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File 1990-0023 Name Albertson's/ M. Lavin - Over hill Annexation – Replat Block 1 & 2-SE 12TH & Orchard

	Scanned	
		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the in some instances, not all entries designated to be scanned by the department are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been provided. **Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.** **Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.**
X	X	**Table of Contents**
		Review Sheet Summary
		Application Form
		Review Sheets
X		Receipts for fees paid for anything
		***Submittal checklist**
X	X	***General project report**
		Reduced copy of final plans or drawings
X	X	Reduction of assessor's map.
		Evidence of title, deeds, easements
X	X	***Mailing list to adjacent property owners**
		Public notice cards
		Record of certified mail
		Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
		***Final reports for drainage and soils (geotechnical reports)**
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		***Staff Reports**
		***Planning Commission staff report and exhibits**
		***City Council staff report and exhibits**
		***Summary sheet of final conditions**
		***Letters and correspondence dated after the date of final approval (pertaining to change in conditions or expiration date)**

DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

X	X	Action Sheet	X	X	Annexation map - ** - historical files
X	X	Review Sheet Summary	X		Subdivision Summary Form
X		Review Sheets	X	X	Letter from Ronald P. Rish, Armstrong Consultants, Inc. to Don Newton re: comments on meeting to resolve design criteria – 5/15/90
X		Development Application – 5/22/90	X	X	Site work Specifications for Albertson's/Osco – 6/90
X	X	Development Improvement Agreement - ** - 7/27/90	X	X	Geotechnical Engineering Study – 6/16/89
X	X	Letter of credit - ** - 7/27/90	X		Notes to file – no date
X		Certification of plat – 7/27/90	X		Notice of Public Hearing – 6/5/90
X	X	Recorded document re: reviewed by utilities committee – 7/11/90	X	X	Site Plan
X		Public Notice Posting – 5/23/90			
X	X	Common Area Maintenance Agreement – 7/27/90			
X	X	Appraisal – John W. Nisley, MAI, Real Estate Appraiser – 5/30/90			
X	X	Letter from Lydia O. Sletvold, West One Bank re: Correspondence abouth letter of credit – 7/26/90			
X	X	Letter from Dennis W. Wyatt, Architect, Wyatt & Associates, for Albertson's Inc. to Dan Wilson re: requesting a revocable permit to Albertsons Shopping Center Sign – 8/29/90			

no changes to original matrix on file

EXHIBIT "H" (1 of 2)

Richard L. & Linda Berkey
1215 Mesa Avenue
Grand Junction, CO 81502

Harley W. Kirkeby
Bette M. Kirkeby
1325 Mesa Avenue
Grand Junction, CO 81501

Clarise J. Swenson
1252 Texas Ave.
Grand Junction, CO 81501

Florence L. Howard
1225 Mesa Avenue
Grand Junction, CO 81501

Cecil A. & Ruby B. Rorex
1315 Mesa Avenue
Grand Junction, CO 81501

Harold J. Lekic
Mary A. Lekic
310 Music Lane
Grand Junction, CO 81505

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Jack L. Woods
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Tennie Ann Capps
1310 Texas Avenue
Grand Junction, CO 81501

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Alice G. Brown
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Harlien Perina, Trustee
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Grand Junction, CO 81501

Florence Allen
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Cedaredge, CO 81415

Randall V. Smith
1216 Texas Avenue
Grand Junction, CO 81501

Daniel D. Tucker
Nell P. Tucker
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Grand Junction, CO 81501

Dean Blake Chambliss
1315 Mesa Avenue
Grand Junction, CO 81501

Ernest M. Eggert
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Grand Junction, CO 81501

Arthella Manspeaker
161 29 Road
Grand Junction, CO 81503

Virgil R. Preston
Lola A. Preston
1347 Orchard Avenue
Grand Junction, CO 81501

Mesa College
c/o State of Colorado
Mesa College
Grand Junction, CO 81501

Jean Jacques Monier
Gisele Coursinoux
50 Avenue
Borrigiione
Nice, France F.C. 00063

Earl F. Hannebaum
1245 Mesa Avenue
Grand Junction, CO 81501

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EXHIBIT "H" (2 of 2)

Phil E. Tesitor
1342 Hall Avenue
Grand Junction, CO 81501

REPRESENTATIVE:
Wyatt & Associates, AIA
1165 So. Pennsylvania St
Denver, CO 80210

Bill B. Ashcraft
1332 Hall Avenue
Grand Junction, CO 81501

REPRESENTATIVE:
Albertsons, Inc.
Real Estate Division
250 Parkcenter Blvd.
Boise, ID 83726

George A. Theisen
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Grand Junction, CO 81501

OWNER:
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ORCHARD GROUP, LTD.
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Larry D. Anderegg
Cheryl A. Anderegg
c/o Escrow Spec
P.O. Box 4370
Grand Junction, CO 81502

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Taeko Whitesell
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Grand Junction, CO 81501

Gilbert W. Reddick
Nora E. REddick
1354 Mesa Avenue
Grand Junction, CO 81501

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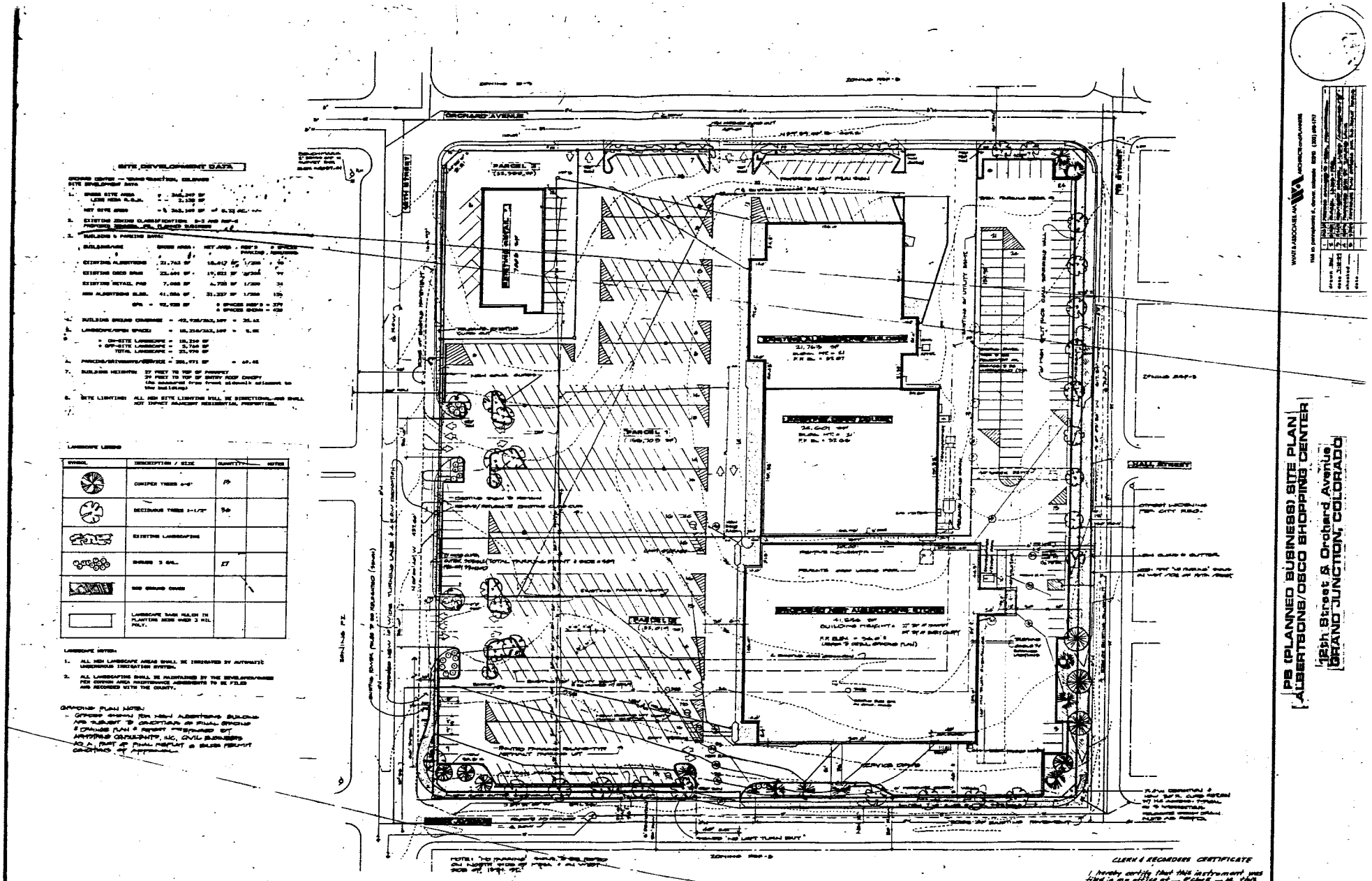


EXHIBIT G,R,S,T,U,V,W,X

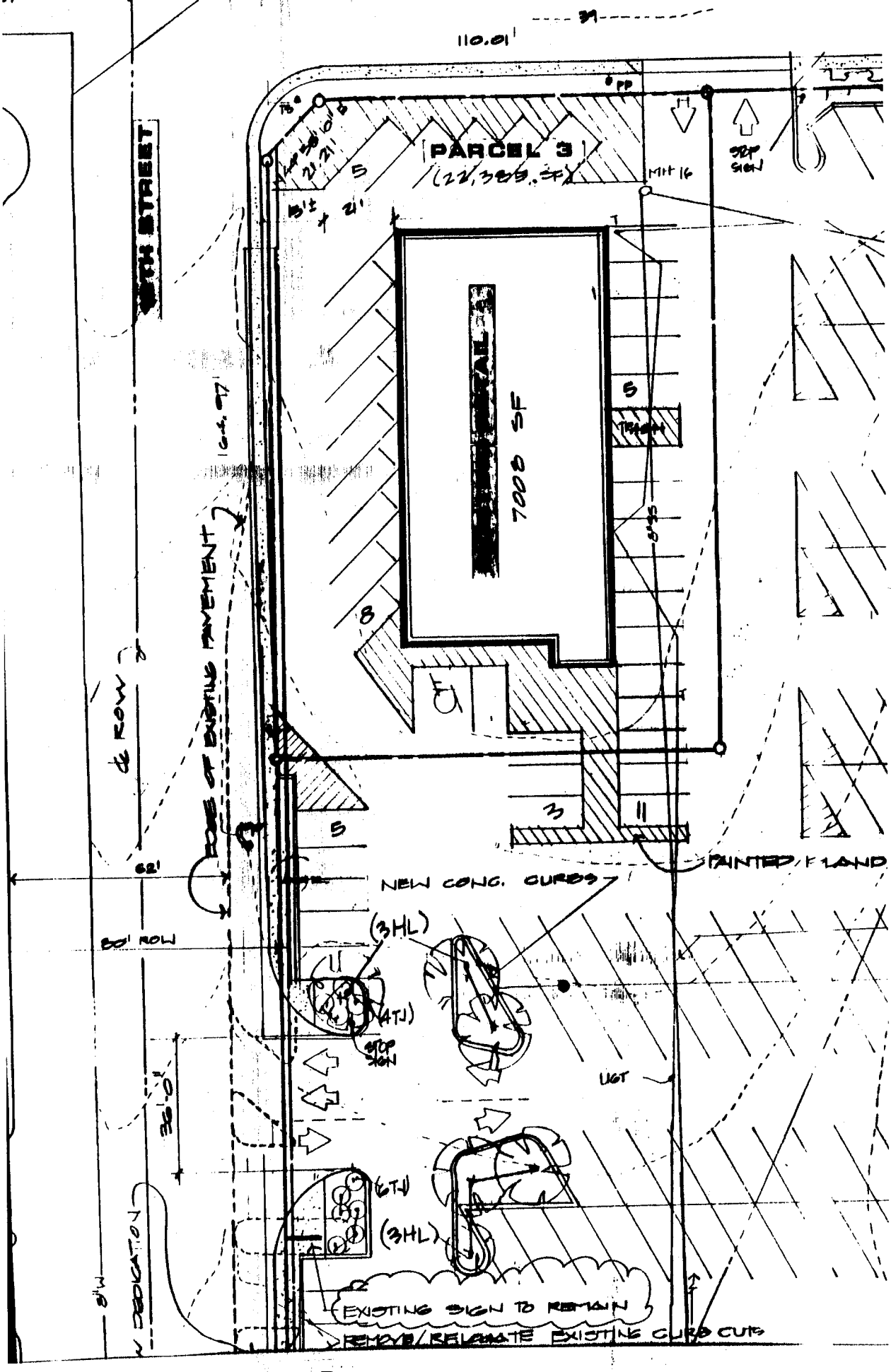


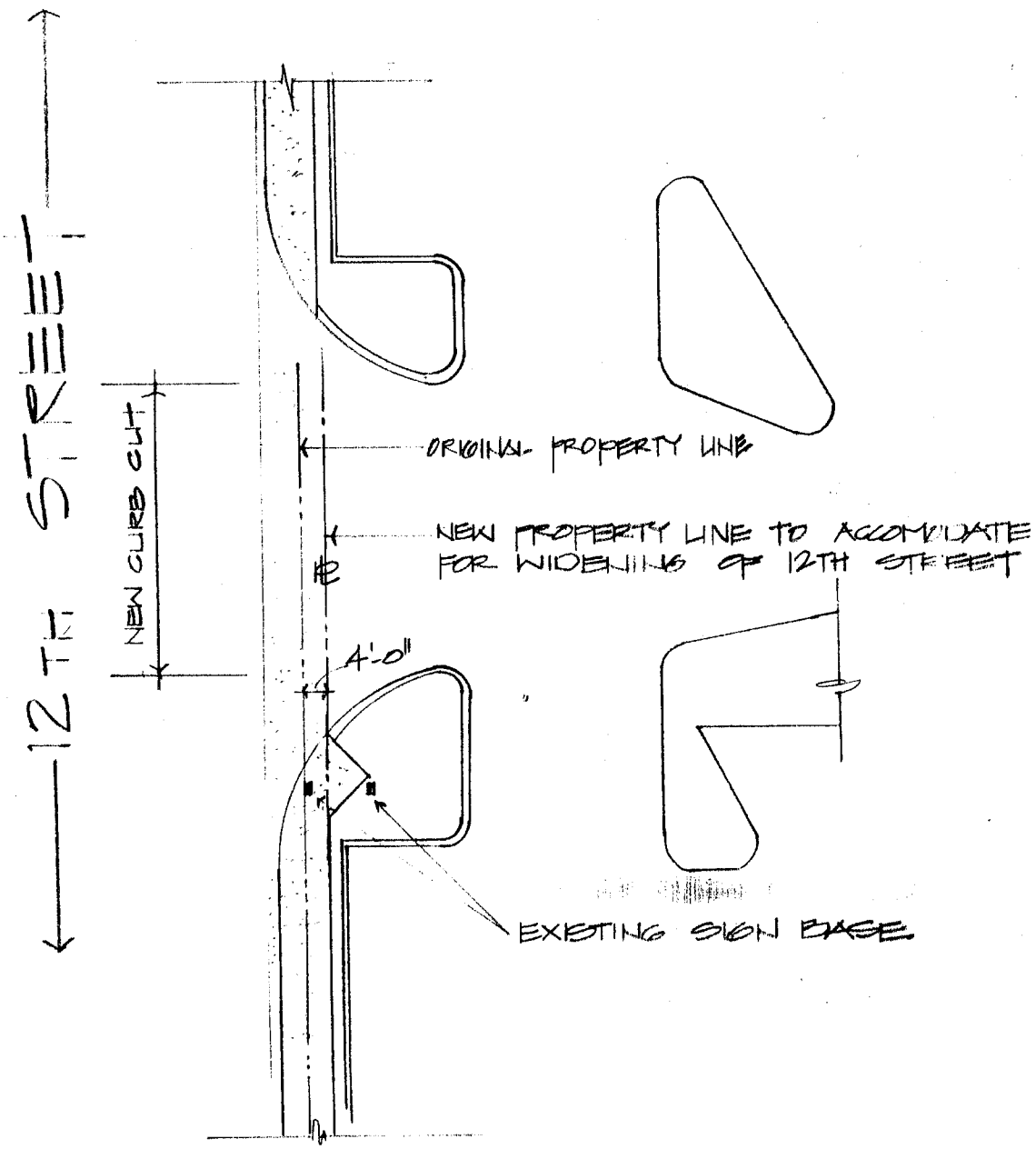
EXHIBIT A

ALBERTSONS #886 GRAND JUNCTION, COLO
(EXCERPT FROM APPROVED SITE PLAN)

ALBERTSON STORE 0886 - GRAND JUNCTION, CO

SHOPPING CENTER - EXHIBIT "B"

1"=20'-0"

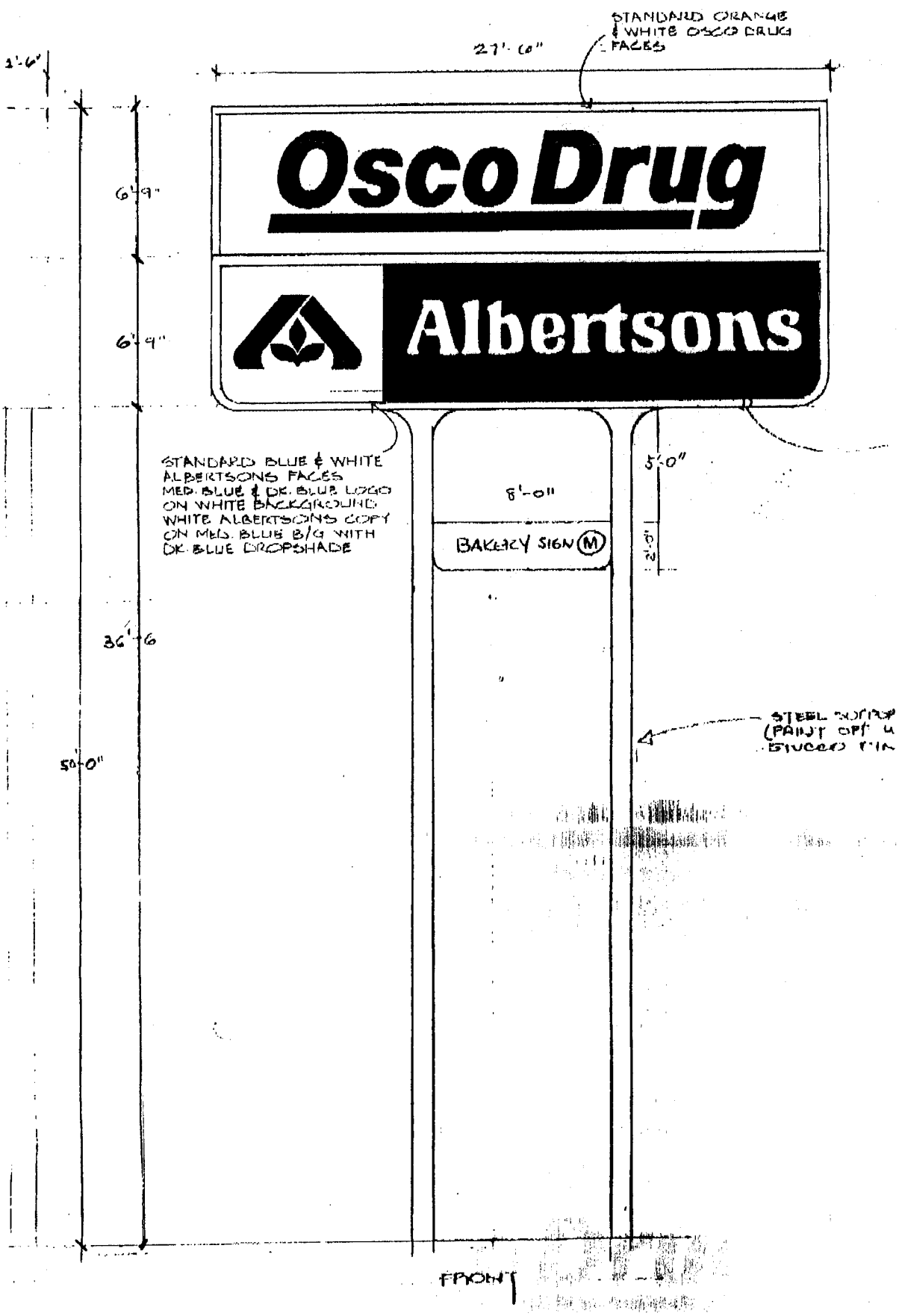


FEED = EXISTING ALBERTSONS FACES ONLY

NOT TO SCALE

ALBERTSONS #820
GRAND JUNCTION, COLO.
REVISION - 5-29-90

EXHIBIT "C"

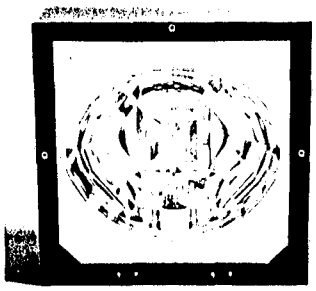


Two Highly Efficient Optical Systems

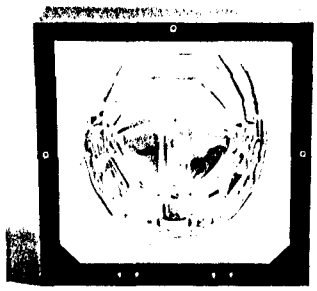
LIGHTING FOR ALBERTSON/OSCO

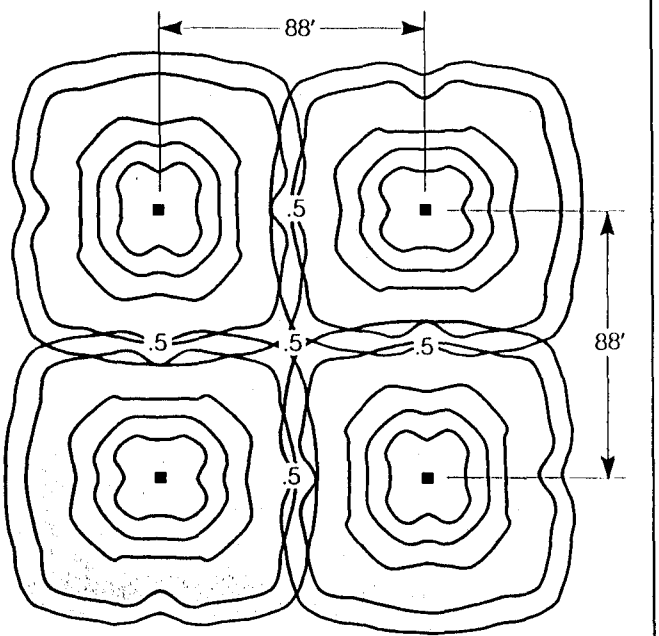
Type V Square
Kim researched and developed the square light pattern specifically for high efficiency in open area illumination. Maximum pole spacing is achieved in parking lots and plazas with virtually uniform light levels at the critical midpoints.

U.S. Patent 4,041,306

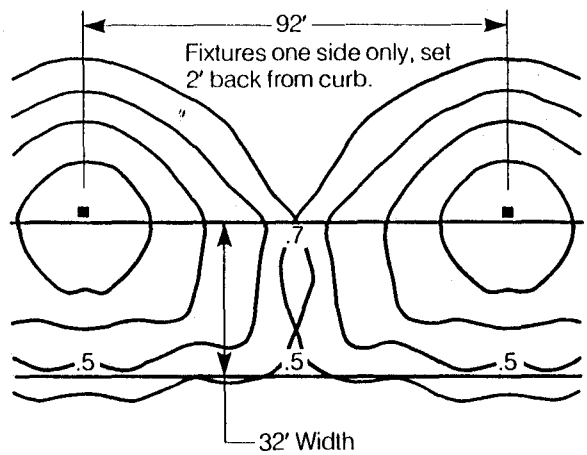


Type III Asymmetric
Streets, driveways or pathways are lighted uniformly from a curb-line location with the asymmetric optical system. This system also provides excellent sidewalk lighting characteristics. Where light trespass laws are in effect, the houseside shield option can aid in eliminating undesirable light spill beyond the property line.

