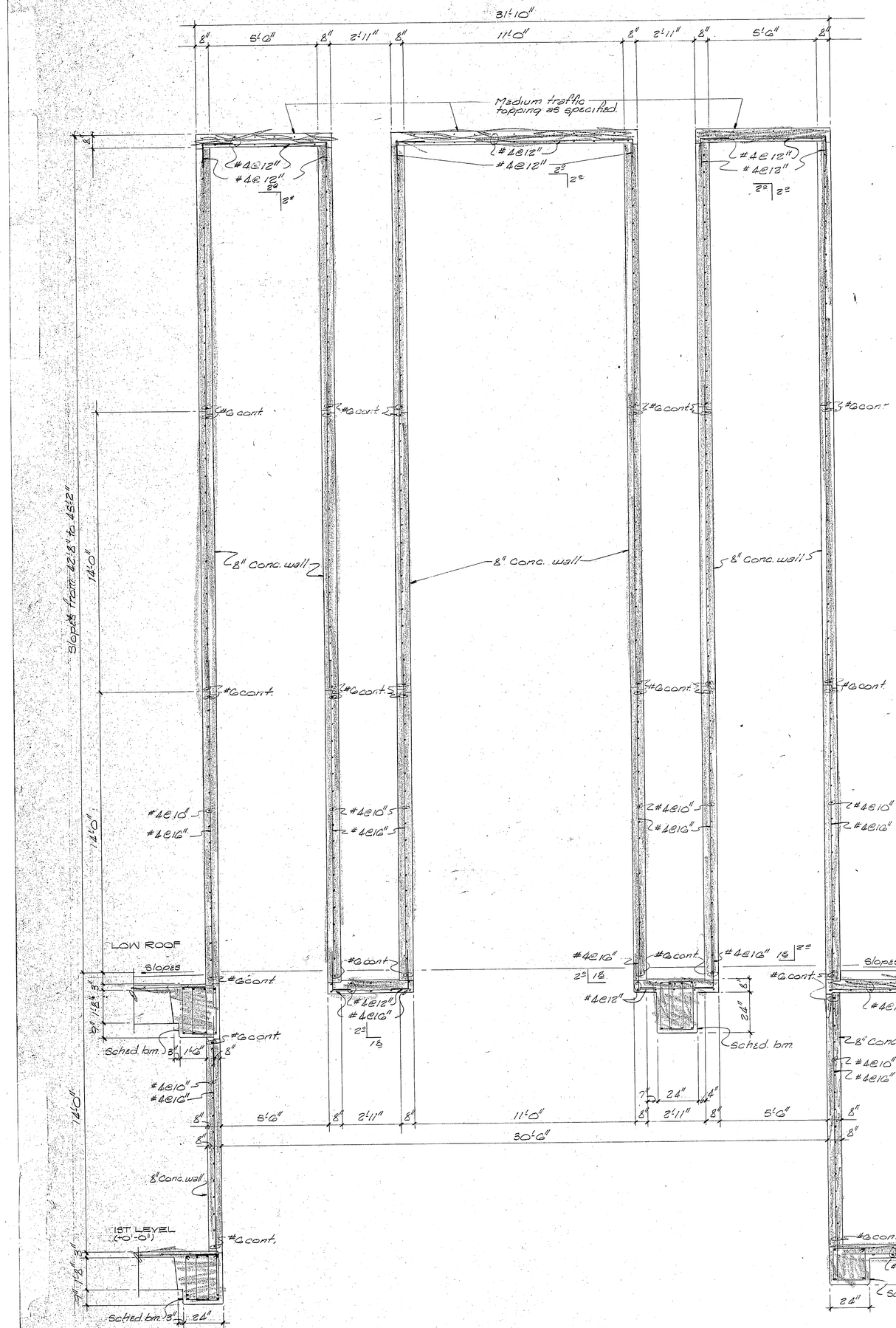


SECTION
Scale: 3/8"=1'-0" (1/S20)

SECTION
Scale: 3/8"=1'-0" (2/S20)

GENERAL NOTES

GENERAL:

1. Mechanical contractor shall coordinate installation of the required inserts with the general contractor. See mechanical drawings for supporting structures and inserts.
2. Mechanical contractor shall furnish all necessary structures, inserts and hanging devices for installation of mechanical equipment, ntes, etc. In no case shall the structures of support or the hanging devices be installed in such a manner as to overload any part of the building's structural components.
3. Consult mechanical and electrical drawings for all chases, sleeves, openings, ducts, etc., as required.
4. Where conflicts occur between specs., referenced codes, notes, and working drawings, the most stringent requirements shall apply.
5. Do not backfill against basement walls until first floor is in place.

