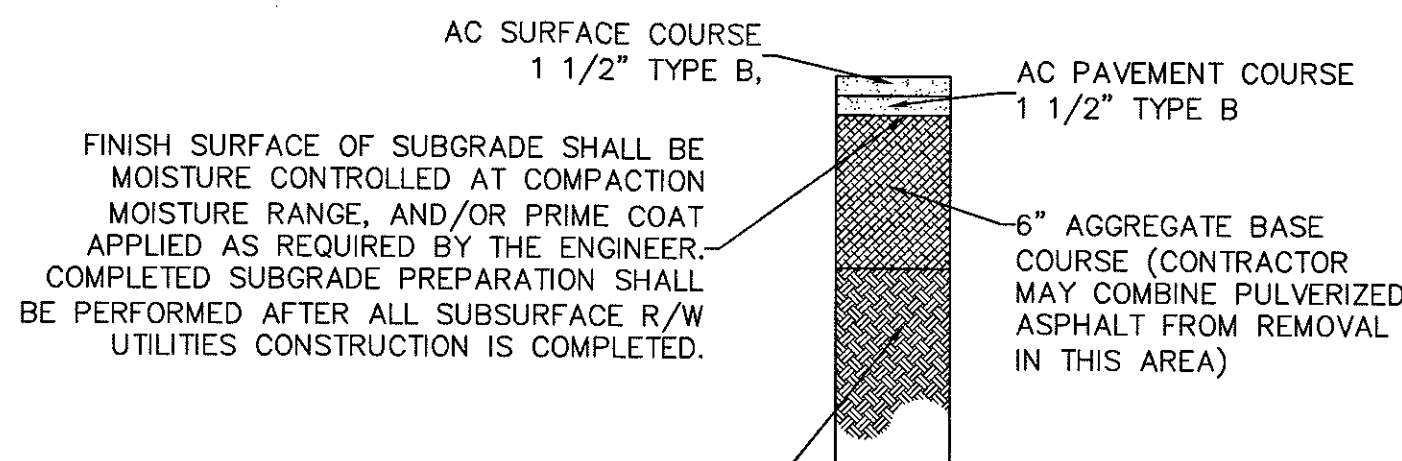
THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, ARE INTENDED FOR USE ON THIS PROJECT AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF GND ENGINEERING, LLC IN THE EVENT OF UNAUTHORIZED USE, THE USER ASSUMES ALL RESPONSIBILITY AND LIABILITY WHICH RESULTS.



ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE



ASPHALT SECTION

NOT TO SCALE

GENERAL NOTES:

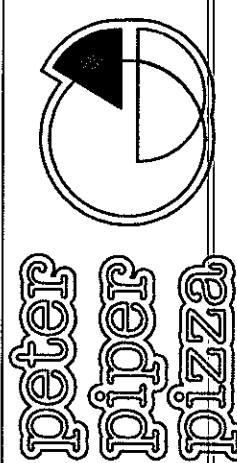
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREIN, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, UPDATE NO. 9.
- THE EROSION PROTECTION SPECIFIED ON THIS PLAN IS THE MINIMUM RECOMMENDED. THE OWNER IS ENCOURAGED TO INCORPORATE EROSION RESISTANT LANDSCAPING ON AREAS WHERE EROSION MAY OCCUR SUCH AS SLOPES AND SWALES. THE OWNER IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL FEATURES NECESSARY TO PRESERVE THE DESIGN INTENT OF THE GRADING PLAN.
- THE DRAINAGE INFRASTRUCTURE SHOWN ON THIS PLAN IS THE RESPONSIBILITY OF THE PROPERTY OWNER.
- ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD MUST BE RESEDED OR LANDSCAPED
- (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, (260-1990) FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS AND EXISTING PAVEMENT. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.

EROSION CONTROL NOTES

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
- REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.

REVISIONS:

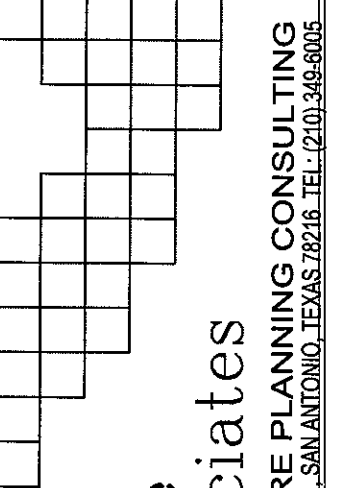
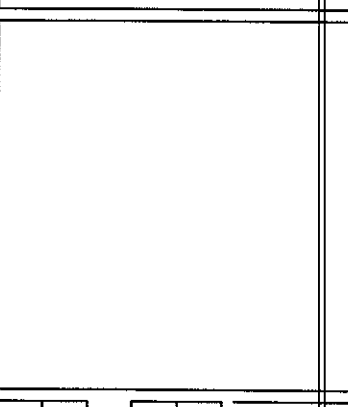
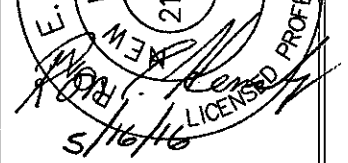
I.D.#	DESCRIPTION
1	BUILD ASPHALT PAVING, PER TYPICAL SECTION THIS SHEET.



Renovations for: Peter Piper Pizza #240
3109 San Mateo Blvd., NE
Albuquerque, NM 87110



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DATE: 5.14.16
JOB NO: 42144
DRAWN BY: REH
SHEET NUMBER: C 1.0
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