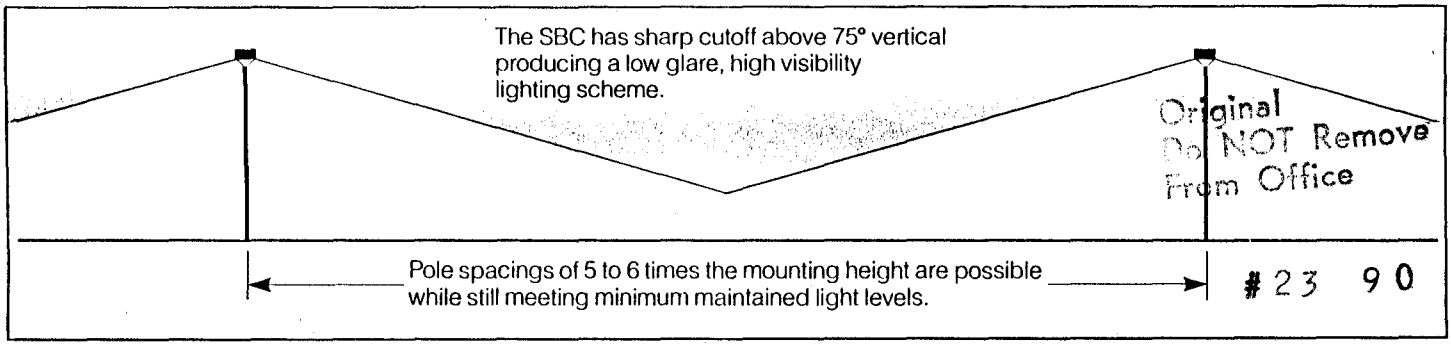




Example for 175W. Metallic Halide on 16' poles. 44.25 ft² per Watt



Example for 150W. High Pressure Sodium on 16' poles.



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ARMSTRONG CONSULTANTS, INC.
861 Rood Avenue — Grand Junction, Colorado 81501 — (303) 242-0101

May 15, 1990

Mr. Don Newton
City Engineer
250 N. Fifth Street
Grand Junction, CO 81501

RE: Albertsons/Osco Shopping Center
Armstrong Project No. 905308

Dear Don:

Thank you for the time you spent with me yesterday to resolve the design criteria for the perimeter street improvements for the above. The following will be the basis for our design of the improvements.

General:

* All street curbs will be vertical-face and curb & gutter will be 2 ft. wide. (ie City Standard)

* All curb, gutter and sidewalk will be monolithic. (City Standard)

* Curb radii (face of curb) at all public street intersections (12th & Mesa, Orchard & 13th and 13th & Mesa) will be 30 ft. The right-of-way for these should be triangular.

* All street improvements will be measured from centerline of street right-of-way which will be shown on plans.

* No trees will be placed within 10 ft. of face of street curb for 100 ft. to left of any exiting driveway. The Architect should submit the landscape plan to you for review of potential sight obstructions at all driveways and street intersections.

* Stop signs will be placed at all exits. No-parking signs will be placed along the west side of 13th Street and the north side of the east (narrow) end of Mesa Avenue. The Architect should submit the traffic signage plan to you for review.

* Curb ramps (wheelchair) will be installed at the three street corners and at any driveways having vertical curb returns. (City Standard)

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* Existing pavement widths from centerline of right-of-way to edges on opposite side of streets from project will be shown on the plans.

* Pavement thicknesses on all streets (and the parking lot) will be based on design using CBR test(s) of the site subgrade soil.

12th Street:

* The right turn lane shown on Wyatt's submittal drawing of May 5, 1990, is acceptable.

* The right turn lane width of 10 ft. is from the existing edge of asphalt to the proposed edge of asphalt.

* The curb, gutter and sidewalk will be 8 ft. wide (minimum) (City Standard).

* The parking curb east face will be located 2 ft. from the back edge of the 8 ft. curb, gutter and sidewalk with one of the following two options for the 1½ ft. space between sidewalk and parking lot curb. This is to allow for parked vehicle overhang.

  a) Widen sidewalk 1½ ft. if grades allow.
  b) Slope pave with concrete if grades differ.

* The right-of-way line will be located at the west face of the parking lot curb.

* The existing curb, gutter and sidewalk will be replaced up to the newer curb, gutter and sidewalk near Orchard Avenue. The 8 ft. wide section should butt to the existing narrower section at the interface. It is acknowledged that parking lot traffic at the corner building will probably sometimes encroach onto the new sidewalk edge.

* The two proposed new 36' wide driveways are acceptable as shown on the May 5 submittal in location and width. The curved driveway edges are acceptable if 8 ft. wide crosspans and concrete fillets are provided.

* The existing driveway cut at the south edge of the northwest parcel will remain at the same location and width but will be reconstructed with the right turn lane widening.

Orchard Avenue:

* The most westerly existing driveway will remain as is.

* The center existing driveway will be widened to 36 ft. width.

* The most easterly existing wide driveway will remain as is except the short "bump" near the driveway center will be removed and replaced to provide a continuously smooth driveway apron.

* All existing curb, gutter and sidewalk will remain as is.

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13th Street:

* The existing pavement will be wheel-cut and matched at the centerline and the west half will be replaced with 15 ft. of asphalt mat (measured from centerline of right-of-way) and 2 ft. curb and gutter.

* No sidewalk will be provided on the west side of the street.

* Except for the intersection corners, no additional right-of-way is required.

Mesa Avenue:

* The existing pavement will be wheel-cut and matched at the centerline of right-of-way.

* East of the proposed driveway, 15 ft. of asphalt mat (measured from centerline of right-of-way) and 7 ft. curb, gutter and sidewalk will be provided within the existing right-of-way.

* West of the proposed driveway, 22½ ft. of asphalt mat (measured from centerline of right-of-way) and 7 ft. curb, gutter and sidewalk will be provided.

* From the east edge of the proposed driveway to 12th Street, an additional 5 ft. of right-of-way will be dedicated which will result in the back edge of street sidewalk (29½ ft. from centerline of right-of-way) being 6 inches from the new right-of-way line (30 ft. from centerline of right-of-way).

* The proposed 40 ft. wide driveway as shown on the May 5 submittal is acceptable as to location and width. You expressed concern about making sure the easterly edge radius is sufficient to accommodate the large trucks using this driveway.

Please notify us if the above is not your understanding of the design criteria for the perimeter streets design. We anticipate submitting the construction plans for the streets improvements within the next few weeks for your review and approval.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Ronald P. Rish

Ronald P. Rish, P.E.

RPR/ss
DALY16

cc: Dennis Wyatt, AIA
Karl Metzner - City Planning
Jim Shanks - Public Works Director

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Chen-Northern, Inc.
50 South ...
Denver, Colorado 80223
303/744-7105
FAX: 303/744-0210

Billings
Boise
Casper
Colorado Springs
Denver
Elko
Evanston
Gillette
Glenwood Springs
Helena
Phoenix
Pocatello
Rock Springs
Salt Lake City
San Antonio
Tri Cities
Yakima

GEOTECHNICAL ENGINEERING STUDY
PROPOSED NEW ALBERTSON'S FOOD STORE
12TH STREET AND ORCHARD AVENUE
GRAND JUNCTION, COLORADO

PREPARED FOR

ALBERTSON'S, INC.
250 PARKCENTER BOULEVARD
BOISE, IDAHO 83726

ATTENTION: MR. MARK LAVIN ML 6/19/89

JUNE 16, 1989

JOB NO. 1 585 89

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CONCLUSIONS

(1) The subsurface conditions encountered at the site generally consisted of a thin layer of pavement and approximately 13 to 48.5 feet of stiff to very stiff sandy to very sandy and silty clay. The clay was underlain by medium dense to dense sand in Boring 3. Very dense sand and gravel was encountered at depths on the order of 50 feet. Ground water was encountered in the two deep borings at depths between 30 to 35 feet.

(2) The most desired foundation system is to found the building on piles driven into the very dense sand and gravel stratum at depths of approximately 50 feet below the ground surface. The building may also be founded on drilled piers bottomed on dense sand and gravel.

(3) An alternative foundation system, which would exhibit a higher risk of potential foundation movement, would be to place the building on conventional spread footings placed on 3 feet of compacted structural fill.

(4) Due to some expansive soils present at the site, floor slabs will require special construction details.

(5) Pavement areas restricted to automobile traffic should be constructed using 6 inches of aggregate base course with a 2 1/2-inch asphalt surface. Truck access areas and driveways should consist of 6 inches of aggregate base course with a 3 1/2-inch asphalt surface. Full-depth asphalt and portland cement concrete pavement alternatives are presented in the text of the report.

(6) Geotechnical related design and construction details are discussed in the text of the report.

PURPOSE AND SCOPE OF STUDY

This report presents the results of a subsurface study for proposed new Albertson's Inc. supermarket to be located directly south of the existing retail facilities at the southeast corner of 12th Street and Orchard Avenue in Grand Junction, Colorado. The subsurface study was conducted for the purpose of developing foundation recommendations for the proposed building and pavement recommendations for the adjacent parking areas. The project site is shown on Fig. 1. The study was conducted in accordance with our proposal to Albertson's, Inc., dated May 2, 1989.

A field exploration program consisting of exploratory borings was conducted to obtain information on subsurface conditions. Material samples obtained during the field exploration were tested in the laboratory to determine the strength, compressibility, swell characteristics, corrosivity and classification of the on-site soils. The results of the field exploration and laboratory testing were analyzed to develop recommendations for foundation types, depths and allowable pressures for the proposed building foundation and paving thickness recommendations. The results of the field exploration and laboratory testing are presented herein.

This report has been prepared to summarize the data obtained during this study and to present our conclusions and recommendations based on the proposed construction and the subsurface conditions encountered. Design parameters and a discussion of geotechnical engineering considerations related to construction of the proposed food store are included in the report.

PROPOSED CONSTRUCTION

We understand it is proposed to construct a larger replacement store south of the drug store at the approximate location shown on Fig. 1. The existing Albertson's supermarket north of the drug store will be released or demolished.

The new building will consist of masonry or precast tilt-up concrete walls and will be constructed with a slab-on-grade floor. The elevation of the slab-on-grade is to approximately match the elevation of the existing retail drug store located directly to the north. Approximately 2 to 3 feet of fill will be necessary for placement within the building footprint to achieve the desired final floor slab elevations. Foundation loads are anticipated to be on the order of 5-kips per lineal foot for the continuous wall loads and approximately 100-kips for column loads. Loadings on the floor slab are anticipated to be on the order of 200 psf.

If loadings, locations or conditions are significantly different from those described above, we should be notified to reevaluate the recommendations contained in this report.

SITE CONDITIONS

The present use of the site consists of a shopping center with a surrounding asphalt covered parking lot for the majority of the surface area. The southern portion of the site did not have any pavement and was covered with occasional grasses and weeds. Indications of some previous overlot grading on the southern portion of the site were observed. The ground surface had a slight slope downward to the south. The proposed building site was bounded on the east by 13th Street and to the south by Mesa Avenue. To

the west was 12th Street and to the north were the existing shopping center and Orchard Avenue.

Based on the information provided to us by Albertson's Inc., the existing retail buildings are supported by steel pipe piles driven into dense sand and gravel. Our experience indicates this foundation type is typical of this area.

SUBSURFACE CONDITIONS

The field exploration for the project was conducted on May 16 and 17, 1989. Seven exploratory borings were drilled at the locations shown on Fig. 1 to explore subsurface conditions. Two of the borings were shallow auger borings drilled to obtain bulk samples for pavement design. Locations of the exploratory borings were determined by tape measurements and elevations were determined by a level survey performed by representatives of Chen-Northern, Inc.

The borings were advanced through the overburden soils with 4-inch diameter continuous flight augers and 7-inch O.D. continuous flight hollow stem augers. Depths at which the samples were taken and the penetration resistance values are shown on the Logs of Exploratory Borings, Fig. 1. Measurements of the water level were made in the borings by lowering a weighted plumb line into the open hole shortly after completion of drilling. The elevations of the water levels measured are shown on the Logs of Exploratory Borings.

A thin layer of asphaltic concrete and aggregate base course was encountered at the ground surface in Borings 1, 2 and 4. A dense clayey sand and gravel which appeared to be a human-placed fill was encountered at the

ground surface in Boring 6. Below the asphalt base course and fill, native clays and silts were encountered and continued beyond the maximum depth of 30 feet in Borings 2, 4, 5, 6 and 7. The sandy clays and silts were medium stiff just below the ground surface increasing to stiff with increasing depth. In Boring 3, medium dense to dense silty sand was encountered at a depth of approximately 13 feet below the sandy clay and silt. In Borings 1 and 3, a very dense sand and gravel stratum was encountered at depths on the order of 49 1/2 to 50 feet below the ground surface existing at the time of the borings. The sands and gravels continue to the maximum depths of 50 and 51 feet, respectively, in these two borings.

Ground water was encountered at approximately 35 feet and 31 1/2 feet in Borings 1 and 3, respectively. All borings were backfilled after completion of drilling and water table measurements. Logs of Exploratory Borings are presented on Fig. 2, the legend on Fig. 3 and notes on Fig. 4.

Samples obtained from the exploratory borings were examined and visually classified in the laboratory by the project engineer. Laboratory testing included standard property tests, such as natural moisture contents (ASTM D-2216), dry unit weights, grain size analyses (ASTM D-422) and liquid and plastic limits (ASTM D-4318). Swell-consolidation tests (similar to ASTM D-2435) were conducted on several samples of the soil to determine the compressibility or swell characteristics under loading when submerged in water. The percentage of water soluble sulfates was determined in general accordance with "Standard Methods for the Examination of Water and Wastewater, 15th ed.," for selected samples.

The laboratory test results indicate that the upper soils have nil to low expansive potential. Unconfined compressive strength tests indicate values in the range of 890 to 2,040 psf.

Results of the laboratory testing are presented on Figs. 5 through 7 and in the attached Summaries of Laboratory Test Results and Laboratory Resistivity and Soil Acidity Test Results, Tables I and II.

FOUNDATION RECOMMENDATIONS

The majority of the upper soils at and below probable footing bearing elevation are of low strength at the in-situ moisture contents. These soils would likely result in unacceptable settlement of conventional footings placed upon the soils. An extremely low bearing pressure could be utilized; however, this would likely result in prohibitively large footings and differential settlements could still occur. A deep foundation such as driven piles or drilled piers would transfer building loads down to the very dense sand and gravel stratum and would exhibit a significantly lower risk of potential foundation movement.

Based on the subsurface conditions encountered and the proposed construction, we recommend the structure be supported on driven piles or drilled caissons. A foundation alternative of footings placed on 3 feet of nonexpansive compacted structural fill is also presented. Considering the previous construction in the vicinity, driven piles into the very dense sand and gravel appears to be the preferred foundation system.

Driven Pile Foundations: Pile types available for support of the proposed food store include steel "H" piles or steel pipe piles, driven closed-end and

filled with concrete. In our opinion, steel "H" piles would be preferred for support of the proposed food store because of the ease of driving.

The design details presented below should be observed for a driven pile foundation system. Construction details should be considered when preparing project documents.

(1) The piles should be driven to a depth of at least 3 feet into the sand and gravel stratum encountered approximately 49 1/2 to 50 feet below the ground surface existing at the time of the borings.

(2) The steel H-piles can be designed for the following loads.

Pile Designation	Allowable Load Capacity (kips)
HP 8 X 36	60
HP 10 X 57	80
HP 12 X 74	100

These load capacities are based on both the end bearing and frictional components of the pile/soil interaction.

(3) Steel pipe piles will likely exhibit more driving difficulty than steel H-piles. The steel pipe piles should be driven closed end with a mandrel. Steel pipe piles can be designed for the following loads based on both the end bearing and frictional resistance of the pile/soil interaction.

Pipe Diameter (in)	Allowable Load Capacity (kips)
8	60
10	80
12	100

These allowable load capacities are lower than the maximum pile steel capacities based on pile cross-sectional area and a pile service stress of 9,000 psi.

(4) The contractor should select a driving hammer and cushion combination capable of installing the selected piling without overstressing the piles. The contractor should submit the pile driving plan and pile hammer cushion combination to the engineer for evaluation of the driving stresses well in advance of pile installation. In general, the manufacturer's rated energy output of the hammer should be between 1,800 to 2,000 foot-pounds per square inch of the pile's steel section. This assumes a reasonable operating efficiency for the hammer.

(5) All H-piles should be provided with driving shoes to protect the pile tip from damage when penetrating the overburden clays and silts, and the very dense sand and gravel.

(6) The pile hammer should be operated at the manufacturer's recommended stroke when measuring penetration resistance.

(7) Each pile should be observed during installation by a qualified engineer or his representative. The piles should be monitored for buckling, crimping and alignment, in addition to recording penetration resistance and general pile driving operations.

(8) Corrosion information is provided in the section entitled "Buried Metal Corrosion" included later in this report.

Drilled Pier Foundation Alternative: Straight-shaft drilled piers bottomed into dense sand and gravel may be used for support of the structure. The piers like piles, have the advantage of providing high capacity for transferring the structural loads to a soil stratum of high bearing

capacity. However, the piers will require casing due to presence of granular soils and ground water. The load carrying capability of the sand and gravel stratum was evaluated based on an analysis of the penetration tests and our experience with the design and performance of similar structures.

The design and construction criteria presented below should be observed for a straight-shaft pier foundation system. The construction details should be considered when preparing project documents.

(1) Piers should be designed for an allowable end bearing pressure into the sandy and gravel of 15,000 psf. A skin friction of 200 psf can be used for the portion of the pier in the clays and silts overlying the sand and gravel stratum. Due to possible disturbance during drilling, the upper 5 feet of pier penetration into the clays and silts should be ignored in design calculations for side shear.

(2) Piers should penetrate at least two feet into the sand and gravel stratum located at an approximate depth of 50 feet below the existing ground surface.

(3) Piers should be reinforced their full length with at least one No. 5 reinforcing rod for each 16 inches of pier perimeter.

(4) A 4-inch void should be provided beneath the grade beams to concentrate pier loadings.

(5) The minimum spacing requirements between piers should be three diameters from center to center. At this spacing, no reduction in axial or horizontal soil modulus values is required. Piers grouped less than three diameters from center to center should be studied on an individual basis to determine the appropriate reductions in both lateral and axial capacity.

(6) A minimum pier diameter of 24 inches is recommended to facilitate proper cleaning and observation of the pier hole.

(7) Concrete used in the piers should be a fluid mix with sufficient slump so it will fill the void between reinforcing steel and the pier hole. We recommend a minimum slump in the range of 5 to 7 inches.

(8) Pier holes should be properly cleaned prior to the placement of concrete.

(9) The presence of water and granular soils in the exploratory borings indicates casing and/or dewatering equipment will be required. In no case should concrete be placed in more than 3 inches of water unless the tremie method is used. If water cannot be removed or prevented with the use of casing and/or dewatering equipment prior to placement of concrete, the tremie method should be used after the hole has been cleaned.

(10) The drilled shaft contractor should mobilize equipment of sufficient size and operating condition to achieve the required penetration in the sand and gravel stratum at depths on the order of 50 feet.

(11) Concrete should be placed in piers the same day they are drilled. The presence of water or caving soils may require that concrete be placed immediately after the pier hole is completed. Failure to place concrete the day of drilling will normally result in a requirement for additional penetration.

(12) Positive cutoff of ground water inside casing does not appear possible. Use of bentonite slurry and a displacement method will be required for concrete placement. The contract documents should advise potential drilled shaft contractors of these subsurface conditions. In addition, careful consideration should be given to preparing bid items to avoid high costs for potential overruns.

(13) A representative of the soil engineer should observe pier drilling operations on a full-time basis.

Spread Footing Foundation Alternative: An alternative to driven piles or drilled piers would be to support the building on spread footings placed on a minimum of 3 feet of properly compacted structural fill. It should be realized that a higher risk of potential foundation movement would be associated with this type of foundation system due to the low strengths of these soils at the in situ moisture contents.

The design and construction criteria presented below should be observed for a spread footing foundation system. The construction details should be considered when preparing project documents.

(1) A minimum depth of 3 feet of the on-site native clay and silt soils encountered within the foundation excavation should be removed. The overexcavated subgrade should be replaced with nonexpansive structural fill material compacted to 100% of the maximum standard Proctor density near the optimum moisture content. New fill should extend down from the edges of the footings at a 1:1 (horizontal to vertical) projection for both continuous spread footings and isolated column footings.

(2) The structural fill should be nonexpansive, predominantly granular, have a maximum particle size of 3 inches, and be free of trash and debris.

(3) The on-site soil will be expansive when placed in a compacted condition. Consequently, it should not be used for fill beneath footings.

(4) Footings placed on the 3 feet minimum of properly compacted structural fill should be designed for an allowable soil bearing pressure of 2,000 psf. The footings should also be designed for a minimum dead load

pressure of 500 psf. In order to satisfy the minimum dead load pressure and minimum footings width criteria, it may be necessary to concentrate loads by using a grade beam and pad or similar foundation design. If this system is used, a void should be provided beneath the grade beams between pads. Wall-on-grade construction is not acceptable to achieve the minimum dead load.

(5) Exterior footings and footings beneath unheated areas should be provided with adequate soil cover above their bearing elevation for frost protection. Placement of foundations at least 30 inches below the exterior grade is typically used in this area.

(6) Continuous foundation walls should be reinforced top and bottom to span an unsupported length of at least 10 feet.

(7) A representative of the soil engineer should observe all footing excavations prior to concrete placement. The structural fill should be tested during placement to assure that proper compaction is being attained.

FLOOR SLABS

Some of the soils encountered near the ground surface exhibited low expansive characteristics. Floor slabs present a problem where expansive materials are present near floor slab elevation because sufficient dead load cannot be imposed on them to resist the uplift pressure generated when the materials are wetted and expand. Based on the moisture-volume change characteristics of the materials encountered, we believe slab-on-ground construction may be used, provided the risk of distress resulting from slab movement is accepted by the owner. The following measures should be taken to

reduce damage which could result from movement should the underslab materials be subjected to moisture changes.

(1) Floor slabs should be separated from all bearing walls and columns with expansion joints which allow unrestrained vertical movement.

(2) Interior non-bearing partitions resting on floor slabs should be provided with slip joints either at the top or bottom so that, if the slabs move, the movement cannot be transmitted to the upper structure. This detail is also important for wallboards, stairways and door frames. Slip joints which will allow at least 2 inches of vertical movement are recommended.

(3) Floor slab control joints should be used to reduce damage due to shrinkage cracking. We suggest joints be provided on the order of 15 feet on center. The requirements for slab reinforcement should be established by the designer based on experience and the intended slab use.

(4) All fill materials for support of floor slabs should be nonexpansive soil placed in 8-inch lifts and compacted to at least 95% standard Proctor density in accordance with ASTM D 698.

(5) The on-site soils will be expansive when placed in compacted condition and should not be used below slabs. New fill should be imported from off-site sources.

(6) All plumbing lines should be tested before operation. Where plumbing lines enter through the floor, a positive bond break should be provided. Flexible connections should be provided for slab-bearing mechanical equipment.

DOCK WALLS

Dock walls which are laterally supported and can be expected to undergo only a moderate amount of deflection should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of 50 pcf for backfill consisting of the on-site fine grained soils and 40 pcf for backfill consisting of imported granular materials. These values are appropriate for walls less than 8 feet in height.

All foundation and retaining structures should be designed for appropriate surcharge pressures such as adjacent buildings, traffic, construction materials and equipment. The pressures recommended above assume drained conditions behind the walls and a horizontal backfill surface. The build-up of water behind a wall or an upward sloping backfill surface will increase the lateral pressure imposed on a foundation wall or retaining structure.

BURIED METAL CORROSION

The potential corrosive environment for metal placed beneath the ground surface at the site was evaluated based on data collected during our field exploration and criteria presented in the Handbook of Steel Drainage and Highway Construction Products published by the American Iron and Steel Institute. The data includes soil group classification, electrical resistivity and pH.

The soils encountered predominantly consist of clays and silts, with fair drainage and water contents of less than 20%. The general characteristics of the soils and bedrock indicate they are moderately corrosive.