CONCRETE GRADE BEAMS:

1. Unless otherwise noted, depress top of all grade beams at doorways and wall openings to receive floor slab. (Typ.)
2. Provide continuous fiberboard box under all grade beams and walls.

CONCRETE:

1. All concrete shall be (150#/Ft³) f'c 4000 psi at 28 days. EXCEPT AS NOTED
2. Concrete proportions, mixing, placing, curing, formwork, construction joints, etc., shall comply with all applicable provisions of the ACI code "ACI-301-72" and the ACI standards.
3. Unless noted or detailed, provide corner bars the same size and spacing as the horizontal reinforcing at the corners and intersection of all walls, beams, bond beams, turndowns and footings.
4. General contractor shall furnish and install all welding inserts, etc., that are cast in place.
5. Form all footings, stem walls, and other concrete structural elements.
6. Construction joints on structural concrete slabs, beams and grade beams shall occur only at centerline of span between supports. Approval of construction joint location shall be obtained from the structural engineer.
7. At concrete beams, grade beams, and structural slabs, splice top bars at mid span, and splice bottom bars at centerline of supports unless otherwise noted.

CONCRETE SLABS:

1. Slabs on grade shall have typical construction joints at 30 ft. centers (maximum) in each direction unless otherwise noted or detailed.
2. Soil under slabs on grade and footings shall be compacted as specified. Soil compaction tests shall be taken as specified.
3. All slabs on grade are 4" thick and reinforced with 6 x 6-10/10 w.w.f. unless otherwise noted or detailed. Place slabs on alternate sections in a checkerboard pattern between construction joints as shown on plan and detailed.
4. Unless noted or detailed, provide around openings in concrete floors and roofs 2ø5 x 4'-0" diagonal at all corners, 2ø5 at each side, and extend 2'-0" beyond openings at sides.
5. Unless otherwise noted, provide at the intersection of structural slabs with walls #3 dowels x 6'-0" long with 90° bends and 12"-0" returns at 39" on center, placed at right angles to the main structural reinforcing.
6. Reinforce 3" concrete slab over joist with 6 x 4 - 4/4 w.w.f. sheets. Reinforcing shall be continuous over interior beams and shall extend to within 3" of the outside face of exterior beams.

CONCRETE REINFORCING:

1. No bending or fabrication of rebar will be permitted on the job site.
2. All concrete reinforcing steel details not specifically noted or detailed shall be in accordance with notes and details already shown as applicable.
3. Reinforcing steel shall comply with all applicable provisions of the ACI Code "ACI-318-71", the ACI detailing manual "ACI 315-74" and the C.R.S.I. design handbook.
4. Unless otherwise noted or detailed, the reinforcement of footing and other principal structural members in which the concrete is deposited against the ground shall have not less than 3 inches of concrete between it and the ground contact surfaces. If concrete surfaces after removal of the forms are to be exposed to the weather or be in contact with the ground the reinforcement shall be protected with not less than 2 inches of concrete for bars larger than #5 and 1½" for #5 bars or smaller.
5. All reinforcing steel shall be "ASTM-A-615-60" except ties, stirrups and lugs welded to plates may be "A-615-40".
6. Minimum concrete cover, unless otherwise noted, for all structural slabs, walls and joists shall be 3/4". Cover for principal reinforcement of beams, girders and columns shall be 2" and for ties and stirrups shall be 1½".
7. Provide 2#6 at the top and bottom, above and below all floor and roof bearing points, and above and below all horizontal construction joints in all concrete walls.
8. Where columns are poured monolithically with concrete walls, provide vertical reinforcing and ties as scheduled.
9. Unless noted or detailed, provide around openings in concrete walls 1ø5 x 4'-0" diagonal at all corners, 1ø5 at each side, top and bottom, and extend 2'-0" beyond openings at side, top and bottom.

STEEL, GENERAL:

1. All structural steel shapes shall be A36 steel.
2. Shop and field fabrication and erection of structural steel shall comply with the current A.I.S.C. specifications for the "Design, Fabrication, and Erection of Structural Steel for Buildings".
3. All anchor bolts shall be A-307.
4. Steel joists shall be anchored or welded to supporting members.
5. Metal Deck Note:
   Deck welds shall be ½" plug welds with washers at 9" o.c. max. at each bearing point, around openings all sides, and 9" along length at edge of building where joist spacing exceeds 2'-9" and angle is provided for deck bearing. Button punch side laps at 10" o.c. when applicable.
6. Provide continuous angle support at all edges of all metal deck unless otherwise provided.
7. Provide roof holes in all angles and plates imbedded in concrete.