Electrical resistivity measurements conducted in the laboratory indicate resistivity values of between 700 and 7,000 ohm-centimeters at the natural moisture contents based on interpolation of the data presented in Table II.

The acidity of the soils and bedrock was assessed by conducting pH tests on several samples. The pH tests indicate the soils are slightly basic and will not accelerate corrosion.

The data obtained in our study indicates the subsurface conditions will be slightly aggressive towards iron and other buried metals based on a scale published in "Corrosion of Building Materials" by Dictbert Knofel. We recommend a qualified corrosion engineer review the information presented above to design an appropriate level of corrosion protection for buried metal.

WATER SOLUBLE SULFATES

The concentration of water soluble sulfates measured in samples obtained from the exploratory borings ranges from approximately 0.1% to approximately 1.1%. This concentration of water soluble sulfates represents a very severe degree of sulfate attack on concrete exposed to these materials. The degree of attack is based on a range of negligible, positive, severe and very severe as presented in the U.S. Bureau of Reclamation Concrete Manual.

Based on this information, we recommend all concrete exposed to the on-site materials contain a sulfate resistant cement with less than 5% tri-calcium aluminate (Type II modified or Type V). Concrete should be a relatively rich mix and should be air entrained.

SEISMIC CONDITIONS

Fig. No. 2 of the "Uniform Building Code", 1988 Edition, presented on Page 178 indicates that the Grand Junction, Colorado area is in Seismic Zone 1. We recommend that the standard precautions as presented in the UBC for construction in Seismic Zone 1 be observed and adhered to.

SURFACE DRAINAGE

The following drainage precautions should be observed during construction and maintained at all times after the food store has been completed.

(1) Excessive wetting or drying of the foundation excavations and underslab areas should be avoided during construction.

(2) Exterior backfill should be adjusted to near optimum moisture and compacted to at least 95% of the maximum standard Proctor density in pavement areas and to at least 90% of the maximum standard Proctor density in landscape areas.

(3) The ground surface surrounding the exterior of the building should be sloped to drain away from the foundation in all directions. We recommend a minimum slope of 6 inches in the first 10 feet in unpaved areas and a minimum slope of 3 inches in the first 10 feet in paved areas.

(4) Roof downspouts and drains should discharge well beyond the limits of all backfill.

(5) Landscaping which requires typical irrigation and lawn sprinkler heads should be located at least 10 feet from foundation walls.

SITE GRADING

Fill material used inside building limits and within 3 feet of pavement grade should consist of a nonexpansive granular material with a maximum particle size of 3 inches. Fill should be placed and compacted to at least 95% of the maximum standard Proctor density (ASTM D 698) near the optimum moisture content for slab areas which will be subjected to the 200 psf loading as reported by Albertson's Inc. representatives. Fill should not contain concentrations of organic matter or other deleterious substances. The soil engineer should evaluate the suitability of proposed fill materials prior to placement. All moderately organic topsoil and vegetation should be removed prior to placement of the proposed fill materials. In the areas where asphaltic concrete and aggregate base course are present, the asphaltic concrete should be broken up to a maximum particle size of 3 inches prior to placement of any of the fill materials. The asphaltic concrete and aggregate base course should be scarified to a depth of 6 inches, adjusted to a moisture content near optimum and recompacted to provide a uniform base for fill placement.

Site grading should be planned to provide positive surface drainage away from all building and parking areas. The buildings and parking areas should be placed as high as possible on the site so that positive drainage away from these features can be provided. Surface diversion features should be provided around parking areas to prevent surface runoff from flowing across the paved surfaces.

The natural soil encountered during this investigation will be expansive when placed in a compacted condition. Consequently, it should not be used as fill beneath floor slabs. The natural soils can be used for fill near the bottom of fills outside building areas.

PAVEMENT DESIGN

A pavement section is a layered system designed to distribute concentrated traffic loads to the subgrade. Performance of the pavement structure is directly related to the physical properties of the subgrade soils and traffic loadings. Soils are represented for pavement design purposes by means of a soil support value for flexible pavements and a modulus of subgrade reaction for rigid pavements. Both values are empirically related to strength.

Pavement design procedures are based on strength properties of the subgrade and pavement materials assuming stable, uniform conditions. Certain soils, such as those encountered on this site, are potentially expansive and frost susceptible and require additional precautions be taken to provide for adequate pavement performance. Proper surface and subsurface drainage is essential for adequate performance of pavement on these soils.

Subgrade Materials: Based on the results of the field and laboratory studies, the subgrade materials at the site classify as A-4 and A-6 with group indices between 4 and 9 in accordance with the American Association of State Highway and Transportation Officials (AASHTO) classification. California Bearing Ratio (CBR) values for these materials vary from 4.5 to 7.0, depending on the material type. For design purposes, a soil support value of 4.9 was selected

for flexible pavements and a modulus of subgrade reaction of 150 pci was selected for rigid pavements.

Anticipated traffic loading information was provided by Albertson's, Inc. An equivalent 18 kip daily load application (EDLA) of 4 was used for automobile traffic areas and an EDLA of 6 was used for drives and truck access areas.

Pavement Design: Areas of the pavement restricted to automobile traffic, (such as parking lots,) should consist of 6 inches of high quality base course and a 2 1/2-inch asphalt surface. An alternate full-depth asphalt section of 5 inches will be used.

The pavement in areas of drives and truck access should consist of 6 inches of high quality base course and 3 1/2 inches of asphalt surface. An alternate full-depth asphalt section of 6 inches will be used.

Our experience indicates full-depth asphalt sections generally perform better on expansive subgrades than combined asphalt/aggregate base course sections. The reasons for the better performance of full-depth asphalt are not fully understood. However, the use of aggregate base course provides a pervious layer above a relatively impervious subgrade. The base course can transmit water causing changes in moisture content within the subgrade materials. Variations in the subgrade moisture content can be erratic and result in erratic volume changes which cause premature deterioration of the pavement. In addition, the thinner asphalt surface of a combined section can more easily allow water to penetrate through cracks and migrate through the aggregate base course. High moisture contents in the subgrade or base course will result in loss of strength.

Truck loading dock areas and other areas where truck turning movements are concentrated should be paved with 6 inches of portland cement concrete. The concrete pavement should contain sawed or formed joints to 1/4 of the depth of the slab at a maximum distance of 12 feet on center.

Subgrade Preparation: Prior to placing the pavement section, the entire subgrade area should be scarified to a depth of 8 inches, adjusted to a moisture content near optimum and compacted to 95% of the maximum standard Proctor density. The pavement subgrade should be proofrolled with a heavily loaded pneumatic-tired vehicle. This is especially important in the vicinity of Boring 6 where fill was encountered. Pavement design procedures assume a stable subgrade. Areas which deform excessively under heavy wheel loads are not stable and should be removed and replaced to achieve a stable subgrade prior to paving.

Drainage: The collection and diversion of surface drainage away from paved areas is extremely important to the satisfactory performance of pavement. Drainage design should provide for the removal of water from paved areas and prevent the wetting of the subgrade soils.

LIMITATIONS

This report has been prepared in accordance with generally accepted soil and foundation engineering practices in this area for use by the client for design purposes. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings drilled at the locations indicated on the exploratory boring plan, and the proposed type of construction. The nature and extent of subsurface variations across the site may not become evident until construction. If during construction, fill,

soil, rock or water conditions appear to be different from those described herein, this office should be advised at once so reevaluation of the recommendations may be made.

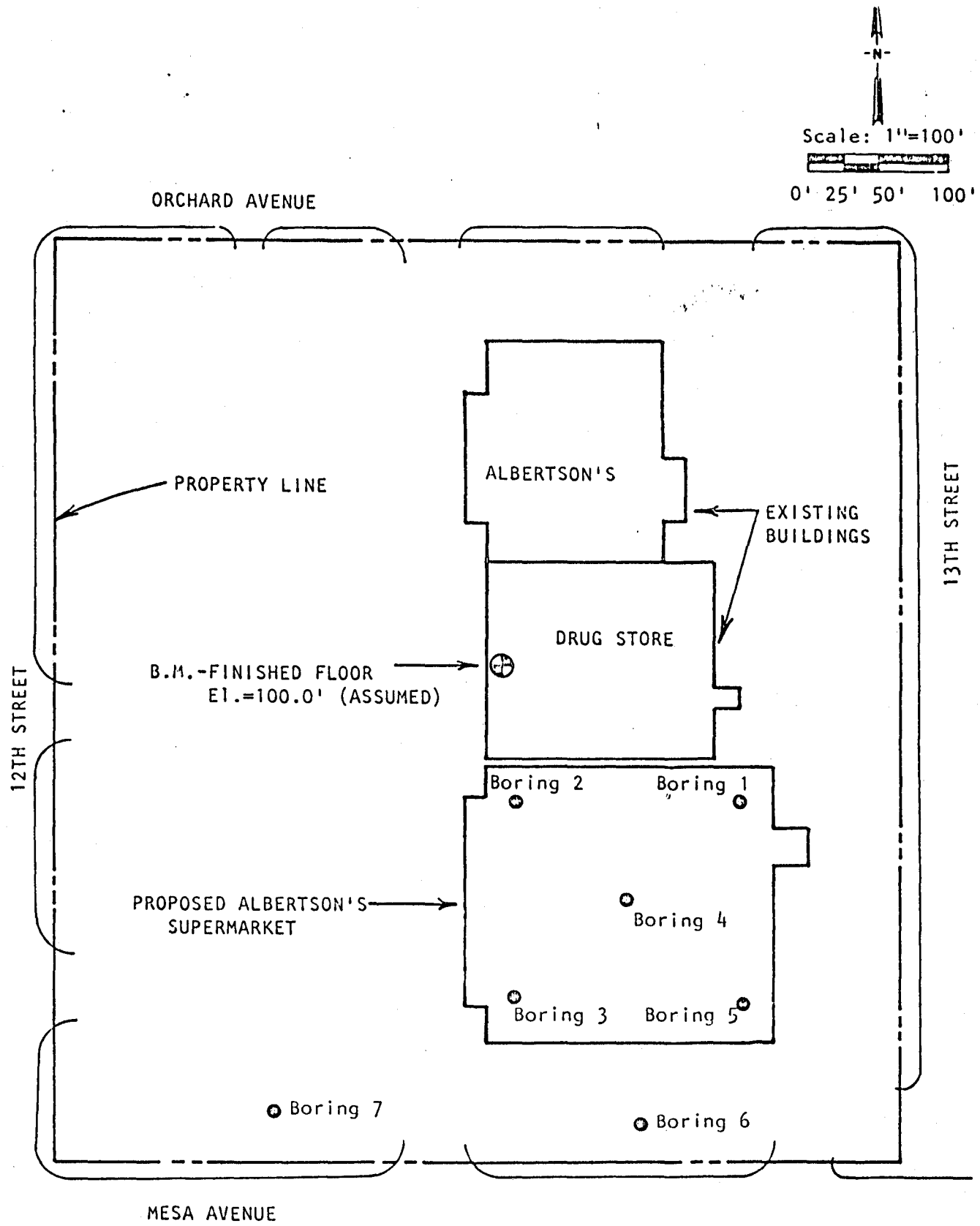
Sincerely,

CHEN-NORTHERN, INC.

By _____
David M. Nasiatka, P.E.

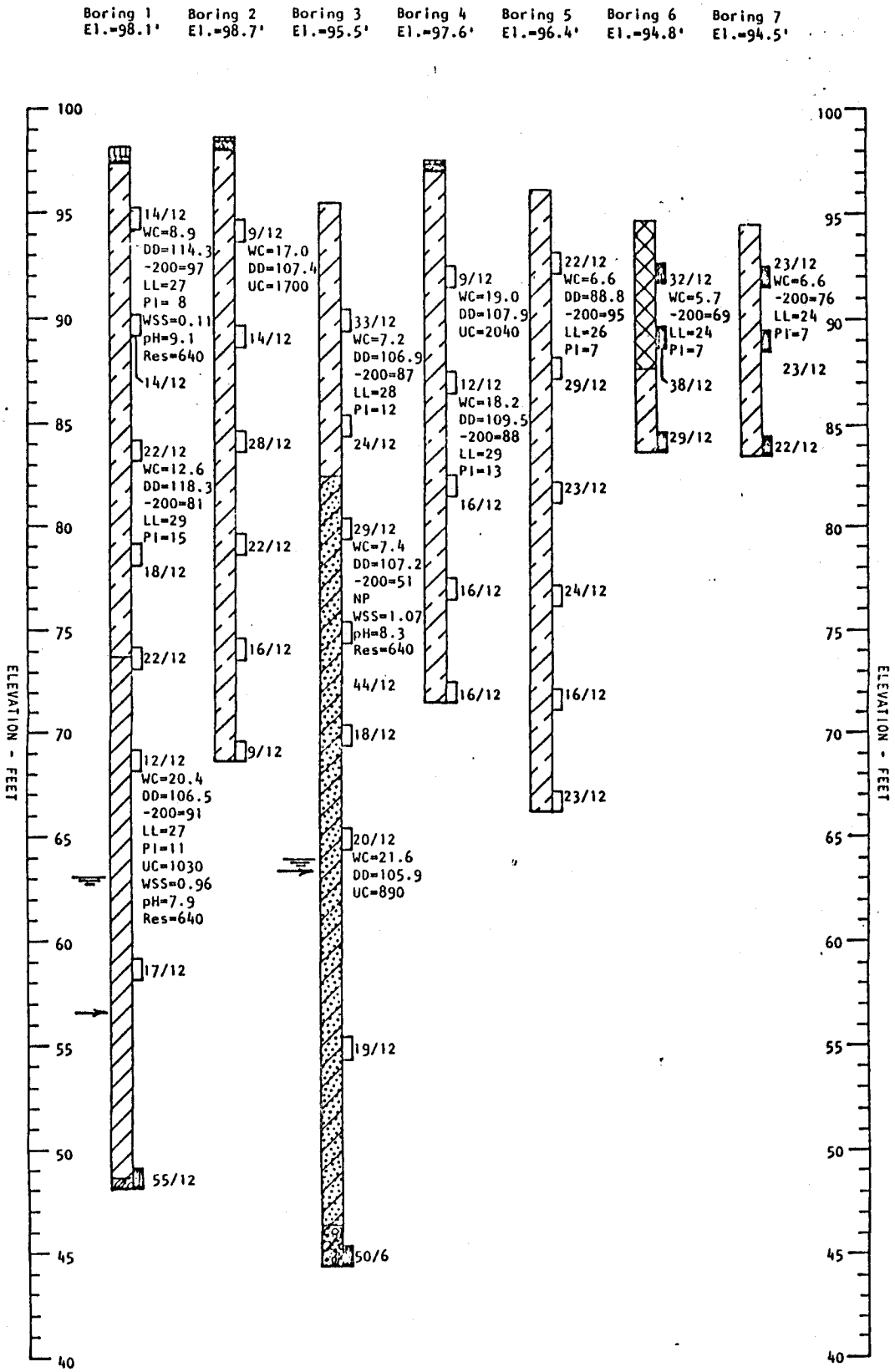
Reviewed By _____
Narender Kumar, P.E.

DMN/sej



1 535 89	*Chen-Northern, Inc.*	LOCATION OF EXPLORATORY BORINGS	Fig. 1

Chen-Northern, Inc.



LOGS OF EXPLORATORY BORINGS

Fig. 2

LEGEND:


Asphalt


Base course, sand and gravel, slightly silty, moist, brown.


Fill: clayey sand and gravel to sandy clay, dense, slightly moist, light brown.


Clay and silt (CL-ML), slightly sandy to sandy, stiff to very stiff, moist, brown, occasionally calcareous.


Clay (CL), sandy to very sandy, stiff to very stiff, moist to wet, brown.


Sand (SM), silty, slightly clayey, medium dense to dense, moist to wet, light brown.


Sand and gravel (GM-SM), silty, contains cobbles, very dense, wet, brown.


Drive sample, 2-inch I.D. California liner sample.


Drive sample, Standard Penetration Test, 1 3/8-inch split spoon sample.

14/12 Drive sample blow count. Indicates that 14 blows of a 140-pound hammer falling 30 inches were required to drive the California or SPT sampler 12 inches.


Depth to water level at the time of drilling. Borings were backfilled upon completion.


Depth at which boring caved.

1 585 89	*Chen-Northern, Inc.*	LEGEND	Fig. 3

NOTES:

1. Exploratory borings were drilled on May 16 and 17, 1989 with a 4-inch diameter continuous flight power auger and with a 7-inch diameter continuous flight hollow stem power auger.

2. Locations of exploratory borings were measured approximately by taping from features shown on the site plan provided.

3. Elevations of exploratory borings were measured by instrument level and refer to the bench mark on Fig. 1.

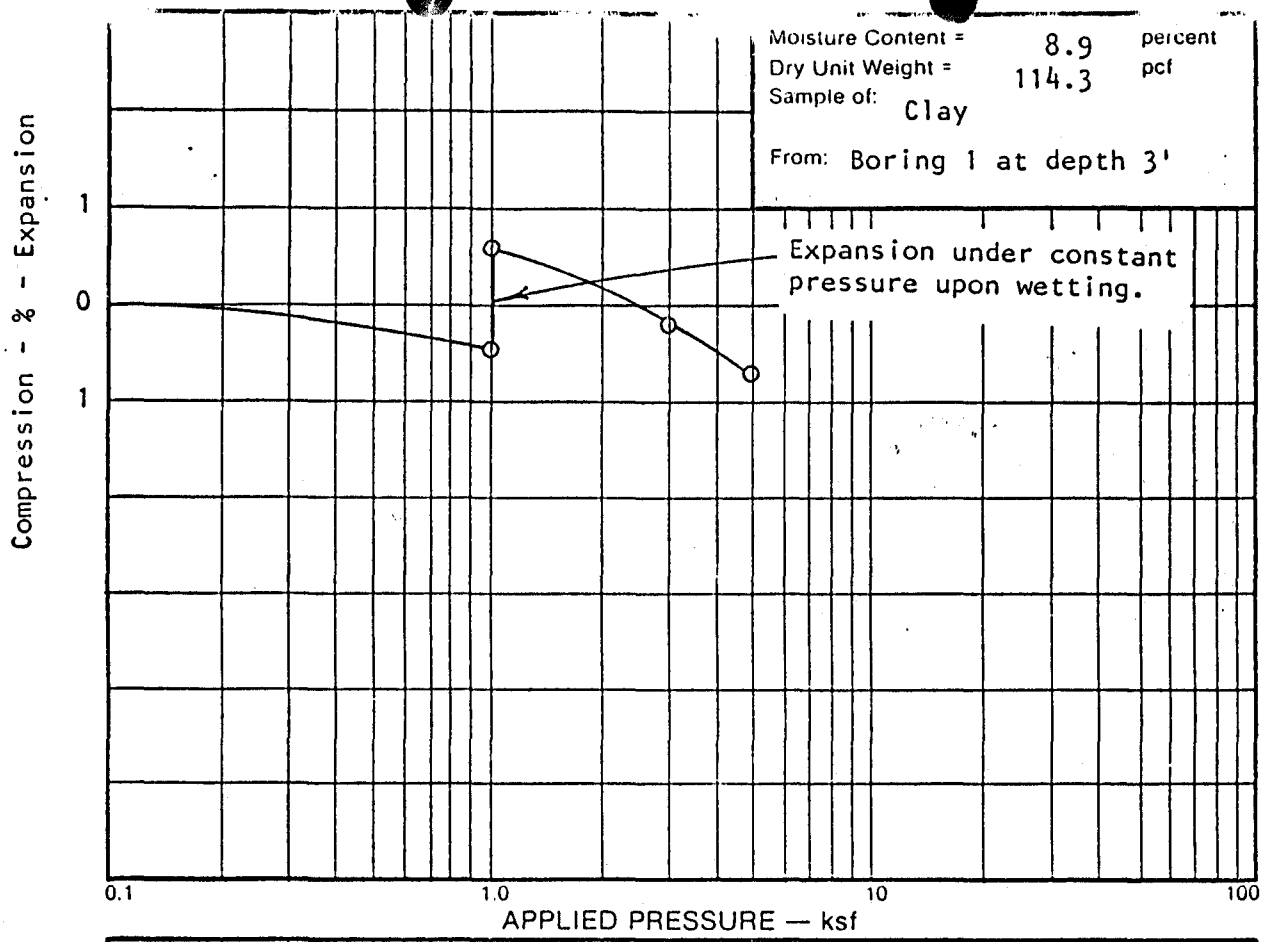
4. The exploratory boring locations and elevations should be considered accurate only to the degree implied by the method used.

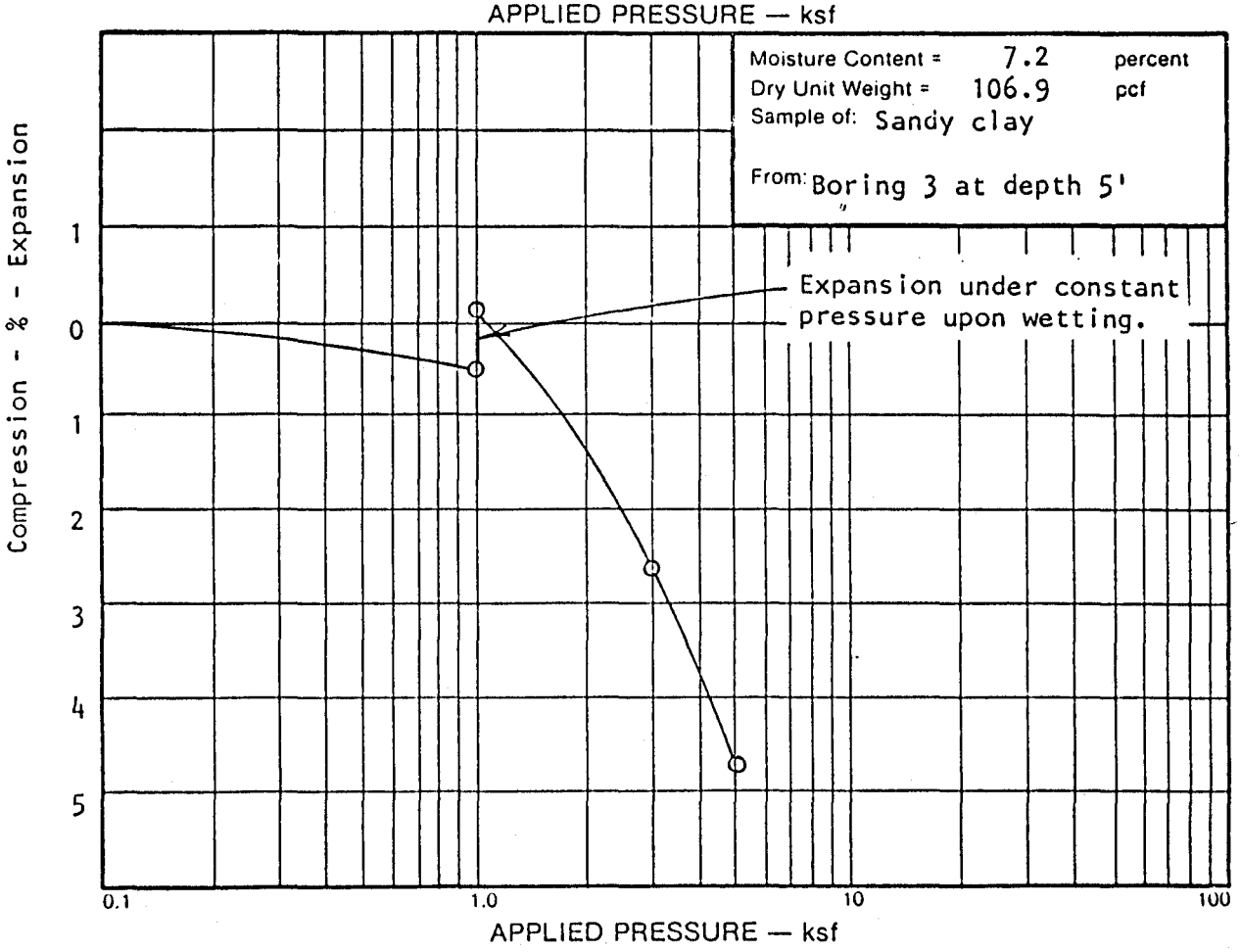
5. The lines between materials shown on the exploratory boring logs represent the approximate boundaries between material types and the transitions may be gradual.

6. Ground-water levels shown on the logs were measured at the time and under conditions indicated. Fluctuations in the water level may occur with time.

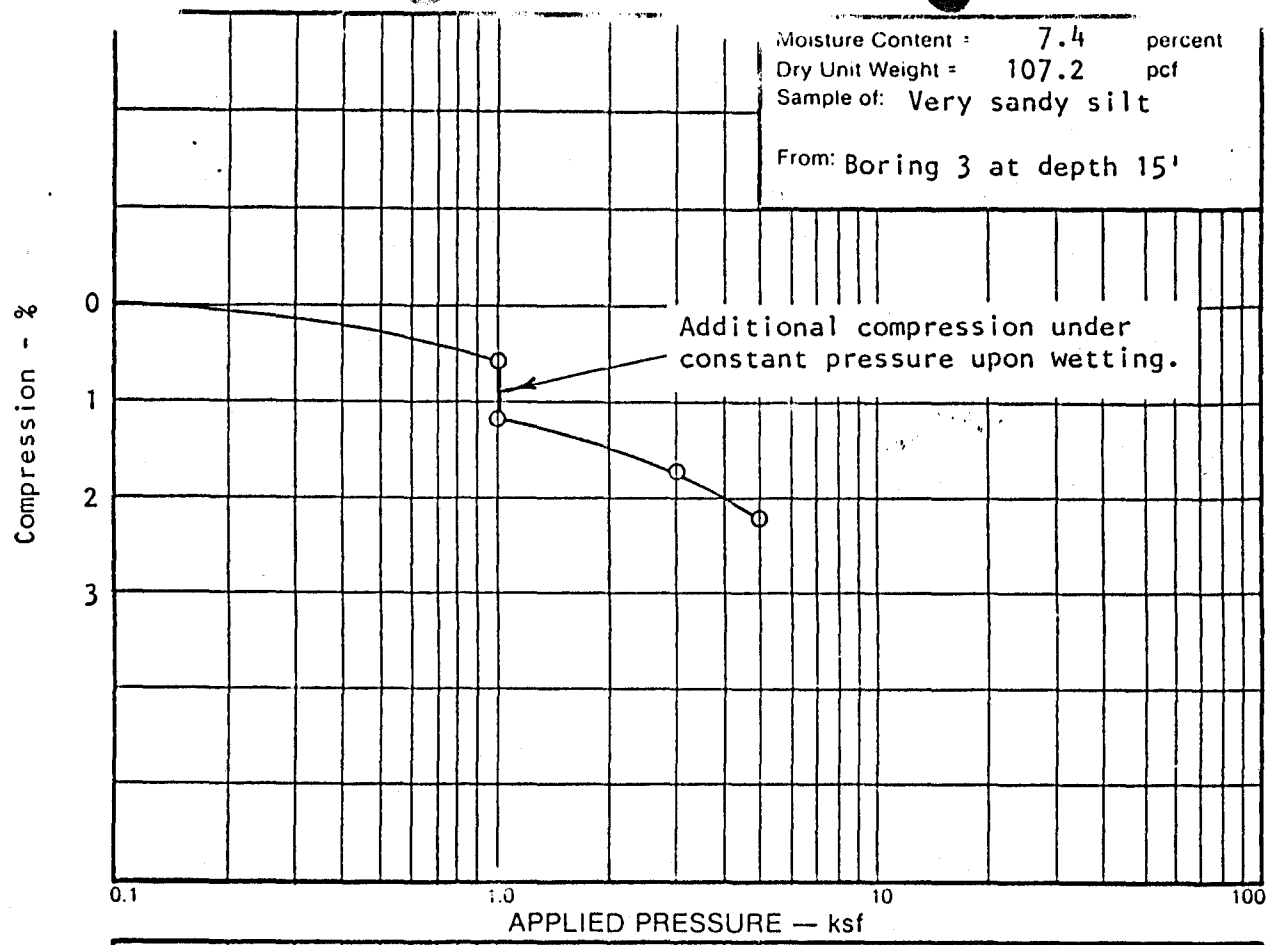
7. LABORATORY TEST RESULTS

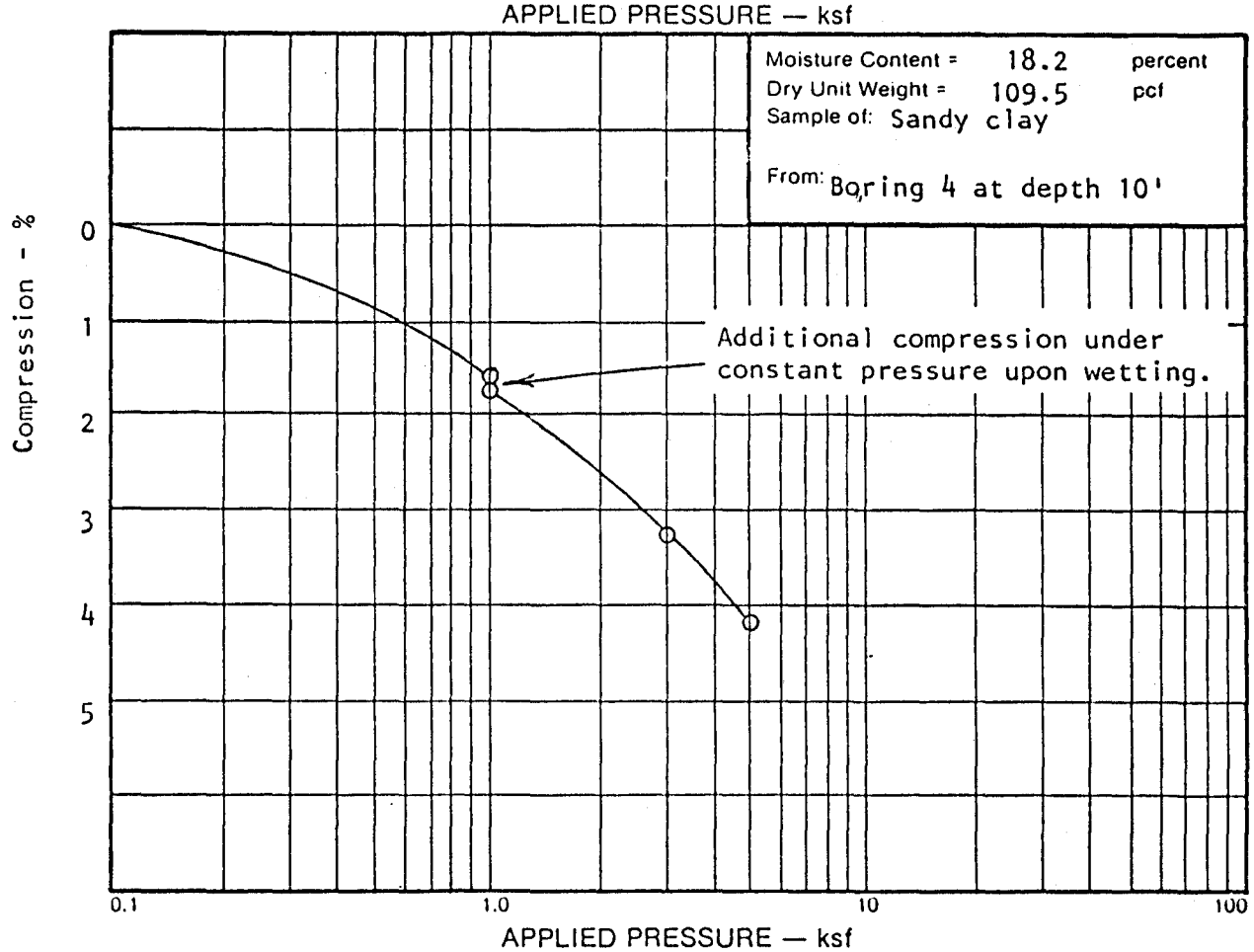
   WC = Water Content (%);
   DD = Dry Density (pcf);
   -200 = Percentage Passing No. 200 Sieve;
   LL = Liquid Limit (%);
   PI = Plasticity Index (%);
   NP = Non-Plastic;
   UC = Unconfined Compressive Strength (psf);
   WSS = Water Soluble Sulfates (%);
   pH = Acid Base Index;
   Res = Miniumum Soil Resistivity (ohm-cm) (See Table II).



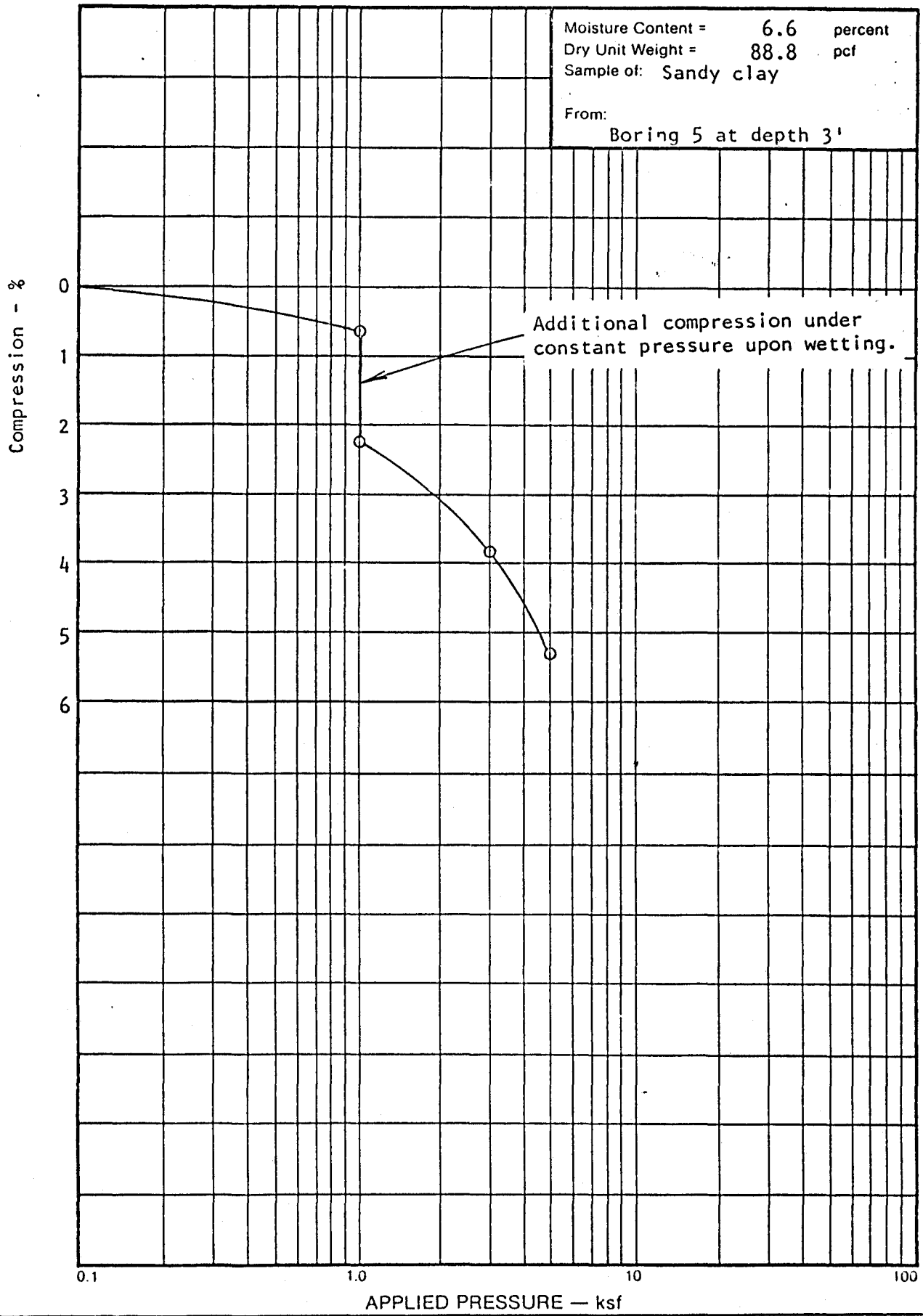


1 585 89	*Chen-Northern, Inc.*	SWELL-CONSOLIDATION TEST RESULTS	Fig. 5





1 585 89	*Chen-Northern, Inc.*	SWELL-CONSOLIDATION TEST RESULTS	Fig. 6



1 585 89	*Chen-Northern, Inc.*	SWELL-CONSOLIDATION TEST RESULTS	Fig. 7

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Chen-Northern, Inc.

TABLE I

SUMMARY OF LABORATORY TEST RESULTS

Job No. 1 585 89

SAMPLE LOCATION		NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (pcf)	GRADATION		PERCENT PASSING NO. 200 SIEVE	ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER SOLUBLE SULFATE (%)	SOIL OR BEDROCK TYPE
HOLE	DEPTH (feet)			GRAVEL (%)	SAND (%)		LIQUID LIMIT (%)	PLASTICITY INDEX (%)			
1	3	8.9	114.3			97	27	8		0.11	Clay
1	14	12.6	118.3			81	29	15			Sandy clay
1	29	20.4	106.5			91	27	11	1030	0.96	Slightly sandy clay
2	4	17.0	107.4						1700		Silty clay
3	5	7.2	106.9			87	28	12			Sandy clay
3	15	7.4	107.2			51	NON-PLASTIC			1.07	Very sandy silt
3	30	21.6	105.9						890		Very sandy silt
4	5	19.0	107.9						2040		Sandy clay
4	10	18.2	109.5			88	29	13			Sandy clay
5	3	6.6	88.8			95	26	7			Sandy clay
6	2	5.7				69	28	14			Sandy clay
7	2	6.6				76	24	7			Sandy clay

TABLE II

SUMMARY OF LABORATORY RESISTIVITY AND SOIL ACIDITY TEST RESULTS

Job No. 1 585 89

BORING	DEPTH (ft)	RESISTIVITY (ohm-cm)	MOISTURE CONTENT (%)	pH
1	3	5200	7.6	9.1
		1760	13.9	
		720	26.5	
		640	39.2	
1	29	5600	8.6	7.9
		1920	15.0	
		720	27.8	
		640	40.5	
3	15	7200	7.8	8.3
		2000	14.1	
		760	26.8	
		640	39.4	

	Chen-Northern, Inc.		Fig.

SITEWORK
SPECIFICATIONS

FOR

ALBERTSONS/OSCO
SHOPPING CENTER
GRAND JUNCTION, COLORADO

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From Office

#23 90

JUNE, 1990

Prepared by: Armstrong Consultants, Inc.
Project #905308

SECTION 02050

DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Demolition shall include, unless otherwise noted on Drawings, removal of existing objects or improvements, whether indicated on drawings or not, that would, in the opinion of the owner, prevent or interfere with progress or completion of proposed work.
   2. Permits, fees, and licenses shall be secured and paid for by Contractor, including disposal charges as required to ensure progress of work will proceed.
   3. Work shall comply with requirements of governing authorities in demolition of existing pavement, curbs and gutters, drainage structures and utilities as may be required.

1.02 RELATED REQUIREMENTS

Contract Documents
Construction Drawings

1.03 JOB CONDITIONS

A. Structures to be demolished will be discontinued in use and vacated prior to start of work.

B. Owner assumes no responsibility for condition of structures to be demolished.

C. Conditions existing at time of inspection for bidding purposes will be maintained by Owner in so far as practicable. Variations within structure may occur by Owner's removal and salvage operations prior to start of demolition work.

D. Unless designated for salvage to the Owner, items of salvageable value to Contractor may be removed as work progresses. Salvaged items must be transported from site as they are removed. Storage or sale of removed items on site will not be permitted.

E. Explosives shall not be brought to site or used without written consent of authorities having jurisdiction. Such written consent will not relieve Contractor of total responsibility for injury to persons or for damage to property due to blasting operations. The performance of any required blasting shall comply with governing regulations.

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1.03 PROTECTIONS

1. Ensure safe passage of persons around all areas of demolition.

2. Conduct operations to prevent damage to adjacent buildings, structures, other facilities, or injury to persons.

3. Provide interior and exterior shoring, bracing or support to prevent movement, settlement or collapse of structures to be demolished and of adjacent facilities to remain.

4. Promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.

5. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.

6. Prevent interruption of existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction.

7. Provide temporary services during interruptions to existing utilities as acceptable to governing authorities.

8. Make arrangements, before initiating demolition, for disconnection, rerouting, abandoning, or similar action as may be required relative to utilities and other underground piping, to permit work to proceed without delay. Arrangements shall be made in accordance with regulations of authorities of utilities concerned, including but not restricting any other services not mentioned, such as overhead and underground power and telephone lines and equipment, gas piping, storm sewers, sanitary sewers or water piping. Contractor shall not use water when it may create hazardous or objectionable conditions, such as ice, flooding and/or pollution.

9. Use water sprinkling and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level.

10. Comply with governing regulations pertaining to environmental protection.

11. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations. Return adjacent areas to condition existing prior to start of work.

12. Concrete curbs and gutters in the public rights-of-way shall not be removed or disturbed prior to the Contractor obtaining a permit from the Grand Junction City Engineer.

PART 2 - PRODUCTS

This part not applicable.

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PART 3 - EXECUTION

3.01 DEMOLITION

1. Demolish concrete and masonry in small sections. Break up and remove concrete slabs-on-grade unless otherwise shown to remain.

2. Demolish and remove below grade construction and concrete slabs on grade to a minimum depth of two feet below proposed subgrade.

3.02 FILLING BASEMENTS AND VOIDS

1. Completely fill below grade areas and voids resulting from demolition or removal of structures (underground fuel storage tanks, walls, cisterns, etc.) using approved select fill materials consisting of stone, gravel and sand free from debris, trash, frozen materials, roots and other organic matter.

2. Ensure that areas to be filled are free of standing water, frost, frozen material, trash and debris prior to fill placement.

3. Place fill materials in horizontal layers not exceeding 6" in loose depth and compact each layer at optimum moisture content of fill material to density equal to original adjacent ground, unless subsequent excavation for new work is required.

4. Grade surface to match adjacent grades and to provide flow to surface drainage structures after fill placement and compaction.

3.03 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove from site debris, rubbish and other materials resulting from demolition operations.

B. No burning of any material, debris or trash on-site or off-site will be allowed, except when allowed by the appropriate governing authority. If allowed as stated above, burning shall be performed in a manner prescribed by governing authority. Attend burning materials until fires have burned out or have been extinguished.

C. Transport materials removed from demolished structures and dispose off-site to areas which are approved for disposal by governing authorities and appropriate property owners.

END OF SECTION

SECTION 02110

SITE PREPARATION

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:
   1. Protection or removal of trees and other vegetation.
   2. Topsoil stripping.
   3. Clearing and grubbing.
   4. Proofrolling.

1.02 RELATED REQUIREMENTS

Contract Documents
Construction Drawings

1.03 PROTECTIONS

A. Provide protection necessary to prevent damage to existing improvements, trees or vegetation indicated on the Contract Documents to remain.

B. Protect improvements and property monuments or benchmarks on adjoining properties and on Owner's property.

C. Restore damaged improvements to original condition as acceptable to parties having jurisdiction.

D. Conduct site clearing operations to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction. Streets and roadways shall be thoroughly cleaned and/or swept on a daily basis or more frequently as required by the governing authority.

E. Provide traffic control as required, in accordance with the U.S. Department of Transportation "Manual of Uniform Traffic Control Devices" and the City of Grand Junction requirements.

PART 2 - PRODUCTS

This part not applicable.

PART 3 - EXECUTION

A. Unless otherwise indicated on the drawings, remove trees, shrubs, grass, other vegetation, improvements or obstructions interfering with installation of new construction. Removal includes digging out stumps and roots down to a point 2 ft. or more below finished grade. Do not remove items elsewhere on site or premises unless specifically indicated.

B. Prior to starting general excavation, strip from within the site sufficient suitable topsoil to meet the requirements specified for Landscaping, Seeding and Sodding. Strip to a depth not exceeding six (6) inches or to such other depth or depths as the Architect may approve. Do not strip topsoil in a muddy condition and avoid a mixture of subsoil. Strip no soil from areas where only a slight change, if any, in existing grade is required. Remove all topsoil, to whatever depth found, from areas over which any construction is to be placed, such as buildings, drives, roads, walks. Stockpile the stripped topsoil within the site at locations where it will not hinder construction operations. Topsoil stockpiles shall be free from trash, brush, stones over two (2") inches in diameter and other extraneous material. Protect the stockpiled topsoil against loss and the admixture of debris.

C. Completely remove stumps, roots and other debris below proposed subgrade elevation. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is required. Place fill material in horizontal layers not exceeding 8" loose depth and thoroughly compact per fill requirements of this project.

D. Following topsoil stripping, clearing and grubbing, areas of original soil on which fills are to be placed shall be scarified to a minimum depth of 8" and compacted to a minimum of 95% of the optimum density at a moisture content of not less than 1% below and not more than 3% above the optimum moisture content. Determine optimum density and moisture content in accordance with ASTM D 698.

E. Areas of existing asphalt pavement which are to be filled over shall either have the asphalt pavement removed or it shall be broken up to a maximum particle size of 3 inches prior to placement of any of the fill materials. The asphaltic concrete and aggregate base course shall be scarified to a depth of 8 inches, adjusted to a moisture content near optimum and recompacted to provide a uniform base for fill placement.

F. Areas of original soil on which subgrade preparations are to be performed shall be proofrolled to detect any areas of insufficient compaction. Proofrolling shall be with a rubber tired roller weighing at least 50 tons and in accordance with Colorado Division of Highways Standard Specifications Section 203.13 in the presence of the Owner's inspector.

END OF SECTION

SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Preparation of existing areas for placing of fill, including disposal of muck, topsoil, silt and wet or unsuitable material.

B. Excavation and embankment placement to required lines, dimensions and subgrade elevations.

1.02 RELATED REQUIREMENTS

Contract Documents
Specs. Section 02110 SITE PREPARATION
Construction Drawings: Refer to structural plans and specifications for specific requirements regarding the earthwork beneath the building. Where the structural plans earthwork requirements for the building subgrade pad are more stringent than those stated herein, the structural plans and specifications shall govern.

1.03 REFERENCE STANDARDS

The following most current publications form part of this specification to the extent indicated by references thereto and shall be followed for all the construction testing:

American Society for Testing and Materials (ASTM):

D 698 Test for Moisture-Density Relations of Soils Using 5.5-lb. (2.5 Kg) Rammer and 12-inch (304.8 mm) Drop (Standard Proctor)

D 1557 Test for Moisture - Density Relations of Soils using 10-lb. (4.5 Kg) Rammer and 18-inch (457 mm) Drop (Modified Proctor)

D 2216 Laboratory Determination of Moisture Content of Soil

D 2922 Tests for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

D 3017 Test for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

D 4318 Test for Plastic Limit, Liquid Limit & Plasticity Index of Soils.

American Association of State Highway and Transportation Officials (AASHTO):

T 88 Mechanical Analysis of Soils

1.04 SUB-SURFACE DA

A. Investigation: Sub-surface investigations have been made. See Section 02205 for details. The soils report shall become a part of this specification. Where a condition is not covered elsewhere in the specifications, the recommendations made in the report shall be considered binding. Copies are available from the Architect.

B. Site Visit: Data shown is for general information of bidders. Contractors are expected to examine the site, make investigations and decide for themselves the character of the materials to be encountered.

C. Responsibility: The Owner will not assume responsibility for variations of sub-soil quality or condition at locations other than those places shown at the time investigations were made.

1.05 GRADES, LINES AND LEVELS

A. Grades, lines, levels and bench marks not established by Owner shall be established and maintained by the Contractor, unless specified otherwise.

B. Verify all grades, lines, levels and dimensions, as shown on the drawings.

C. If existing grades are at variance with the drawings, notify the Architect and receive instruction prior to commencing work.