STEEL CONNECTIONS:

1. Wherever practicable for erection, angle and plate connections shall be shop welded to one member to minimize bolted connections.
2. All welds shall be made by currently certified welders.
3. Unless noted or detailed, all connections shall be made with ASTM A325 H.S. bolts. All connections shall comply with A.I.S.C. Manual of Steel Construction.
4. Fabricator shall locate and design field splices for his convenience in shipping and/or erection. These splices shall be designed for field welding and shall be approved by the Architect.

SITE GRADING NOTES

OBSERVATIONS & TESTS

1. The soils engineer shall act as the Owner's representative and shall make observations of site grading operations and tests as considered necessary for quality control. Where foundations or other critical elements are to be supported on engineered fill, continuous observations and tests of grading operations shall be made by the soils engineer. All tests shall be performed in accordance with procedures set forth in the 1975 Book of Standards of the American Society of Testing and Materials (ASTM).

EXTENT OF SURFACE PREPARATION & ENGINEERED FILL

2. Clearing and stripping, any required overexcavation of existing surface soils, compaction of the surface of the native soils and placement and compaction of the engineered fill material shall extend for a horizontal distance outside the perimeters of the building, exterior slabs, pavement, etc., equal to the depth of engineered fill. The building perimeter shall be considered as being the extreme outer edge of footings in determining the required lateral extent of engineered fill.

CLEARING & STRIPPING

3. All vegetation and debris shall be removed from throughout the site. Stumps, matted roots and roots larger than 2 inches in diameter shall be removed from within 6 inches of the surface of areas upon which fills are to be constructed.

COMPACTION OF SURFACE OF NATIVE SOILS

4. The upper 6 inches of native soils upon which fills are to be constructed and the upper 6 inches of soils beneath cut surfaces shall be scarified, brought to the optimum moisture content or above, and compacted to the requirements given below.

COMPACTION METHODS & EQUIPMENT

5. Mechanical compaction equipment shall be used in all grading operations. In no case shall "water settling" or jetting be employed. Where vibratory compaction equipment is used, it shall be the contractor's responsibility to insure that vibrations do not damage nearby buildings or other adjacent property.

THICKNESS OF LIFTS

6. Lifts shall have a thickness, when compacted, of no more than 8 inches.

GRANULAR BASE QUALITY REQUIREMENTS

7. Granular base shall be free of vegetation, debris and other deleterious material. It shall meet the following grading requirements as determined by ASTM D422.

Sieve Size (Square Openings)	Percent Passing by Weight
1 inch	100
3/4 inch	95-100
1/4 inch	35-75
no. 200	0-8

The fraction of material passing the no. 40 sieve shall be nonplastic when tested by ASTM D423 and D424. The coarse aggregate shall have a percent of wear, when subjected to the Los Angeles abrasion test (ASTM D131), of no greater than 45.

ENGINEERED FILL QUALITY REQUIREMENTS

8. Engineered fill shall be free of vegetation, debris and other deleterious material and shall meet the following requirements as determined by ASTM D422.

Sieve Size (Square Openings)	Percent Passing by Weight
4 inch	100
no. 200	10-65

The plasticity index of the fraction passing the no. 40 sieve, as determined by ASTM D423 and D424, shall not exceed 15.

REQUIRED DEGREE OF COMPACTION

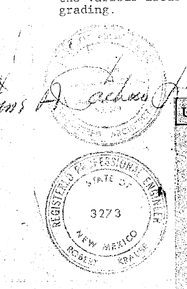
9. Maximum density and optimum moisture content of the engineered fill and granular base shall be determined by ASTM D1557. Materials in the various areas of the project shall be compacted within the ranges of the following percentages of maximum density.

Area	Percent of Maximum Density
Original ground preparation beneath building slab support fill	90
Building slab support fill	90
Exterior slab support fill	90
Granular base	90

Moisture content of the native soils and fill shall be at or above the optimum moisture content. This will tend to reduce the swelling potential of the native soils.

For purposes of acceptance, the in-place density of the fill shall be defined as that determined by the sand cone method (ASTM D1556) or by nuclear methods (ASTM D2922).

Engineered fill compaction requirements shall apply to all utility trench, retaining wall and other backfill in the various areas of the project designated for site grading.



UNM MECHANICAL ENGINEERING BLDG.

SECTIONS
NOTES

pacheco and graham · architects
project date sheet