PART 2 - PRODUCTS

2.01 IMPORTED FILL MATERIAL

1. As stated in the soils report, the on-site soils are expansive and shall not be used for fill construction under the building or within 3 ft. of finished grade in paved areas. Therefore, most of the fill material must be imported from undesignated off-site sources.

2. The site fill under paved areas and the building shall consist of Pit Run Gravel which is non-swelling well-graded granular material with a maximum size of 6 inches in the greatest dimension and no more than 15% passing the #200 sieve. The site fill shall be compacted in 8" lifts to at least 90% of maximum density as determined by ASTM D-1557 except for the top 6 inches which shall be compacted to at least 95% of maximum density as determined by ASTM D-1557.

   Suitable earth fill material approved by the Engineer may be used in lieu of Pit Run Gravel if it meets all the requirements of the following sub-paragraph 3. If imported earth fill material is used in lieu of Pit Run Gravel, it shall be compacted in 8" lifts to at least 95% of maximum density as determined by ASTM D-698 except for the top 6 inches which shall be compacted to at least 100% of maximum density as determined by ASTM D-698.

3. All fill material imported from off-site shall be nonexpansive and have a CBR (California Bearing Ratio) value equal to 5 or above, (in order for the pavement designs to be valid). Soil shall be free of debris, roots, topsoil, frozen material and rock larger than ½ cu. ft.

The Independent Testing Laboratory shall test all imported material, whether Pit Run Gravel or soil, for CBR value, Proctor test(s) and plasticity.

The following table stipulates the maximum allowable values for the plasticity index (PI) and liquid limit (LL) of suitable materials to be used as fill in the specified areas, unless specifically indicated otherwise on the Drawings or elsewhere in the Specifications.

Location*	PI	LL
Building area	12	40
Upper three feet, exclusive of building area	20	50
Area below upper three feet, exclusive of building area	15	40

* References to depth are to proposed subgrade elevations.

PART 3 - EXECUTION

3.01 PREPARATION

1. Remove from site, material encountered in grading operations that, in opinion of Engineer, is unsuitable or undesireable for backfilling, subgrade or foundation purposes. Dispose of in a manner satisfactory to Engineer. Backfill areas with layers of suitable material and compact as specified.

3.02 PROTECTION

A. Protect bench marks and monuments; if disturbed or destroyed, secure the services of a licensed surveyor, and replace as directed by the Architect.

B. Protect existing facilities and adjacent property from ponding or washing of water and from construction damage.

C. Erect barricades, fences, signs and other protective devices as required or directed.

D. Provide and maintain protection for persons and property.

E. Restore to original grades and conditions all properties damaged by an activity related to the work and take adequate precautions to avoid settlements, cave-ins, sediment, materials, trash, etc. from entering sewers or adjacent properties both public and private.

F. Curbs, Sidewalks and Paving: Existing curbs, sidewalks, and paving opened or damaged in performance of this work shall be restored without extra cost to Owner in manner prescribed by Authorities having jurisdiction.

G. Protect active utilities from damage and remove or relocate only as indicated or specified. If active utilities are encountered, not shown on the drawings, notify Architect.

H. Inactive and abandoned utilities encountered in excavation and grading operations shall be removed, plugged or capped as directed. In absence of specified requirements, plug or cap such utility lines at least three (3') feet outside of the new building walls or as required by local authorities.

3.03 EXCAVATION FOR FILLING AND GRADING

A. Classification of Excavation: Contractor by submitting bid acknowledges that he has investigated site to determine type, quantity, quality and character of excavation work to be performed. Excavation shall be considered unclassified excavation.

B. Perform excavation using capable, well-maintained equipment and methods acceptable to Owner and governing agencies.

C. When performing grading operations during periods of wet weather, provide adequate drainage and groundwater management to control moisture of soils.

D. Shore, brace and drain excavations as necessary to maintain safe, secure and free of water at all times.

E. Bottoms of excavations on which pavements are to be placed shall be scarified to a minimum depth of 8 inches and compacted to a minimum of 100% of the optimum density at a moisture content of not less than 1% below and not more than 3% above the optimum moisture content. Determine optimum density and moisture content in accordance with ASTM D 698.

F. Areas of excavations on which pavements are to be placed shall be proofrolled to detect any areas of insufficient compaction. Proofrolling shall be with a rubber tired roller weighing at least 50 tons and in accordance with Colorado Division of Highways Standard Specifications Section 203.13. Areas of failure shall be excavated and recompacted to a minimum of 100% of the optimum density at optimum moisture content as determined by ASTM D-698.

3.04 BUILDING FOUNDATION EXCAVATIONS

A. Make no excavations to full depth indicated when freezing temperatures or rain may be expected. When full depths are made, protect foundation bottoms from frost and water if placing of concrete is delayed.

B. Excavate to lines and levels shown on the structural drawings. Provide ample space for subsequent work and inspection. Cut excavations cleanly with level bottoms. Where changes in levels occur, provide vertical steps in the horizontal runs. Where soil conditions permit, cut footing trenches to exact size of the concrete and omit forms. Notify Architect if earth of doubtful bearing is encountered and proceed only after issue of written order. Carry excavations to required depths to secure design bearing loads. If adequate bearing is not encountered within eight inches of depth shown, excavations will be ordered deeper and paid for as extra work in accordance with the Contract Conditions. If excavations are erroneously carried deeper than shown, the additional depth shall be filled with concrete, of the class specified for footings, at no additional cost to the Owner.

The bottom of all excavations shall be compacted in place by small vibratory compactors to at least 100% of maximum density as determined by ASTM D-698.

C. All loose materials shall be removed before any concrete is placed. No footings shall be placed until the Testing Laboratory and the Architect have examined and approved the soil upon which the footings will rest.

D. Protect excavations against cave-ins, ponding and freezing. Provide bracing, shoring and sheeting as required to safely contain excavations.

E. After completion of foundation, footings and walls, and other construction below the elevation of final grades and prior to backfilling, remove all forms and clean excavation of all trash and debris.

F. Slope grading around buildings to prevent water from running into excavated areas or damaging structures. Keep pits and trenches where footings are to be placed free of water at all times. Provide pumping equipment as required to keep excavated spaces clear of water during construction. Should springs or running water be encountered in excavations, notify Architect.

3.05 USE OF EXPLOSIVES

A. Comply with all laws, rules and regulations of Federal, State and local municipalities and insurer which govern storage, use, manufacture, sale, handling, transportation or other disposition of explosives. All operations involving handling, storage and use of explosives shall be conducted under supervision of properly licensed individual. Take special precautions for proper use of explosives in order to prevent harm to human life and damage to surface structures, all utility lines or other surface structures. Do not conduct blasting operations until persons in vicinity have had ample notice and have reached positions of safety.

B. Contractor shall save harmless Owner, Architect, Engineer and Owner's representative from any claim growing out of use of such explosives. Removal of materials of any nature by blasting shall be done in such manner and such time as to avoid damage affecting integrity of design and to avoid damage to any new or existing structure included in or adjacent to work. It shall be Contractor's responsibility to determine method of operation to ensure desired results and integrity of completed work.

3.06 FILLING AND SUBGRADE PREPARATION

A. Areas of original soil on which fills are to be placed shall be scarified to a minimum depth of 8" and compacted to at least 95% of the optimum density at a moisture content of not less than 1% below and not more than 3% above the optimum moisture content. Determine optimum density and moisture content in accordance with ASTM D 698.

B. Areas of original soil on which subgrade preparations are to be performed shall be proofrolled to detect any areas of insufficient compaction. Proofrolling shall be with a rubber tired roller weighting at least 50 tons and in accordance with Colorado Division of Highways Standard Specifications Section 203.13. Areas of failure shall be excavated and recompacted to a minimum of 95% of the optimum density at optimum moisture content as determined by ASTM D-698.

C. The site fill under paved areas and the building shall consist of Pit Run Gravel which is non-swelling well-graded granular material with a maximum size of 6 inches in the greatest dimension and no more than 15% passing the #200 sieve. The site fill shall be compacted in lifts not to exceed 8 inches loose to at least 90% of maximum density as determined by ASTM D-1557 except for the top 6 inches which shall be compacted to at least 95% of maximum density as determined by ASTM D-1557.

3.07 BACKFILL OPERATIONS

A. Backfill against foundation walls (or where else required) shall not be placed until foundation walls are braced and have cured sufficiently to develop the strength necessary to withstand, without damage, the pressures that will result from backfilling and compacting operations. Secure approval of the Architect before commencing this work.

B. Materials for the backfill shall be clean, dry and unfrozen, free from substances subject to rot, corrosion, termite attack or from metalic scrap or other deleterious material. It may contain masonry or rock fragments, not more than 6" in maximum dimensions, provided none are placed closer than 24" to wall surface or to finished grade. Should on site material prove to be unsuitable as fill or backfill, the Contractor shall furnish suitable off site material meeting requirements specified in this section.

C. Place all material in uniform approximate horizontal layers, not exceeding six (6") in thickness before compacting. Each layer shall be moistened, then well compacted at optimum moisture to produce composition specified above. Tests of fill in place shall be performed by the approved test laboratory.

D. Exercise care that earthwork equipment used will not overload the structure in passing over and compacting these fills.

3.08 MAINTENANCE OF SUBGRADE

A. Finished subgrades shall be verified to ensure proper elevation and conditions for construction above subgrade.

B. Protect subgrade from excessive wheel loading during construction, including concrete trucks and dump trucks.

C. Remove areas of finished subgrade found to have insufficient compaction density to depth necessary and replace in a manner that will comply with compaction requirements by use of material equal to or better than best subgrade material on site. Surface of subgrade after compaction shall be hard, uniform, smooth, stable and true to grade and cross-section.

D. Grading of building and paving areas shall be checked. Tolerance of 0.10 feet will be permitted. Provide engineering and field staking of work necessary for verification of lines, grades and elevations.

E. Maintain subgrade for area to be paved and building pad subgrade, whether perviously graded by others and accepted by contractor or constructed by contractor. Make adjustments that may be required in accordance with Specifications at no additional expense to Owner.

3.09 FINISH GRADING

A. Grade all areas where finish grade elevations or contours are indicated on Drawings, other than paved areas and building, including excavated areas, filled and transition areas and landscaped areas. Graded areas shall be uniform and smooth, free from rock, debris or irregular surface changes. Finished subgrade surface shall not be more than 0.10 feet above or below established finished subgrade elevation and all ground surfaces shall vary uniformly between indicated elevations.

B. Correct all settlement and eroded areas within one year after date of completion at no additional expense to Owner. Bring grades to proper elevation. Replant or replace any grass, shrubs, bushes or other vegetation disturbed by construction using corrective measures.

3.10 FIELD QUALITY CONTROL

A. Independent Testing Laboratory selected by the Architect and paid by Owner, shall be retained to perform construction testing on site based on the following:

1. Fill Placed in Areas to be Paved: One compaction test for every 4,000 sq. ft. of each 8" lift (measured loose).
2. Fill Placed Under Building and Extending 10'-0" Outside Exterior Building Line: Not less than one compaction test for every 2,000 sq. ft. of each 8" lift (measured loose).

B. If compaction requirements are not complied with at any time during construction process, remove and recompact deficient areas until proper compaction is obtained at no additional expense to Owner.

C. In all areas to receive pavement, a CBR test shall be performed for each type of material imported from offsite.

D. The following tests shall be performed on each type of material used as compacted fill as part of construction testing requirements:

1. Moisture and Density Relationship: ASTM D-698 or D-1557.
2. Mechanical Analysis: AASHTO T-88.
3. Plasticity Index: ASTM D-4318.

E. Field density tests for in-place materials shall be performed using a Nuclear Density Gauge.

F. Independent Testing Laboratory shall prepare test reports that indicate test location and results. Owner, Architect, Engineer and Contractor shall be provided with copies of reports. In the event that any test performed fails to meet these Specifications, Architect, Engineer and Contractor shall be notified immediately by Independent Testing Laboratory.

Owner reserves the right to employ an Independent Testing Laboratory and to direct any testing that is deemed by them to be necessary. Contractor shall provide free access to site for testing activities.

END OF SECTION

SECTION 02205
SUB-SURFACE INVESTIGATION

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

A. Site Preparation, Section 02110.
B. Earthwork, Section 02200.

1.02 SUB-SURFACE DATA

Sub-surface investigations have been made. The "Geotechnical Engineering Study, Proposed New Albertson's Food Store, 12th Street and Orchard Avenue, Grand Junction, Colorado" prepared by Chen-Northern, Inc. and dated June 16, 1989, is on file at the office of the Architect. This report was prepared for use by the Architect and his Engineers for design purposes, but is also considered as a formal part of these specifications. Where a condition is not covered elsewhere in the specifications, the recommendations made in the report shall be considered binding.

END OF SECTION

SECTION 02222
EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

This section includes the excavation, bedding and backfilling of utilities necessary to perform work indicated on Drawings and Contract Documents.

1.02 RELATED REQUIREMENTS

Contract Documents
Construction Drawings
Specs. Section 02110 SITE PREPARATION
Specs. Section 02200 EARTHWORK

PART 2 - PRODUCTS

A. Bedding Materials shall be as shown on the typical trench detail on the plans.

B. Earth Backfill material shall consist of approved materials developed from project excavations or imported from another source. To be suitable for backfill, earth or earth and rock material shall be free from muck, frozen lumps, chunks of concrete, ashes, trash, vegetation and other debris. All excavated materials which, in the opinion of the Engineer, are unsuitable for use in the backfill shall be removed from the site and disposed of by the Contractor at his expense. The maximum size of rock or clod allowed in the various backfill zones shall be as follows:

Zone of Backfill	Maximum size of rock or clod in backfill (measured in greatest dimension)
Trench backfill from a horizontal plane 18" above top of the pipe to ground surface or subgrade of road base course	12"
Trench backfill from a horizonal plane 6" above top of pipe to 18" above pipe	9"
Within 6" of the exterior surface of any pipe or structure	1½"

Backfill material consisting of earth and rock shall contain a sufficient amount of earth to completely fill all voids between the rocks.

PART 3 - EXECUTION

3.01 SUMMARY

A. Set all lines, elevations, and grades for utility and drainage system work and control system for duration of work, including careful maintenance of bench marks, property corners, monuments or other reference points.

B. Maintain in operating condition existing utilities, active utilities and drainage systems encountered in utility installation.

C. Verify location, size, elevation and other pertinent data required to make connections to existing utilities and drainage systems as indicated on Drawings. Contractor shall comply with local codes and regulations.

D. All underground conduit shall be installed in accordance with the Typical Trench Detail shown on the Utility Details plan drawing.

3.02 EXCAVATION, TRENCHING AND BACKFILLING

A. Perform excavation as indicated for specified depths. During excavation, pile materials suitable for backfilling in orderly manner far enough from bank of trench to avoid overloading, slides or cave-ins.

B. Remove excavated materials not required or not suitable for backfill or embankments and waste as specified.

C. Prevent surface water from flowing into trenches or other excavations by temporary grading or other methods, as required. Remove accumulated water in trenches or other excavations by pumping or other acceptable methods.

D. Open cut excavation with trenching machine or backhoe. Do not use clods for backfill. Dispose of unsuitable material and provide other suitable material at no additional cost to Owner.

3.03 TRENCH EXCAVATION

A. The local utility companies shall be contacted before excavation shall begin. Dig trench at proper width and depth for laying pipe, conduit or cable. Cut trench banks as nearly vertical as practical and remove stones as necessary to avoid point-bearing. Over excavate wet or unstable soil, if encountered, from trench bottom as necessary to provide suitable base for continuous and uniform bedding.

B. All trench excavation side walls greater than 5 feet in depth shall be sloped, shored, sheeted, braced or otherwise supported by means of the sufficient strength to protect the workmen within them in accordance with the applicable rules and regulations established for construction by the Department of

Labor, Occupational Safety and Health Administration (OSHA) and by local ordinances.

C. All trenches shall be excavated to at least four (4) inches below the pipe grade and brought back to grade with approved granular bedding material. The bottom of the trenches shall be accurately graded to the line and grade shown on the Plans. Bedding material shall provide uniform bearing and support for each section of pipe at every point along its entire length. Bell holes or depressions for joints shall be dug after the trench bedding has been graded. Bell holes shall be of the minimum length, depth and width as required for proper assembly of the joint. The trench bottom up to 6 inches above the pipe shall be excavated and backfilled in strict accordance with all requirements of the plan details.

D. Where the trench bottom is found to consist of muck, organic matter or any other material that the Engineer determines to be unsuitable for supporting the pipe, an additional depth shall be excavated as directed by the Engineer and replaced with an approved granular stabilization material and compacted in accordance with the detail shown on the plans.

E. Trench depth requirements measured from finished grade or paved surface shall meet the following requirements or applicable codes and ordinances:

1. Water Mains: 42" minimum to top of pipe barrel.
2. Sanitary Sewer: Depths, elevations, and grades as indicated on Drawings.
3. Storm Sewer: Depths, elevations, and grades as shown on Drawings.
4. Electrical Conduits: 24" minimum to top of conduit or as required by NEC 300-5, NEC 710-36 codes or the local utility company requirements.
5. TV Conduits: 18" minimum to top of conduit or as required by the local utility company.
6. Telephone Conduits: 18" minimum to top of conduit or as required by the local utility company.
7. Gas Mains and Service: 30" minimum to top of pipe or as required by the local utility company.

3.04 TRENCH BACKFILLING

A. Criteria: Do not backfill trenches until all required tests are performed, utility systems, as installed, comply with specified requirements and are accepted by applicable governing authority. Backfill trenches as specified. If improperly backfilled, reopen to depth required to obtain proper compaction. Backfill and compact as specified to properly correct condition in an acceptable manner.

B. Backfilling: Unless otherwise specified or approved by the Engineer, all backfill material shall be placed with moisture-density control in accordance with the typical trench detail shown on the plans. All approved backfill material shall be adjusted to within 3% of the optimum moisture content prior to its placement in the trench. During initial backfilling, the Contractor shall take all necessary precautions to prevent movement or distortion of the pipe or structure being backfilled. Pipe bedding and haunching material shall be placed in uniform full-width lifts under and around the conduit to six (6) inches above the top of the pipe. Above the bedding and haunching material, earth backfill material shall be placed full width in uniform layers not more than twelve (12) inches thick. Each layer shall be compacted to not less than ninety-five (95) percent of the maximum dry density determined in accordance with ASTM D-698.

Concrete structures shall not be backfilled until the concrete and mortar therein has attained a minimum compressive strength of 2000 psi and can sufficiently support the loads imposed by the backfill. Backfill shall be placed simultaneously on all sides of the structure in layers approximately twelve (12) inches thick. Each layer shall be compacted to not less than ninety-five (95) percent of the maximum dry density determined in accordance with ASTM D-698.

C. Compaction: For every 400 linear feet of trench and each branch or section of trench less than 400 feet in length, at least one compaction test shall be performed for each two foot vertical lift of backfill material placed. The first test shall be taken approximately two feet above the top of pipe and the last test shall be at the pavement subgrade or 6 inches below the ground surface in unpaved areas. Compaction tests shall be taken at random locations along the trench and wherever poor compaction is suspected.

At least one compaction test shall be performed within the backfill zone of each manhole or structure. These tests shall be at random elevations but shall be at least 12 inches below finish subgrade.

If any portion of the backfill placed fails to meet the minimum density specified, the area shall be defined by additional tests if necessary and the material in the designated area shall be removed and replaced to the required density at the Contractor's expense.

All compaction testing shall be performed by an Independent Testing Laboratory selected by the Architect and paid by the Owner. It shall be the Contractor's responsibility to make necessary excavations in order to accommodate compaction tests at all locations designated.

END OF SECTION

SECTION 02230
PAVING BASE COURSE

PART 1 - GENERAL

1.01 SUMMARY

Paving base course materials shall comply with Section 304 of the Colorado Division of Highways Standard Specifications for Road and Bridge Construction, 1986, and shall be of the classes and compacted as specified on the Site Details plan sheet.

1.02 RELATED REQUIREMENTS

Construction Drawings
Contract Documents
Specs. Section 02110 SITE PREPARATION
Specs. Section 02200 EARTHWORK
Colorado Division of Highways Standard Specifications

PART 2 - PRODUCTS

Submit materials certificate to Independent Testing Laboratory which is signed by material producer and Contractor, certifying that materials comply with or exceed the requirements herein.

PART 3 - EXECUTION

3.01 CONSTRUCTION

A. Perform base course construction in a manner that will drain surface properly at all times at same time prevent runoff from adjacent areas from draining onto base course construction.

B. Compact base material to not less than 90% of maximum density as determined by ASTM D-1557 unless otherwise indicated on the Drawings.

C. Granular Base: Construct to thickness indicated on Drawings.

3.02 FIELD QUALITY CONTROL

A. An Independent Testing Laboratory, selected by the Architect and paid by Owner, shall be retained to perform construction testing of in-place base courses for compliance with requirements for thickness and tolerance. Paving base course tolerances shall be verified to ±0.05 ft. of design elevations allowing for paving thickness as shown in the Drawings.

B. The following tests shall be performed on each type of material used as base course material:

1. Moisture and Density Relationship: ASTM D-1557.
2. Mechanical Analysis: AASHTO T-88.
3. Plasticity Index: ASTM D-424.

4. Base material thickness: Perform one test for each 4,000 square feet in-place base material area.
5. Base material compaction: Perform one test in each lift for each 4,000 square feet in-place base material area.
6. Test each source of base material for compliance with applicable state highway specifications.

C. Field density tests for in-place materials shall be performed according to the following standard as part of construction testing requirements:

Nuclear Method: ASTM D-2922.

D. Independent Testing Laboratory will prepare test reports that indicate test location and results. Owner, Architect and Contractor will be provided with copies of reports. In event that any test performed fails to meet these specifications, Architect and Contractor will be notified immediately by Independent Testing Laboratory. Owner reserves right to employ Independent Testing Laboratory and to direct any testing that is deemed by them to be necessary. Contractor shall provide free access to site of testing activities.

END OF SECTION

SECTION 02511
ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

A. Asphaltic concrete paving shall comply with Sections 401, 403 and 407 of the Colorado Division of Highways Standard Specifications for Road and Bridge Construction, 1986.

B. Contract Documents
Construction Drawings
Specs. Section 02110 SITE PREPARATION
Specs. Section 02200 EARTHWORK
Specs. Section 02230 PAVING BASE COURSE
Colorado Division of Highways Standard Specifications

1.02 SUBMITTALS

A. Design Mix: Before any asphaltic concrete paving is constructed, submit actual design mix to the Architect for review and/or approval. Design mix submittal shall include the type/name of the mix, gradation analysis, Marshall Stability (lbs.), flow, effective asphalt content (percent) and direct references to the applicable Highway Department specifications sections for each material.

B. Material Certificates: Submit materials certificate to Architect which is signed by material producer and Contractor, certifying that materials comply with or exceed the requirements herein.

1.03 JOB CONDITIONS

A. Weather Limitations:

1. Apply prime and tack coats when ambient temperature is above 40° and when temperature has been above 35° for 12 hours immediately prior to application. Do not apply when base is wet or contains excess moisture.
2. Construct asphaltic concrete paving when atmospheric temperature is above 40°.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Hot bituminous pavement shall be Grading E as defined in Colorado Division of Highways Standard Specifications Section 403 and shall also conform to the following:

PROPERTY	TEST METHOD	VALUE	
		Bottom	Top Lift
Voids, Percent	CPL 5105	3-6	3-4 (Range)
Stability, Minimum	CPL 5105	37	37
Strength Coefficient, Minimum	CPL 5105	0.44	0.44
Index of Retained Strength, Minimum	CPL 5104	75	75
Accelerated Moisture Susceptibility			
Tensile Strength Retained, Minimum	CPL 5109	N/A	N/A
Other: Maximum Size Aggregate		5/8"	5/8"
Minimum Job Mix Formula			
Asphalt Content		5.7%	5.7%

The asphalt cement for this grading shall be AC-10.

Subsection 403.03 shall include the following:

The Contractor shall use an approved anti-stripping additive.

In subsection 401.02, Table 401-1, the bitumen content is revised to ±0.3%.

B. Aggregates for hot bituminous pavement shall be of uniform quality, composed of clean, hard, durable particles of crushed stone, crushed gravel, natural gravel, or crushed slag. The aggregate shall have a percentage of wear of not more than 45 when tested in accordance with AASHTO T-96. The material shall not contain clay balls, vegetable matter and other deleterious substances. Excess of fine material shall be wasted before crushing. All requirements of Subsection 703.04 of Colorado Division of Highways Standard Specifications shall be met.

C. Prime coat shall be applied uniformly at a rate of 0.30 gallons per square yard to the surface of aggregate base course prior to placement of hot bituminous pavement. Bituminous material for prime coat shall be liquid asphaltic material (MC-70).

D. Tack coat shall be applied uniformly at a rate of 0.10 gallons per square yard between layers of hot bituminous pavement. Bituminous material for tack coat shall be emulsified asphalt (CSS-1h) and shall consist of one (1) gallon of water for each one (1) gallon of emulsion.

2.02 EQUIPMENT

Maintain equipment in satisfactory operating condition and correct breakdowns in a manner that will not delay or be detrimental to progress of paving operations.

PART 3 - EXECUTION

3.01 The subgrade shall be scarified to a depth of 8 inches, adjusted to a moisture content near optimum and compacted to at least 95% of ASTM D 698 maximum density.

3.02 Asphaltic Concrete Paving shall be constructed in accordance with the Drawings and Section 401 of the Colorado Division of Highways Standard Specifications for Road and Bridge Construction, 1986.

3.02 FIELD QUALITY CONTROL

A. Independent Testing Laboratory, selected by the Architect and paid by Owner, shall be retained to perform construction testing of in-place asphaltic concrete courses for compliance with requirements for thickness, surface smoothness and mix design requirements. Asphaltic surfaces shall be randomly cored at a minimum rate of one core for every 4,000 square feet of paving. However, no less than three cores shall be obtained. Coring holes shall be immediately filled with full-depth asphalt or with concrete. Asphaltic Concrete pavement samples shall be tested for conformance with the mix design requirements for gradation and asphalt content.

B. Grade Control: Contractor shall establish and maintain required lines and elevations.

C. Thickness: In-place compacted thickness shall not be less than thickness specified on the drawings.

D. Surface Smoothness: Testing will be performed on the finished surface of each asphalt concrete course for smoothness, using 10'-0" straightedge applied parallel with and at right angles to centerline of paved area. The results of these tests will be made available to the Owner upon request. Surfaces will not be acceptable if exceeding following tolerances for smoothness:

Base Course Surface: 1/4"

Wearing Course Surface: 3/16"

E. Check surface areas at intervals necessary to eliminate ponding areas. Remove and replace unacceptable paving as directed by Owner.

Areas of deficient paving thickness shall receive a tack coat and a minimum 1" overlay until specified thickness of the course is met or exceeded at no additional expense to Owner.

END OF SECTION

SECTION 02513

PORTLAND CEMENT CONCRETE PAVING

PART 1 - GENERAL

1.01 SUMMARY

The work performed under this section shall consist of constructing curbs, gutters and sidewalks composed of Portland cement concrete, with or without reinforcement as specified, constructed on a prepared subgrade or base course in accordance with these specifications and in reasonably close conformity with the lines, grades, thickness and cross-section shown on the plans or Contract Documents.

1.02 RELATED REQUIREMENTS

A. A permit from the City Engineer will be required for all concrete construction in public Right-of-Way.

B. Contract Documents
Construction Drawings
Specs. Section 02200 EARTHWORK
Specs. Section 02230 PAVING BASE COURSE
Colorado Division of Highways Standard Specifications

1.03 PROJECT CONDITIONS

A. Contractor shall maintain access for vehicular and pedestrian traffic as required for other construction activities. Utilize temporary striping, flagmen, barricades, warning signs and warning lights as required.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Forms: Steel, wood or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects. Use flexible spring steel forms or laminated boards to form radius bends as required. Coat forms with nonstaining type coating that will not discolor or deface surface of concrete.

B. Welded Wire Mesh: Welded plain cold-drawn steel wire fabric, ASTM A 185. Furnish in flat sheets, not rolls, unless otherwise acceptable to Owner.

C. Reinforcing Bars: Deformed steel bars, ASTM A 615, Grade 40.

D. All portland cement concrete used for curbs, gutters and sidewalks shall be Colorado Division of Highways Class "B" (Highway Standard Specifications Section 601.02) using Type V or Type II modified sulfate-resistant Portland Cement.

E. Air Entraining Admixture: ASTM C 260-77, "Sika AER" (Sika Chemical Corp.); "MB-VR" (Master Builders Co.); or "Darex AEA" (W.R. Grace & Co.)

F. Liquid Membrane Curing Compound: ASTM C 309-74, Type 1, "Horncure 30C" (W.R. Grace & Co.); "WR-30 Curing Compound" (W.R. Meadows Inc.); or "Clear Bond" (Guardian Chemical Corp.)

G. Performed Fiber Joint Filler: ASTM C 1751-73 (1978), "Fiber Expansion Joint Filler, Code 1390" (W.R. Grace & Co.); "Fiber Expansion Joint" (W.R. Meadows Inc.); or "Flexcell" (The Celotex Corporation), non-extruding, for expansion joints which are to be sealed.

H. Performed Asphalt Joint Filler: ASTM D 994-71 (1977) "Code 1301" (W.R. Grace & Co.); "Asphalt Expansion Joint" (W.R. Meadows Inc.); or "Elastite Asphalt Expansion Joint" (The Celotex Corp.), for expansion joints which are not to be sealed.

I. Anti-Spalling Compound: "Linseed Anti-Spalling Compound" (Minnesota Linseed Oil Co.); "Tri-Dar 66/1A" (Darling & Co.); or "Deepgard" (PPG Industries).

2.02 PORTIONING AND MIXING

A. Cement content shall be in accordance with the following minimum requirements:

Design Strength (Compressive)	Cement Content
3000 psi at 28 days	6 sacks/cu. yd.

B. Ready-Mixed Concrete shall conform with ASTM C 94-78a.

C. The mixture shall contain no more water than is necessary to produce concrete which is workable and plastic within the limits specified herein for slump. The amount of water and proportion of mortar to coarse aggregate shall be the least which will produce uniformly dense concrete, free from aggregate pockets or honeycomb. Corrections shall be made for the amount of moisture contained in the aggregates and allowances shall be made for absorption of moisture by the aggregates during the period of mixing and handling. A uniform consistency shall be maintained continuously. Mixture shall contain 5-8 percent air entrainment. No calcium chloride shall be used.

D. The consistency shall be determined by the method specified in ASTM C 143-78.

E. In general, the slump shall be not less than 3 nor more that 4" for concrete which is not compacted by vibration. In each of the above cases, slumps outside of the limits named may be used when satisfactory workability cannot be obtained within such limits and the slump is approved by the Architect.

PART 3 - EXECUTION

3.01 PREPARING SUBGRADE

A. The subgrade shall be scarified to a depth of 8 inches, adjusted to a moisture content near optimum and compacted to at least 95% of ASTM D 698 maximum density.

B. All concrete curb, gutter and sidewalk and curb ramps shall be underlaid with a minimum of four inches (4") of aggregate base course Class 6 compacted to at least 90% of ASTM D-1557 maximum density.

C. All driveway concrete (pan, apron or sidewalk crossing) shall be at least six inches (6") thick and underlaid with a minimum of six inches (6") aggregate base course (Class 6) compacted to at least 90% of ASTM D-1557 maximum density.

D. Subgrade shall not be built up under forms after forms are in-place. Subgrade shall be tested with an approved template. High spots shall be lowered and low spots raised. Aggregate base course shall be compacted and leveled to grade.

3.02 INSTALLATION

A. Form Construction
1. Set forms to required grades and lines, rigidly braced and secured.
2. Install sufficient quantity of forms to allow continuance of work and so that forms remain in place a minimum of 24 hours after concrete placement.
3. Check completed form work for grade and alignment to following tolerances:
   Top of forms not more than 1/8" in 10'-0".
   Vertical face on longitudinal axis, not more than 1/4" in 10'-0".
4. Clean forms after each use and coat with form release agent as often as required to ensure separation from concrete without damage.

B. Reinforcement
1. Locate, place and support reinforcement.

C. Concrete Placement
1. Do not place concrete until base material and forms have been checked for line and grade. Moisten base material if required to provide uniform dampened condition at time concrete is placed. Concrete shall not be placed around manholes or other structures until they are at the required finish elevation and alignment.

2. Place concrete using methods which prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with internal vibrator. Keep vibrator away from joint assemblies, reinforcement or side forms. Consolidate with care to prevent dislocation of reinforcing, dowels and joint devices.

3. Deposit and spread concrete in continuous operation between transverse joints, as far as possible. If interrupted for more than 1/2 hour, place construction joint.

4. Curbs and Gutters: Automatic machine may be used for curb and gutter placement at Contractor's option. Machine placement must produce curbs and gutters to required cross section, lines, grades, finish and jointing as specified for formed concrete. If results are not acceptable, remove and replace with formed concrete as specified.

D. Joint Construction

1. Construct expansion, contraction and construction joints true-to-line with face perpendicular to surface of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.

2. Contraction Joints: Provide contraction joints as detailed on the Drawings and as follows:

   a. Tooled Joints: Form contraction joints in fresh concrete by grooving top portion with recommended cutting tool and finishing edges with jointer.
   b. Sawed Joints: Form contraction joints using powered saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut joints into hardened concrete as soon as surface will not be torn, abraded or otherwise damaged by cutting action.

3. Construction Joints: Place concrete joints at end of placements and at locations where placement operations are stopped for period of more than 1/2 hour, except where such placements terminate at expansion joints. Construct joints using standard metal keyway-section forms.

4. Expansion Joints: Expansion joints shall consist of preformed joint fillers of the thickness specified below. The top of the joint shall be placed 1/8" below the surface of the concrete for unsealed joints and 5/8" below the surface of the concrete for joints to be sealed. Where sidewalks are constructed adjacent to pavements or curbs, expansion joints in the sidewalks shall be placed opposite the existing expansion joints as nearly as practicable. Expansion joints shall also be placed where the concrete pavements abut existing structures.

   a. One-half inch (1/2") thick expansion joints shall be placed between the concrete paving and all structures such as light standards which extend through the concrete and at all locations where a thicker expansion joint is not specifically required.

   b. Three-fourth inch (3/4") thick expansion joints shall be placed transverse to the direction of the sidewalks at intervals not to exceed 40 feet, unless otherwise shown.

E. Joint Fillers

1. Extend joint fillers full-width and depth of joint and not less than 1/2" or more than 1" below finished surface where joint sealer is indicated. If no joint sealer, place top of joint filler flush with finished concrete surface.
2. Furnish joint fillers in one-piece lengths for full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together.

F. Joint Sealants: Exterior pavement joint sealants shall be installed per manufacturer's recommendations.

3.03 CONCRETE FINISHING

A. After striking off and consolidating concrete, smooth surface by screeding and floating. Adjust floating to compact surface and produce uniform texture. After floating, test surface for trueness with 10'-0" straightedge. Distribute concrete as required to remove surface irregularities and refloat repaired areas to provide continuous smooth finish.

B. Work edges of slabs, gutters, back top edge of curb and formed joints with an edging tool. Eliminate tool marks on concrete surface. After completion of floating and troweling when excess moisture or surface sheen has disappeared, complete surface finishing as follows:

1. Curbs, Gutters and Sidewalks: Broom finish by drawing fine-hair broom across concrete surface perpendicular to line of traffic. Repeat operation if required to provide fine line texture.
2. Inclined Slab Surfaces: Provide coarse, nonslip finish by scoring surface with stiff-bristled broom perpendicular to line of traffic.
3. Paving: Provide coarse, nonslip finish by scoring surface with stiff-bristled broom perpendicular to line of traffic.

C. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints and point up any minor honeycombed areas. Remove and replace areas or sections with major defects, as directed.

D. White pigmented curing compound shall be applied to all exposed concrete surfaced immediately after finishing. The surface of the newly placed concrete shall be wetted if it becomes dry before the curing material is placed. The water shall be applied as a fine spray so that it will not mar or injure the surface. The top and edges of the concrete shall not be unprotected for a period of more than 1/2 hour at the time the forms are removed.

E. Curing shall be maintained for at least 7 days and may be accomplished by wetting and covering with wetted burlap, impermeable paper, polyethylene sheeting or in lieu of wetting and covering, by membrane spray. Vehicular traffic shall be kept off new concrete for a minimum of 7 days.

3.04 PLACING CONCRETE DURING HOT OR COLD WEATHER

A. During cold weather, equipment and materials shall be provided to maintain a temperature of at least 50 degrees F in the freshly placed concrete during the curing period.

No frozen materials or materials containing snow or ice shall be used in the mix. No dependence shall be placed on salt or other chemicals for the prevention of freezing. No concrete shall be placed on frozen subgrade.

B. During hot weather, suitable precautions shall be taken to avoid drying of the concrete prior to finishing. Windbreaks, sunshades, covering, fog sprays, etc. shall be used as required or directed by the Architect. Concrete deposited in hot weather shall have a placing temperature not greater than 80 degrees F and shall be maintained at a temperature not greater than 90 degrees F during the curing period.

3.05 CLEANING AND ADJUSTING

A. After the concrete has been cured, the spaced along the edges of the walks shall be backfilled to the required elevation with material approved by the Architect. The material shall then be compacted until firm, and the surface neatly graded, with allowance made for topsoil.

B. Sweep concrete pavement and wash free of stains, discolorations, dirt and other foreign material just prior to final inspection.

C. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 7 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and soilage of materials.

D. Concrete walks shall not be placed between November 15 and March 15 without the written approval of the Architect or the Owner. All concrete walks shall be treated with two (2) coats of Anti-Spalling Compound hereinbefore specified. Apply compound in accordance with the manufacturer's recommendations. Allow approximately 28 days after concrete is placed before applying compound. Allow first coat to dry before applying the second coat.

3.06 FIELD QUALITY CONTROL

An independent testing laboratory selected by the Architect and paid by the Owner will randomly core the concrete at a minimum rate of one core per 4,000 square feet of paving. Core shall be tested for thickness and quality of aggregate distribution.

The Independent Testing Laboratory will also prepare and test concrete cylinders for compressive strength at 28 days. One set of cylinders per 4,000 square feet of paving shall be tested.

END OF SECTION

SECTION 02580

PAVEMENT MARKINGS

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS:

Contract Documents
Construction Drawings
Specs. Section 02511 ASPHALTIC CONCRETE PAVING
Specs. Section 02513 PORTLAND CEMENT CONCRETE PAVING

1.02 PROJECT CONDITIONS

Maintain access for vehicular and pedestrian traffic as required for other construction activities. Utilize flagmen, barricades, warning signs and warning lights as required.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Paint Type: Paint shall be a chlorinated rubber alkyd, FS TT-P-115, Type III, factory mixed, quick-drying, nonbleeding or an approved equal.

B. The following items are to be painted with the colors noted below:

Parking Lot Light Pole Bases: Yellow
Handicap Symbols: Blue and White
Guardposts: Yellow
Parking Stall Striping: Yellow

PART 3 - EXECUTION

3.01 PREPARATION

Sweep and clean surface to eliminate loose material and dust.

3.02 APPLICATION

Apply two (2) coats of paint at manufacturer's recommended rate with total minimum of 100 to 110 sq. ft./gal. Apply with mechanical equipment to produce uniform straight edges.

END OF SECTION

SECTION 02590

TRAFFIC SIGNS

PART 1 - GENERAL

1.01 SUMMARY

Provide traffic control signs complying with U.S. Department of Transportation, Federal Highway Administration's Manual "Uniform Traffic Control Devices" and as specified. See Drawings for type, location, and quantity of signs required.

1.02 RELATED REQUIREMENTS:

Contract Documents
Construction Drawings
Manufacturer's mounting instructions

PART 2 - PRODUCTS

2.01 SIGNS

A. "STOP" (R1-1) Signs: 30" x 30", Octagon shall be sheet aluminum, 0.100" minimum thickness, with reflectorized copy and border.

B. "No Parking" (R7-1) Signs: 12" x 18" shall be sheet aluminum, 0.100" minimum thickness, with reflectorized copy and border.

C. "NO LEFT TURN" (R3-1) Sign: 24" x 30" shall be sheet aluminum, 0.100" minimum thickness, with reflectorized copy and border.

2.02 POSTS

Posts shall be a uniform flanged channel section (U-shaped) made from hot rolled structural steel, re-rolled rail steel, or new billet steel, having a minimum yield strength of 30,000 psi and a minimum tensile strength of 50,000 psi.

PART 3 - EXECUTION

Install posts in drilled or excavated holes with 24 inch deep concrete foundations or driven to a minimum depth of 24 inches. Set posts vertical and plumb with bottom of stop sign at 5'-6" and bottom of no parking sign at 7'-6" above finish grade. Mount signs in accordance with manufacturer's instructions.

END OF SECTION

SECTION 02660

WATER AND SEWER SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

Furnish labor, materials, services, equipment and other necessary items required for accomplishing the construction of the exterior water and sewer systems. This shall include, but not be limited to, the following:

Storm drainage system.
Sanitary sewers.
Waterlines.
Related items necessary to perform work.

Set lines, elevations and grades for utility and drainage system work and control system for duration of work, including careful maintenance of bench marks, property corners, monuments or other reference points.

1.02 RELATED REQUIREMENTS

Contract Documents
Construction Drawings
Specs. Section 02200 EARTHWORK
Specs. Section 02222 EXCAVATION, BACKFILLING AND COMPACTING FOR UTILITIES
Local governing authority requirements
All necessary construction permits

1.03 SUBMITTALS

A. Submit catalog materials on pipe, valves, fittings and meters.

B. Submittals shall include ASTM designations, AWWA certifications, and UL labels as required.

PART 2 - PRODUCTS

2.01 SANITARY SEWER SYSTEM

A. Polyvinyl Chloride Sanitary Sewer:

1. Polyvinyl chloride sewer pipe shall be manufactured from material meeting ASTM D 1784. Pipe and fittings shall comply with ASTM D 3034, rated SDR 35. Pipe shall be continually marked with manufacturer's name, pipe size, specification number, SDR rating, and ASTM D 3034 classification.

2. Pipe joints shall be integrally molded bell ends in accordance with ASTM D 3034, Table 2, with factory supplied elastomeric gaskets and lubricant.

B. Manholes:

1. Construct manholes of precast concrete sections and other materials shown as required by Drawings to size, shape and depth indicated.

2. Inverts: Shape inverts for smooth flow across structure floor as shown on Drawings. Use concrete and mortar to obtain proper grade and contour and finish surface with fine textured wood float.

3. Cast Iron Frames and Covers: After completion of manhole set frame in full mortar bed and adjust to required elevation.

4. Main and Lateral Pipes: Neatly cut off main and lateral pipes flush with inside of manhole or inlet where they enter structure walls. Point up all irregularities and rough edges with nonshrinking grout.

C. Installation:

1. Sanitary sewer pipe and manholes shall be installed in accordance with SECTION 02222 EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES and in accordance with the UTILITY DETAILS plan drawing.

2. After the trench has been dewatered and the bedding prepared, the pipe shall be laid to the line and grade shown on the plans or staked. Variance from established line and grade shall not be greater than three (3) inches horizontally and one-half (1/2) inch vertically, provided that such variation does not result in a level or reverse sloping invert. The Contractor shall constantly check line and grade of the pipe with a laser beam or batter boards. Whenever the pipe is found to be outside the specified limits, the misaligned sections shall be removed and relaid to the correct line and grade at the Contractor's expense. Pipe shall be laid upgrade from the point of connection to the existing sewer or from a designated starting point. Pipe with bell and spigot joints shall be laid with the bell end forward or upgrade. The inside of the pipe and jointing surface shall be kept clean and free from mud, soil, gravel, ground water and other foreign material. When pipe laying is not in progress, the forward end of the pipe shall be kept tightly closed with a temporary plug.

3. The manhole base shall be cast-in-place on the line and grade staked or shown on the plans. The invert shall be formed and smoothly finished to match the shape and elevation of all pipes connected to the manhole. The first pre-cast manhole section shall be placed on the concrete base structure before the base has taken initial set or the section shall be grouted into a suitable groove formed in the top of the manhole base. The first section shall be adjusted to the proper grade and alignment so that it is uniformly supported by the base concrete and not bearing on any of the pipe. The remaining pre-cast sections shall be placed and aligned to provide vertical sides and alignment of the ladder rungs. Approved

bitumatic sealer shall be placed between pre-cast sections so that the completed manhole is rigid and watertight. The manhole ring and cover shall be adjusted to grade with precast grade rings. The total height of grade rings shall not be more than twelve (12) inches. Grade rings shall be grouted together and the cast iron ring set in a bed of mortar at the finished grade elevation.

2.02 WATER DISTRIBUTION SYSTEM

A. Polyvinyl chloride (PVC) plastic water pipe 4 inches through 12 inches in diameter and fittings shall conform to AWWA C-900. Unless otherwise specified on the plans, the minimum thickness class of PVC pipe shall conform to DR18 (Class 150). Joints shall be bell and spigot type sealed with elastomeric gaskets and conforming to ASTM F-477 and AWWA C-900. Couplings shall be capable of withstanding the same internal pressure and external loading as the pipe.

B. Polyvinyl chloride (PVC) plastic water pipe 2 inches in diameter and fittings shall conform to ASTM D-2241. Unless otherwise specified on the plans, the minimum thickness class of PVC pipe shall conform to SDR21 (Class 200). Joints shall be bell and spigot type sealed with elastomeric gaskets and conforming to ASTM F-477 and ASTM D-1869. Couplings shall be capable of withstanding the same internal pressure and external loading as the pipe.

C. Water pipe fittings and appertances shall be installed in accordance with SECTION 02222 EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES and in accordance with UTILITY DETAILS plan drawing.

D. Fire hydrant assemblies shall conform to the details shown on the Utility Details plan drawing. Fire hydrants shall be the dry bowl type and shall conform to the requirements of AWWA C-502. The standard hydrant shall have a six-inch inlet connection, a 5¼-inch main valve opening, two (2) 2½-inch hose nozzles and one (1) 4½-inch pumper nozzle. The hydrant barrel shall be marked with a circumferential rib to denote the intended ground line. The centers of the hose nozzles and pumper nozzle shall be at least 14 inches above the ground line mark. Hydrants shall be of the "traffic" or "breakaway" design, having easily replaceable breaking devices for the gradeline flange and operating stem that prevents damage to the barrel sections upon impact. The operating nut and nozzle cap wrench nuts shall be 1 3/8-inch pentagon, measuring from point to opposite flat side at the base. The height of the nut shall not be less than one inch. The nozzle caps shall be removed and the operating nut opened by turning to the left (counter-clockwise). Nozzle caps shall be securely chained to the upper barrel section. The 2½-inch hose nozzles shall be National Standard fire hose thread. The pumper nozzle shall be a Mueller 4-512 or equal with the following requirements:

1. Outside diameter of male thread is 5.282 inches.
2. Diameter of root male thread is 4.932 inches.
3. Number of threads per inch is 4.
4. Pitch diameter is 5.12 inches.

Fire hydrants shall be painted with Dupont #7744D. "Ward La France Yellow", Alkyd Enamel or an approved substitute.

E. The minimum requirements for all waterline gate valves shall conform to the standards of AWWA C-500. All waterline gate valves shall be double disc, cast iron body, fully bronze mounted with non-rising stem and parallel seats. The stem and all wearing surfaces shall be bronze or other approved non-corrosive material. Contact surfaces shall be machine finished and all wearing surfaces shall be easily renewable. Nonferrous bushings shall be of substantial thickness, tightly fitted and pressed into machined seats. Solid wedge valves are not acceptable. End connections of waterline gate valves shall consist of mechanical or push-on (rubber-gasket) joints conforming to AWWA C-111 or flanged ends in accordance with ANSI B-16.1. Wrench nuts shall be made of cast iron and shall be 1 5/16-inches square at the top, 2 inches square at the base and 1 3/4-inches high. A cast iron valve box and lid shall be provided for each underground waterline valve. Valve boxes shall be 5¼-inch diameter, screw-together type, sized for the type of valve and depth of bury. The lid shall have the word "WATER" permanently cast in the top.

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

A. Testing Sanitary Sewers: Testing sanitary sewers for acceptability shall include the following tests:

a. Exfiltration of water.
b. Deflection of thermoplastic pipe.
c. Lamping

1. Exfiltration Test: An exfiltration or leakage test shall be performed on all newly constructed sanitary sewers. The Contractor shall furnish all labor, tools and equipment necessary to conduct the test. The exfiltration test will not be considered valid unless the Engineer or his representative is present throughout the test. The length of pipeline to be tested shall be limited so that the pressure on the lower end of the test section does not exceed six (6) feet of water column. The test section shall be sealed off from the remaining pipeline with watertight plugs inserted in the pipes at the end manholes. The Contractor shall fill the pipe to the test level with potable water at least 24 hours prior to conducting the test. The test level shall be at least eighteen (18) inches above the top of the pipe opening in the upper manhole or eighteen (18) inches above the ground water table, whichever is higher. Throughout the test period of at least one (1) hour, the water level shall be maintained at the test level and all water added shall be accurately measured. If the exfiltration rate exceeds 0.15 gallon per inch of inside pipe diameter per hour per 100 feet of pipe length, the leaks shall be located and repaired at the Contractor's expense and the pipeline retested until the leakage is within the allowable limits.

2. Deflection Testing for Plastic Pipe: All PVC sewer lines will be tested for excess deflection. The maximum allowable deflection of flexible pipe shall not exceed seven and one-half percent (7½%) of the Base Inside Diameter as established in ASTM D3034-81. The following values from ASTM D3034-81 shall apply:

Nominal Pipe Size, In.	Base Inside Diameter In.	Mandrel Diameter In.
6	5.742	5.31
8	7.665	7.09
10	9.563	8.84
12	11.361	10.51
15	13.898	12.86

The deflection test will be performed by pulling a "go-no go" mandrel up-grade through the pipe from manhole to manhole. Where deflection is found to be in excess of allowable testing limits, the Contractor shall excavate to the point of excess deflection and remove the deflection by recompacting around the pipe or other approved method. After backfilling, the line shall then be retested for deflection. If the line has failed to return to its original size (inside diameter) the deflected pipe shall be replaced by the Contractor at his expense.

B. Testing and Disinfection of Waterlines: Water pipelines installed below grade and outside the building shall be tested and disinfected in accordance with the following procedures. The Contractor shall furnish all labor, tools, materials and equipment necessary to conduct the procedures. The pressure and leakage tests will not be considered valid unless the Engineer or his representative is present throughout the test.

1. Pressure and Leakage Tests: Waterlines shall be tested for pressure and leakage in accordance with these specifications and AWWA Standard C-603, Section 4. No pressure testing shall be performed until all thrust blocks have been placed and cured for at least seven (7) days and the pipeline backfilled adequately to prevent any movement or lifting of the pipe. Pavement or other permanent surfaces shall not be placed until all pressure and leakage tests are satisfactorily completed. Unless otherwise specified, the test pressure for all pipes shall be double the operating pressure at the lowest elevation of the test section or the class designation of the pipe plus fifty (50) psi, whichever is less, except that the minimum test pressure for water distribution lines shall be one hundred and fifty (150) psi. The pipeline shall be filled with potable water at least twenty-four (24) hours before being subjected to the hydrostatic pressure test. Each section of pipeline shall be filled slowly and all air expelled by means of taps at points of highest elevation. The pressure and leakage tests may be performed simutaneously or separately. The total time for the combined pressure and leakage tests shall be a minimum of two (2) hours for each section of pipeline. If separate tests are made, the pressure test shall be made first. The

duration of the pressure test shall be a minimum of one (1) hour and the duration of the leakage test shall be a minimum of four (4) hours. The pressure of the leakage test may be reduced to one hundred and fifty percent (150%) of the maximum working pressure that will occur on that portion of the line. The specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Owner. No pipe installation will be accepted if the leakage for the section of line being tested is more than the rate calculated using the following formula.

$$\frac{L=ND\sqrt{P}}{7,400}$$

where L = allowable leakage in gallons per hour
N = number of joints in length of pipeline tested
D = nominal diameter of pipe in inches
P = average test pressure in psi gauge

Leakage is defined as the quantity of water to be supplied to the section of pipeline being tested, which is necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled.

2. Disinfection of Water Lines: After completion of pressure and leakage testing and prior to being placed into service, all new water mains and repaired portions of or extensions of existing mains shall be chlorinated by the Contractor in accordance with AWWA Standard C-601 in the presence of City of Grand Junction Water Department personnel. Sections of pipe to be disinfected shall first be flushed to remove any solids or contaminated material that may have entered the pipe. If no hydrant is installed at the end of the main, then a 2½ inch tap shall be installed in order to flush the line. Chlorine shall be applied by one of the methods described in AWWA C-601. The preferred point of application of the chlorinating agent is at the beginning of the pipeline extension or any valved section of it and through a corporation stop inserted in the pipe. The water injector for delivering the chlorine-bearing water into the pipe should be supplied from a tap made on the pressure side of the gate valve controlling the flow into the pipeline extension. Alternative points of application may be used when approved or directed by Ute Water District.

Valves shall be manipulated so that the strong chlorine solution in the line being treated will not flow back into the line supplying the water. Check valves may be used if desired. Treated water shall be retained in the pipe at least twenty-four (24) hours. After this period, the chlorine residual at pipe extremities and at other representative points shall be at least twenty-five (25) mg/1. In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent and under normal operating pressure. Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipe at its extremity until the replacement water throughout its length shows upon test a chlorine residual of less than 1 mg/1. In the event chlorine is normally used in the source of supply, then the tests shall show a residual of not in excess of that carried in the system.

3. Connections to Existing Mains: New water lines shall not be placed into service until the new lines have been tested and disinfected. Where the connection of the new work to old requires interruption of service, the Owner and the Contractor shall mutually agree upon a date and time for connections which will allow ample time to assemble labor and materials. The Contractor shall notify the City of Grand Junction Fire Department and all water users affected.

END OF SECTION

SECTION 02810

IRRIGATION SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

The Contractor shall design and construct an automatically-controlled pressurized underground irrigation system in accordance with these Specifications. The design layout, specifications, calculations and any other data pertinent to the proposed system shall be submitted by the Contractor to the Architect and Owner for review and approval.

The system shall include the following:

Piping, Backflow Preventer, Sprinkler Heads, Valves, Controllers, Control Wiring, Fittings, Electrical Connections, Connections to Mains, and All Necessary Accessories.

1.02 RELATED REQUIREMENTS

Construction Drawings
Contract Documents
Specs. Section 02222 EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES
Specs. Section 02660 WATER AND SEWER SYSTEMS

1.03 SUBMITTALS

A. Submit manufacturer's technical data and installation instructions for underground irrigation system.
B. Submit shop drawing layout plan and details illustrating the location, size and type of heads, valves, piping circuits, controls, and accessories for Architect and Owner approval prior to start of construction.
C. Record Drawings and Controller Chart.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Rain Bird Sprinkler Manufacturing Corporation
B. The Toro Company, Irrigation Division

2.02 MATERIALS

A. Pipe

1. All main line pipe to circuit control valves shall be rigid PVC Schedule 40 conforming to ASTM D 2241.
2. All circuit pipe 1¼" diameter and larger shall be rigid PVC class 200 conforming to ASTM D 2241.
3. All circuit pipe less than 1¼" diameter shall be rigid PVC class 160 conforming to ASTM D 2241.

B. Pipe Fittings: For PVC pipe, ASTM D 2466, socket fittings with ASTM A 2564 solvent cement. For copper tube fittings, provide cast brass or wrought copper, sweat-solder type.

C. PVC Sleeves for water lines shall be rigid PVC Schedule 40 conforming to ASTM D 2241 and be sized as indicated on the Drawings.

D. PVC Sleeves for pulling electrical control wires shall be rigid PVC Class 160 conforming to ASTM D 2241 and be sized as indicated on the drawings.

E. Screw-type Valves:

1. Provide straight globe valves of brass construction.
2. Provide valves fitted with a key head for key operation.

F. Remote Control Valves:

1. Provide valves of heavy cast bronze body and cover with stainless steel spring and metal parts of brass.
2. Solenoid operated diaphragm, globe-type 150 psi CWP-Rated, FIP threads.
3. Packless valve, without sliding seals and completely serviceable without removing from pipeline.
4. Solenoid complying with Class II National Electric Code, requiring a maximum of 0.46 amperes, 10.0 watts at 24 volts AC.

G. Automatic Sprinkler Controllers:

1. Provide unit capable of controlling 6 stations and complying with the following:
   a. Microprocessor based/microelectronics solid-state type, capable of fully automatic or manual operation.
   b. Controller in wall or panel mounted, weatherproof lockable steel cabinet.
   c. Primary of 117 volts AC, secondary of 24 volts AC.
   d. 0 to 60 minutes in 1 minute increments with Master on-off switch.
   e. Two independent programs with 3 automatic starts per day for each.
   f. 24-hour program clock readout, 14 day clock.

H. Sprinkler Heads:

1. Pop-up Spray and Shrub Heads:

   a. Provide Rain Bird Series 1804 (or Toro equivalent) 4" - lawn and 1806 10" - shrub/groundcover beds. Pop-up spray heads.
   b. The sprinkler body, stem, nozzle and screen of heavy duty plastic.

c. The sprinkler shall have a soft elastomer pressure activated co-molded wiper seal for cleaning debris from pop-up stem as it retracts into case to prevent sprinkler from sticking up.
d. The sprinkler shall have a strong stainless steel retract spring for positive pop-down. Pop-up height shall be no less than 2".
e. The sprinkler shall have a screen under nozzle to protect it from clogging and for easy removal for cleaning and flushing system.

2. Impact Rotor Pop-Up Sprinklers

a. Provide Rain Bird Series 15103 (or Toro equivalent) Impact Rotor Pop-Up Sprinklers.
b. The full or part circle pop-up rotor sprinkler shall be a single nozzle impact drive type.
c. Part circle sprinkler shall have an infinetely adjustable arc of coverage from 20 degrees to 340 degrees.
d. Sprinkler case and internal assembly made of durable plastic.
e. The rotation of the sprinkler is accomplished by a horizontal oscillating precision jet arm, actuated by outlet water stream.
f. Sprinkler with adjustable diffuser pin for distance and distribution control.
g. Sprinkler with strong stainless steel retract spring for positive pop-down.

I. Quick Coupling Equipment:

1. Valves: One piece body constructed from heavy duty cast bronze with a 3/4" FIP riser connection.
2. Quick Couplers: Single lug coupler of heavy cast bronze and detachable handle.
3. Swivel Hose Ell: Heavy cast bronze, connected to quick couplers for hose connection. Hose ells 3/4" FIPX 3/4" Male Hose Threads.
4. Each quick coupler should be installed in a valve box by Ametek, Sheboygan, Wisconsin and packed with pea gravel, 4" in depth.

J. Wire:

1. Provide #12RW wire to electric control valves from automatic controller which is "U.L." approved for direct underground burial.
2. Provide a single wire to each solenoid from controller and a common neutral wire to all solenoids from controller as power supply.
3. Colored wiring shall have color coding shown on the controller.

K. Automatic Drain Valves:

1. Automatic drain valves by King Technology, Inc. Edina, Minnesota.
2. Valve body all of PVC plastic with valve material of rubber E.P.
3. Piping connection 1/2" MPT or insert fittings, metal clamps.
4. Actuating plunger spring to close @ 10-11 psi and open @ 9-10 psi.
5. Dispersing pad of polyester non-woven mat.

L. Backflow Preventer

1. 805Y Double Backflow Preventer, 3", as manufactured by Febco, P.O. Box 8070, Fresno, CA 93747, (209) 252-0791, or Owner-approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Summary:

1. Stake location of each sprinkler in accordance with Plans.
2. If discrepancies in plan become apparent at this time, point out discrepancy to Architect.
3. Do not proceed with work until necessary design engineering changes have been made and approved by Architect.
4. Install sprinkler system equipment with necessary hardware in accordance with Drawings and manufacturer's instructions and as specified herein.

B. Pipe Laying:

1. Do not lay pipe on unstable material, in wet trench, or when in the opinion of the Owner's Representative, conditions are unsuitable.
2. Minimum of three inches between parallel pipes in the same trench.
3. Hold pipe securely in place while joint is being made.
4. Rest full length of each pipe section firmly on bedding, excavating recesses to accommodate joints.
5. Do not lay pipe on blocking.
6. Avoid heating trenches, electric ducts, storm and sanitary sewer lines, existing water and gas mains, all of which have right-of-way.
7. Sprinkler sections shall drain to an automatic drain placed at low point in section.
8. Minimum cover over mains and control valves is 18" below finish grade.
9. Minimum cover over laterals is 12 inches.
10. Do not cut sidewalk, drives or curb during trenching for piping.
11. Use PVC sleeves under paved areas where possible; otherwise auger bore or tunnel. Repair damaged paved surfaces during guarantee period.

12. Cover and protect open pipe ends, fixtures and equipment from dirt, water and chemical or mechanical damage during installation.
13. At completion of work, thoroughly clean fixtures, exposed materials and equipment.

C. Laying Plastic Pipe:

1. Snake in trench at least 1 foot per every 100 feet to allow for thermal expansion.
   a. Solvent welded socket type.
   b. Threaded Type: Apply liquid teflon thread lubricant to teflon thread type.

D. Install Sprinkler Heads:

1. Install rotary heads, pop-up spray and shrub heads and quick couplers so they will be flush with finished, settled ground surface.
2. Place part circle heads no more than 4" from edge of paved surfaces.
3. Place swing joints on all sprinkler heads adjacent to curbs or walks.

E. Wiring:

1. Hold splicing to a minimum.
2. Provide 12 inch expansion loops in wiring at each wire connection or change in wire direction.
3. Provide 24 inch expansion loop at remote control valves.
4. Do not run power wiring in the same conduit as control wiring.
5. Solder splices, coat with general bakelits cement, wrap with electrical tape and coat again with general bakelite cement. Crimp type connectors may be substituted.

F. Setting of Valves:

1. Do not locate valves beneath paved surfaces.
2. Install valves in a level position.
3. Install valves with minimum 18 inches cover.

G. Sleeving:

1. Furnish and install PVC sleeving where control wires or pipe pass under paved surfaces as follows:
   a. Provide sleeving of adequate size to allow retrieval for repair.
   b. Extend sleeving 12 inches beyond end of paving at each end.
   c. Bed sleeves with 4 inches sand backfill above pipe.
   d. Install pipe with 24 inches of cover.
   e. Install permanent benchmark in curb for reference to all sleeve locations.

3.2 TEST AND FLUSHING

A. Following installation, make final adjustments of lawn irrigation system preparatory to Owner's Representative's final inspection:
   1. Flush system completely to remove debris, with nozzle removed.
   2. Verify sprinkler operation and alignment for direction of throw.
   3. Check pop-up spray nozzling for proper arc of spray.
   4. Determine whether uniform distribution exists over all areas.

B. Following final adjustment, separate the entire installation to demonstrate the complete and successful operation of all equipment.

3.3 OPERATION AND MAINTENANCE

A. Maintenance:
   1. Provide one hour operating instructions prior to final acceptance.
   2. Provide on-job site consultation with Owner's operating personnel for 6 months, not to exceed 4 hours per month, at no charge to Owner.
   3. Provide Owner with a bonded written two-year maintenance/warranty agreement (beginning on the Owner's possession date) with an experienced local A.N.A.-certified nursery business capable of performing the work. This agreement shall include labor and materials for maintenance of the irrigation system.

B. Record Drawings and Controller Chart:
   1. Maintain a complete set of up-to-date as-built drawings.
   2. Prepare a controller chart showing:
      a. Location of all sections, valves, lateral lines and routes of control wires.
      b. Identify all valves as to size, station, number and type of irrigation.
      c. Provide chart as a black-line print with a different color used to show area of coverage for each station.
      d. Locate chart inside controller door. Seal chart between two pieces of plastic.
      e. Complete chart and receive approval prior to final inspection of irrigation system.

END OF SECTION

800A-34/CLM

23-90

#8-P - 12th Street and
Orchard Ave.
Grand Junction, CO
4/24/90

COMMON AREA MAINTENANCE AGREEMENT

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Conformed copy of Instrument
Recorded in
Book 1797 Page 71
Recpt # 1547595
Dated 7-27-90 at 4:23P M.
Mesa County, CO

COMMON AREA MAINTENANCE AGREEMENT

THIS COMMON AREA MAINTENANCE AGREEMENT ("Agreement") is made as of the 27 day of July, 1990, by and between **Orchard Group, Ltd.**, a Colorado limited partnership ("First Party") and **Albertson's, Inc.**, a Delaware corporation ("Albertson's").

1. **Recitals.**

1.1 Albertson's is the owner of Parcel 2 and Sublessee of Parcels 1 and 3; and First Party is the owner of Parcels 1 and 3 as shown on Exhibit "A" and more particularly described in Schedule I attached hereto and incorporated herein by this reference. Parcels 1 through 3 are hereinafter collectively referred to as the "Shopping Center". Parcel 1, 2 or 3 is sometimes referred to as "Parcel".

1.2 By virtue of that certain document entitled "Declaration of Restrictions and Grant of Easements" which encumbers the Shopping Center and is recorded concurrently herewith ("Declaration"), the Owners (as defined in the Declaration which states, among other things, that Albertson's shall be deemed the owner of Parcel 1 so long as Albertson's has a leasehold interest in Parcel 1 pursuant to the Master Lease as defined in Section 23.1 hereof) have imposed certain restrictions on their Parcels and have executed reciprocal easements each in favor of the other covering those portions of the Shopping Center defined in the Declaration as "Common Area".

1.3 The Owners desire to provide for the common operation, cleaning, maintenance, repair, replacement and insurance of the Common Area within the Shopping Center as hereinafter provided.

1.4 All of the terms in this Agreement shall have the meanings set forth in the Declaration, the provisions of which are incorporated herein by this reference. In the event of any conflict between the terms of this Agreement and the Declaration, the Declaration shall control.

2. **Maintenance Standards.**

2.1 Commencing on the date Albertson's first opens its building on Parcel 2 for business, the Maintenance Director shall, except as hereinafter provided, maintain the Common Area at all times in good and clean condition and repair, said maintenance to include, without limitation, the following:

(a) Maintaining, repairing and resurfacing, when necessary, all paved surfaces in a level, smooth and evenly covered condition with the type of surfacing material originally installed or such substitute as shall in

all respects be equal or superior in quality, use and durability; and restriping, when necessary;

(b) Removing all snow, papers, debris, filth and refuse and thoroughly sweeping the area to the extent reasonably necessary to keep the area in a clean and orderly condition;

(c) Maintaining, repairing and replacing, when necessary, all traffic directional signs, markers and lines;

(d) Operating, maintaining, repairing and replacing, when necessary, such artificial lighting facilities as shall be reasonably required (except for the "After Hours Lighting" described in Article 3 below);

(e) Maintaining all landscaped areas (including, without limitation, those on the perimeter of the Shopping Center); maintaining, repairing and replacing, when necessary, automatic sprinkler systems and water lines; and replacing shrubs and other landscaping as is necessary;

(f) Maintaining, repairing and replacing, when necessary, all Common Area walls (including, without limitation, all fences, walls or barricades constructed pursuant to Section 4.4 of the Declaration);

(g) Maintaining, repairing and replacing, when necessary, all storm drains, sewers and other utility lines and facilities not dedicated to the public or conveyed to any public or private utility which are necessary for the operation of the buildings and improvements located in the Shopping Center (with the cost of all such items being allocated between the Owners of all buildings and improvements serviced by said facilities on the basis of their respective Building Areas);

(h) Keeping the Existing Pylon Sign and New Pylon Sign (as shown on Exhibit "A") lighted from dusk to dawn or during such other times mutually agreed in writing by the businesses designated thereon; and

(i) Performing itself or contracting with a third party or parties to perform any of the services described herein; provided, however, that the Maintenance Director shall remain responsible and liable for the performance of all of said services in accordance with the terms of this Agreement and for the performance of any such third party or parties under any such contract or contracts.

2.2 In addition to the foregoing, the Maintenance Director shall provide and maintain comprehensive general liability insurance with broad form

endorsement insuring First Party, American Drug Stores Inc., an Illinois corporation or other tenant occupying Parcel 3, Albertson's and all other persons who now or hereafter own or hold portions of the Shopping Center or building space within the Shopping Center or any leasehold estate or other interest therein as their respective interests may appear (provided that the Maintenance Director is notified in writing of such interest) against claims for personal injury or death or property damage or destruction occurring in, upon or about the Common Area. Such insurance shall be written with an insurer licensed to do business in the state in which the Shopping Center is located and First Party, American Stores Inc., an Illinois corporation (or other occupant of the building shown as Drug on Exhibit "A" which the Maintenance Director receives notice) and Albertson's shall be named on the policy or policies as additional insureds. The limits of liability of all such insurance shall be not less than $2,000,000 for injury to or death of any one person, $2,000,000 for injury to or death of more than one person in one occurrence and $500,000 with respect to damage to or destruction of property; or, in lieu of such coverage, a combined single limit (covering bodily injury or death and property damage or destruction) with a limit of not less than $2,000,000 per occurrence. The Maintenance Director shall furnish First Party and Albertson's with certificates evidencing such insurance and, upon request, copies of the insurance policy or policies as well. The policy or policies of such insurance shall provide that the insurance shall not be changed or cancelled without the giving of thirty (30) days prior written notice to the holders of such insurance and the holders of such certificates.

2.3 Anything in this Article 2 to the contrary notwithstanding, the Maintenance Director shall not be responsible for the maintenance or insurance of any Service Facilities (as defined in the Declaration) or driveup or drive through customer service facilities, which facilities shall be maintained by the Owners thereof in good and clean condition and repair and in a quality and condition comparable to the quality and condition of the maintenance of the balance of the Common Area. In addition, the Owners of the Parcel or Parcels on which said facilities are located shall at all times (i) provide and maintain or cause to be provided and maintained comprehensive general liability insurance with broad form endorsement insuring all persons who now or hereafter own or hold portions of said facilities or any leasehold estate or other interest therein as their respective interests may appear against claims for personal injury or

death or property damage or destruction occurring in, upon or about said facilities, and (ii) indemnify, defend and hold harmless the Owners and occupants of all other Parcels from and against any and all liability, claims, damages, expenses (including reasonable attorney's fees and reasonable attorney's fees on any appeal), judgments, proceedings and causes of action, for injury to or death of any person or damage to or destruction of any property occurring in, on or about said facilities and arising out of the performance or nonperformance of any of the obligations of the Owners of the Parcel or Parcels on which said facilities are located set forth in this Section 2.3, unless caused by the negligent or willful act or omission of the indemnified person, its agents, contractors or employees. Said insurance shall be written with an insurer licensed to do business in the state in which the Shopping Center is located and in the amounts set forth in Section 2.2 above. The Owners of any such Parcel or Parcels shall furnish the Maintenance Director and any other Owner or Prime Lessee with certificates evidencing such insurance upon request. The insurance which an Owner is required to maintain hereunder may be provided under a blanket policy provided such policy otherwise complies with the requirements of this Agreement. So long as an Owner has a net worth, determined in accordance with generally accepted accounting principles, in excess of $100,000,000.00, all or any part of such insurance carried by such Owner may be provided under a program of self-insurance.

2.4 The Maintenance Director agrees to indemnify, defend and hold harmless the Owners and occupants of all Parcels from and against any and all liability, claims, damages, expenses (including reasonable attorney's fees and reasonable attorney's fees on any appeal), judgments, proceedings and causes of action, for injury to or death of any person or damage to or destruction of any property occurring in, on or about the Common Area (exclusive of any Service Facilities or driveup or drive through customer service facilities) and arising out of the performance or nonperformance of any of the obligations of the Maintenance Director set forth in this Agreement, unless caused by the negligent or willful act or omission of the indemnified person, its agents, contractors or employees.

3. Lighting.

3.1 It is agreed that the artificial lighting for the Common Area shall remain on while a majority of the businesses in the Shopping Center are open

for business. If artificial lighting for a time later than the foregoing ("After Hours Lighting") is needed by any Owners or occupants, then such artificial lights to service such Owners or occupants shall be separately metered or otherwise measured or reasonably estimated and all expenses thereof shall be paid by such Owners or occupants to the extent appropriate. Such Owners or occupants shall pay a reduced proportion of the expense of lighting the balance of the Common Area according to the extent to which such Owners or occupants are lighting the Common Area by separately metered lights.

4. Taxes.

4.1 Each Owner shall pay or cause to be paid direct to the tax collector when due the real property taxes and other special improvement taxes and assessments assessed against the Owner's Parcel (hereinafter "Property Tax"), including the portion of the Common Area on such Owner's Parcel; subject, however, to the right of any such Owner to contest the amount or validity of all or any part of said taxes and assessments.

4.2 Each Owner of Parcels 1 and 3 shall provide the Owner of Parcel 2 with copies of all Property Tax notices and tax bills relating to each Owner's respective Parcel within 15 days after each such Owner receives the same and, if requested by the Owner of Parcel 2, such further tax assessment information as is necessary for the Owner of Parcel 2 to determine the total amount of Property Tax assessed against the land and Common Area improvements on each Parcel (excluding building improvements). The Owner of Parcel 2 shall calculate each Parcel's pro rata share of the total amount of said Property Tax for the entire Shopping Center (excluding buildings) which pro rata share shall be as set forth in Section 7.1 hereof.

4.3 Each Owner shall reimburse the Owner of Parcel 2 the difference, if any, between: (i) the Property Tax actually billed for land and Common Area improvements (excluding buildings) on each parcel; and (ii) each Owner's pro rata share (as calculated above) of the Property Tax for the land and Common Area improvements in the entire Shopping Center (excluding buildings), which reimbursement shall be made within 15 days after a receipt of a bill for the same. The Owner of Parcel 2 shall thereafter distribute such received reimbursements to each Owner as necessary to effect a sharing of the real property and special taxes and assessments on land and Common Area improvements in the Shopping Center on a pro rata basis, as calculated above.

5. Maintenance Director.

5.1 The Owners hereby appoint the Owner of Parcel 3 as Maintenance Director of the Shopping Center Common Area from and after the date Albertson's first opens its building on Parcel 2 for business.

5.2 The Owners of at least two (2) Parcels (provided that Parcel 2 is included within such group) may remove the Maintenance Director upon written notice to the Owners of the remaining Parcels in which event the Owners of a majority of the Parcels (provided that Parcel 2 is included within such majority) shall appoint another person to be the Maintenance Director.

5.3 The Maintenance Director shall have the right, upon giving ninety (90) days prior written notice to the Owners of the Shopping Center, to resign as Maintenance Director in which event the Owners of a majority of the Parcels (provided that Parcel 2 shall appoint another person to be the Maintenance Director.

6. Reimbursement of Maintenance Director.

6.1 The Maintenance Director shall contract for and pay for all of the items enumerated as maintenance and insurance expenses in Article 2 herein; provided, however, that the Maintenance Director shall not be entitled to reimbursement of all or any portion of an Owner's pro rata share of any item of Common Area maintenance or insurance expense, the pro rata share of which for said Owner's Parcel exceeds Two Thousand Dollars ($2,000.00), without the prior written approval of the Owner of said Parcel.

6.2 At least thirty (30) days prior to the initial commencement of the cleaning and sweeping of the Common Area and any other Common Area maintenance work done on a regular basis, the Maintenance Director shall submit said Common Area maintenance work for bid to at least four (4) bidders approved in writing by the Consenting Owners (as defined in the Declaration), which approval shall not be unreasonably withheld or delayed provided, however, if four bidders for any particular item of common area maintenance are not reasonably available then the Maintenance Director may proceed with obtaining bids from the number of bidders reasonably available for such items. The names of the bidding contractors or companies and the amounts of their respective bids shall be furnished to the Consenting Owners by the Maintenance Director within ten (10) days after receipt thereof. The Maintenance Director shall award the contract to the low bidder unless the prior written consent of

the Consenting Owners to award the contract to a higher bidder is first obtained by the Maintenance Director.

6.3 Upon thirty (30) days prior written notice from any Consenting Owner, the Maintenance Director shall have the Common Area maintenance work, or any portion thereof designated by said Owner, rebid in the manner set forth in Section 6.2, and the Owners' shares of said Common Area maintenance work shall thereafter be based on the amount of the lowest bid unless the prior written consent of the Consenting Owners to award the contract to a higher bidder is first obtained by the Maintenance Director. Following a rebid of any item or items of Common Area maintenance, no Consenting Owner shall have the right to require a subsequent rebid of the same item or items for a period of at least one (1) year. The foregoing notwithstanding, the Maintenance Director shall not be required to rebid any item before the expiration of the term of the applicable contract. In no event shall the Maintenance Director enter into any contract for all or any portion of the Common Area maintenance work for a term in excess of one (1) year without the prior written approval of the Consenting Owners.

6.4 The Owners of the Parcels as referenced in Article 7 below, including Section 7.3, shall cause the Maintenance Director to be reimbursed for all of its out-of-pocket expenses in performing such services plus a maximum service charge of ten percent (10%) of said expenses to cover management and administration costs; provided, however, that the ten percent (10%) service charge shall not exceed Three Hundred Fifty Dollars ($350.00) for any item of Common Area maintenance expense without the prior written approval of the Consenting Owners and shall not be applied to any insurance premium or capital expenditure expenses. The Common Area expenses shall not include any costs incurred by the Maintenance Director for the services of a manager or management company or for office overhead or compensation of its employees except to the extent included in the ten percent (10%) service charge.

6.5 The Maintenance Director agrees to perform its duties under this Agreement on a nonprofit basis with an end to keeping such expenses at a reasonable minimum.

7. **Billing for Expenses.**

7.1 The Owner of each Parcel (or its respective tenants or agents, as it may direct) shall be billed monthly in arrears for its pro rata share of all expenses incurred by the Maintenance Director in maintaining and insuring the

Common Area as provided above (including the ten percent [10%] service charge described in Article 6 above) with the first billing date being the last day of the first full calendar month following the date Albertson's first opens its building on Parcel 2 for business. Said bills shall be due and payable within thirty (30) days after receipt of said bills and, if requested, copies of all invoices, statements or other documents supporting same. The proportionate share of the total Common Area expenses to be borne by each Owner for any year shall be that percentage set forth below except that any costs associated with Section 2.1(h) shall be born by the Owners entitled to display designations thereon in proportion that the total square footage of each owners designation bears to the total square footage of all designations thereon:

		Maximum Building Area (Excluding Expansion Area)	Percent	
Parcel 1	(Existing Albertson's)	21,763	23.42	(47.74% total)
	(Drug)	22,601	24.32	
Parcel 2		41,556	44.72	
Parcel 3		7,008	7.54	
TOTAL:		92,928	100.0	

In the event the Owner of a building expands its building into the Expansion Area shown on Exhibit "A", the above percentages shall be recalculated based upon any increase in the total floor area (excluding mezzanines and basements not used for the sale or display of merchandise) of said building from the figures set forth above. The Maintenance Director shall not be entitled to reimbursement from any Owner (or its tenants or agents) for any item of Common Area maintenance or insurance expense (including the ten percent [10%] service charge described in Article 6 above) for which a bill is not submitted to said Owner (or its tenants or agents, as it may direct) within ninety (90) days after the end of the calendar year in which said expense is incurred.

7.2 The Owner of Parcel 2 may, upon not less than ten (10) days prior written notice to the Maintenance Director, inspect the Maintenance Director's records for all Common Area maintenance and insurance expenses incurred during the preceding calendar year at the Maintenance Director's General Offices or at such other location reasonably designated by the Maintenance Director at any time during reasonable business hours. If said inspection reveals an overpayment of Common Area maintenance and insurance

expenses (including the ten percent [10%] service charge described in Article 6 above), the Maintenance Director shall reimburse the Owner of each Parcel (or its respective tenants or agents, as it may direct) its proportionate share of any such overpayment within thirty (30) days after receipt of notice of determination, and of the amount, of such overpayment. If said inspection reveals an underpayment of Common Area maintenance and insurance expenses (including the ten percent [10%] service charge described in Article 6 above but excluding all expenses for which a statement was not timely submitted pursuant to Section 7.1 above), the Owner of each Parcel shall reimburse the Maintenance Director its proportionate share of any such underpayment within thirty (30) days after receipt of proper billing in accordance with Section 7.1. If said inspection reveals that the Maintenance Director misstated Common Area maintenance and insurance expenses by more than five percent (5%), the Maintenance Director shall reimburse the person making such inspection for all costs reasonably incurred in making such inspection within thirty (30) days after receipt of notice of determination, and of the amount, of any such misstatement.

8. Effect of Sale by Owner.

8.1 In the event an Owner sells all or any portion of its interest in its Parcel, such Owner shall thereupon be released and discharged from any and all obligations as Owner in connection with the property sold by it arising under this Agreement after the sale and conveyance of title but shall remain liable for all obligations arising under this Agreement prior to the sale and conveyance of title. The new Owner of any such Parcel or any portion thereof (including, without limitation, any Owner who acquires its interest by foreclosure, trustee's sale or otherwise) shall be liable for all obligations arising under this Agreement with respect to such Parcel or portion thereof after the date of sale and conveyance of title.

9. Default.

9.1 In the event any Owner fails or refuses to pay when due its share of any bill for the Common Area maintenance and insurance expenses described above (including the ten percent [10%] service charge described in Article 6 above), or the tax reimbursement described in Section 4.1, above, which failure continues for a period of ten (10) days after receipt of written notice thereof, such failure shall constitute a default and legal action may thereafter be instituted against the defaulting Owner by the Maintenance

Director or other person paying the maintenance or insurance expenses (including the ten percent [10%] service charge described in Article 6 above) of the defaulting Owner ("Curing Party") for reimbursement plus interest from and after the date said bill was due and payable at a rate equal to the lesser of (i) the highest rate allowed by law, and (ii) the rate two percent (2%) above the reference rate of interest charged from time to time to corporate borrowers of the highest credit standard by BankAmerica (the lesser rate being hereinafter referred to as the "Default Rate"). Furthermore, the Curing Party shall have a lien on the Parcel of the defaulting Owner for the amount of said expenses (including the ten percent [10%] service charge described in Article 6 above) plus accrued interest as set forth above; provided, however, that if there be a bona fide dispute as to the existence of such default or of the amount due and all undisputed amounts are paid, there shall be no right to place a lien on such Owner's Parcel until such dispute is settled by final court decree or mutual agreement.

9.2 In the event any Owner fails to perform any other provision of this Agreement, which failure continues for a period of thirty (30) days after receipt of written notice specifying the particulars of such failure, such failure shall constitute a default and any other Owner may thereafter institute legal action against the defaulting Owner for specific performance, declaratory or injunctive relief, monetary damages or any other remedy provided by law; provided, however, that the defaulting Owner shall not be deemed to be in default if such failure to perform cannot be rectified within said thirty (30) day period and such Owner is diligently proceeding to rectify the particulars of such failure.

9.3 In the event the Maintenance Director fails to perform any of the provisions of this Agreement, which failure continues for a period of thirty (30) days (ten [10] days in the event of failure to pay money) after receipt of written notice from any Owner specifying the particulars of such failure, such failure shall constitute a default and any Owner may thereafter institute legal action against the Maintenance Director for specific performance, declaratory or injunctive relief, monetary damages or any other remedy provided by law and/or may perform the obligations of the Maintenance Director specified in said notice of default and offset the cost thereof from amounts due the Maintenance Director; provided, however, that the Maintenance Director shall not be deemed to be in default if such failure to perform (excluding the payment of money)

cannot be rectified within said thirty (30) day period and the Maintenance Director is diligently proceeding to rectify the particulars of such failure.

9.4 In addition to the foregoing, in the event any person initiates or defends any legal action or proceeding to enforce or interpret this Agreement, the prevailing party in any such action or proceeding shall be entitled to recover its reasonable costs and attorney's fees (including its reasonable costs and attorney's fees on any appeal) as determined by the court in the same or a separate proceeding except that such attorney's fees shall not be assessed against the City of Grand Junction, Colorado unless they have taken enforcement or defense action unreasonably.

9.5 The failure of a person to insist upon strict performance of any of the terms, covenants, conditions or agreements contained herein shall not be deemed a waiver of any rights or remedies that said person may have, and shall not be deemed a waiver of any subsequent breach or default in any of the terms, covenants, conditions or agreements contained herein by the same or any other person.

9.6 In addition to the remedies set forth in this Agreement, each person entitled to enforce this Agreement shall have all other remedies provided by law to the same extent as if fully set forth herein word for word. No remedy herein conferred upon, or reserved to any person shall exclude any other remedy herein or by law provided, but each shall be cumulative.

10. Lien for Expenses.

10.1 The lien provided for in Article 9 above shall only be effective when filed for record by the Curing Party as a claim of lien against the defaulting Owner in the office of the recorder of the county in which the Shopping Center is located, signed and verified, which shall contain at least:

(a) An itemized statement of all amounts due and payable pursuant hereto;

(b) A description sufficient for identification of that portion of the real property of the defaulting Owner which is the subject of the lien;

(c) The name of the Owner or reputed Owner of the property which is the subject of the lien; and

(d) The name and address of the Curing Party.

10.2 The lien, when so established against the real property described in the lien, shall be prior and superior to any right, title, interest,

lien or claim which may be or has been acquired or attached to such real property after the time of filing the lien. The lien shall be for the use and benefit of the person curing the default of the defaulting Owner and may be enforced and foreclosed in a suit or action brought in any court of competent jurisdiction.

11. Right to Maintain Parcel Separately.

11.1 Any Owner may, at any time and from time to time, upon at least sixty (60) days prior written notice to the Maintenance Director and the other Owners, elect to assume the obligations of the Maintenance Director to maintain, repair, replace and insure such Owner's portion of the Common Area, except for resurfacing, lighting and other costs which cannot be practicably segregated or allocated between the Parcels, which costs shall continue to be proportionately paid for by each Owner (or its respective tenants or agents, as it may direct) pursuant to the formula in Article 7. In the event of any such assumption by any Owner, such Owner agrees to maintain, repair and replace its portion of the Common Area at its sole cost and expense and in a manner and at a level of quality at least comparable to that of the balance of the Common Area. Any such Owner may also elect to terminate its obligation to maintain, repair, replace and insure its portion of the Common Area by giving at least sixty (60) days prior written notice to the Maintenance Director, in which event the Maintenance Director shall resume its duties with respect to said Parcel and the Owner so electing agrees to pay for its pro rata share of all Common Area maintenance and insurance costs (including the ten percent [10%] service charge described in Article 6 above) thereafter incurred by the Maintenance Director in accordance with the formula in Article 7. Anything in the preceding sentence to the contrary notwithstanding, the Owner electing to terminate its obligation to maintain, repair, replace and insure its portion of the Common Area shall return said Common Area to the Maintenance Director in the same quality and condition as the balance of the Common Area, any failure of which shall be corrected at the sole cost and expense of said Owner.

11.2 The Owner of any Parcel electing to assume the obligations of the Maintenance Director pursuant to Section 11.1 above agrees to indemnify, defend and hold harmless the Maintenance Director and the Owners and occupants of all other Parcels from and against any and all liability, claims, damages, expenses (including reasonable attorney's fees and reasonable attorney's fees on any appeal), judgments, proceedings and causes of action,

for injury to or death of any person or damage to or destruction of any property occurring on said Owner's Parcel and arising out of the performance or nonperformance of any of the obligations of the Owner of said Parcel set forth in this Article 11, unless caused by the negligent or willful act or omission of the indemnified person, its agents, contractors or employees.

12. Responsibility if No Maintenance Director.

12.1 In the event there should at any time cease to be a Maintenance Director, each Owner shall be responsible for the maintenance, insurance and lighting of its own Parcel according to the standards herein enumerated. In the event any Owner defaults in the performance of such obligations, any other Owner may cause the performance of the obligations of the defaulting Owner and bill the defaulting Owner for the expenses incurred. In such event, the provisions and remedies of Articles 9 and 10 shall apply.

12.2 In the event there should at any time cease to be a Maintenance Director, each Owner agrees to indemnify, defend and hold harmless the Owners and occupants of all other Parcels from and against any and all liability, claims, damages, expenses (including reasonable attorney's fees and reasonable attorney's fees on any appeal), judgments, proceedings and causes of action, for injury to or death of any person or damage to or destruction of any property occurring on the indemnifying Owner's Parcel and arising out of the performance or nonperformance of any of the obligations of the Owner of said Parcel set forth in Section 12.1, unless caused by the negligent or willful act or omission of the indemnified person, its agents, contractors or employees.

13. General Provisions.

13.1 This Agreement shall inure to the benefit of and be binding upon the Owners, their heirs, personal representatives, successors and assigns, and upon any person acquiring a Parcel, or any portion thereof, or any interest therein, whether by operation of law or otherwise.

13.2 The term of this Agreement shall be for sixty-five (65) years from the date hereof; provided, however, that this Agreement shall terminate automatically upon the expiration or earlier termination of the Declaration.

13.3 Anything in this Agreement to the contrary notwithstanding, no breach of this Agreement shall defeat or render invalid the lien of any mortgage or deed of trust made in good faith for value, but this Agreement shall be binding upon, and be effective against, any Owner whose title is acquired by foreclosure, trustee's sale or otherwise.

13.4 Each term, covenant, condition and agreement contained herein respecting any Parcel shall be a burden on that Parcel, shall be appurtenant to and for the benefit of the other Parcels and each part thereof and shall run with the land.

13.5 This Agreement may not be modified in any respect whatsoever or terminated, in whole or in part, except with the consent of the Owners of the Parcels containing ninety percent (90%) of the total square footage of Building Area in the Shopping Center at the time of such modification or termination, and then only by written instrument duly executed and acknowledged by all of the required Owners, duly recorded in the office of the recorder of the county in which the Shopping Center is located. No modification or termination of this Agreement shall affect the rights of any Lienholder unless the Lienholder consents in writing to the modification or termination. In addition, the City of Grand Junction shall be required to approve modifications or terminations which substantially change the maintenance standards of Section 2 or the enforcement provisions of Sections 9 and 10.

13.6 Whenever the consent or approval of any Owner is required, such consent or approval shall be exercised only in the following manner. Each Parcel shall have only one (1) vote. The Owners (if consisting of more than one [1] person) of each Parcel shall agree among themselves and designate in writing to the Owners of each of the other Parcels a single person who is entitled to cast the vote for that Parcel. If the Owners of any such Parcel cannot agree who shall be entitled to cast the single vote of that Parcel, or if the Owners fail to designate the single person who is entitled to cast the vote for that Parcel within thirty (30) days after receipt of request for same from any Owner, then that Parcel shall not be entitled to vote. In the event a Parcel is not entitled to vote, its consent or approval shall not be necessary and the total square footage of Building Area located on said Parcel shall be disregarded for the purpose of computing the percentage requirement set forth in Section 13.5. Except as otherwise set forth in Section 13.5, in the event an Owner sells its Parcel and becomes the Prime Lessee thereon, said Prime Lessee is hereby appointed the entity to cast the vote or give the consent for said Parcel on behalf of the Owner thereof and is hereby granted all of the rights and remedies granted to the Owner of said Parcel so long as it is the Prime Lessee of said Parcel, anything in this Agreement to the contrary notwithstanding.

13.7 All notices given pursuant to this Agreement shall be in writing and shall be given by personal delivery, by United States mail or by United States express mail or other established express delivery service (such as Federal Express), postage or delivery charge prepaid, return receipt requested, addressed to the person and address designated below or, in the absence of such designation, to the person and address shown on the then current real property tax rolls in the county in which the Shopping Center is located. All notices to First Party, Second Party or Albertson's shall be sent to the person and address set forth below:

First Party: Orchard Group, Ltd.
c/o J. Richard Livingston
P.O. Box 398
Grand Junction, CO 81502

Albertson's: Albertson's, Inc.
250 Parkcenter Boulevard
P.O. Box 20
Boise, ID 83726
Attention: Legal Department

The person and address to which notices are to be given may be changed at any time by any party upon written notice to the other parties. All notices given pursuant to this Agreement shall be deemed given upon receipt. .

For the purpose of this Agreement, the term "receipt" shall mean the earlier of any of the following: (i) the date of delivery of the notice or other document as shown on the return receipt, (ii) the date of actual receipt of the notice or other document by the person or entity specified pursuant to this Section, or (iii) in the case of refusal to accept delivery or inability to deliver the notice or other document, the earlier of (A) the date of the attempted delivery or refusal to accept delivery, (B) the date of the postmark on the return receipt, or (C) the date of receipt of notice of refusal or notice of nondelivery by the sending party.

14. Intentionally Deleted.

15. Severability.

15.1 If any term or provision of this Agreement or the application of it to any person or circumstance shall to any extent be invalid or unenforceable, the remainder of this Agreement or the application of such term or provision to persons or circumstances, other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and shall be enforced to the extent permitted by law.

16. Not a Partnership.

16.1 The provisions of this Agreement are not intended to create, nor shall they be in any way interpreted or construed to create, a joint venture, partnership, or any other similar relationship between the parties.

17. Captions and Headings.

17.1 The captions and headings in this Agreement are for reference only and shall not be deemed to define or limit the scope or intent of any of the terms, covenants, conditions or agreements contained herein.

18. Entire Agreement.

18.1 This Agreement contains the entire agreement between the parties hereto and supersedes all prior agreements, oral or written, with respect to the subject matter hereof. The provisions of this Agreement shall be construed as a whole and not strictly for or against any party.

19. Construction.

19.1 In construing the provisions of this Agreement and whenever the context so requires, the use of a gender shall include all other genders, the use of the singular shall include the plural, and the use of the plural shall include the singular.

20. Joint and Several Obligations.

20.1 In the event any party hereto is composed of more than one person, the obligations of said party shall be joint and several.

21. Recordation.

21.1 This Agreement shall be recorded in the office of the recorder of the county in which the Shopping Center is located.

22. Master Lease.

22.1 Notwithstanding anything to the contrary contained in this Agreement, it is expressly understood and agreed as follows: Ninth Cheltenham Properties, Inc., its successors and/or assigns (hereinafter "Master Landlord"), has a prior interest in a portion of the Shopping Center by virtue of that certain "Ground Lease" dated January 1, 1970 originally entered into between Frank Jaros, Jr., Earnest A. Jaros and Tekla Flash, as Landlord, and Albertson's, Inc., a Delaware corporation, as Tenant. Said Ground Lease and buildings located thereon were respectively assigned and conveyed by Albertson's, Inc. to Master Landlord. Master Landlord thereafter leased the buildings and subleased the property which is the subject of the Ground Lease to Albertson's, Inc., pursuant to that certain Lease and Sublease Agreement

dated November 9, 1970 between Master Landlord and Albertson's, Inc., recorded December 23, 1970 in Book 953 at Page 768 of the Official Records of Mesa County, Colorado ("Master Lease"). It is understood and agreed that this Agreement is subject and subordinate to any interest of Master Landlord in the buildings and the real property covered by the Ground Lease and its successors or assigns other than interests currently held or to be held by the parties hereto.

23. Third Party Beneficiary.

23.1 It is understood and agreed that the City of Grand Junction, Colorado is a third party beneficiary of this Common Area Maintenance Agreement to the extent of the Owners and/or Maintenance Director's obligations herein to maintain the Shopping Center under Articles 2.1, 5, 11.1 and 12.1 hereof. In the event that the Maintenance Director and/or Owner defaults (as defined in Section 9.2 or 9.3 hereof) in the performance of any said obligation to maintain the Shopping Center, the City of Grand Junction shall have all rights and remedies to enforce said maintenance obligations against the Maintenance Director or Owner, as the case may be, by curing said default and billing each Owner its pro rata share of the actual cost thereof in accordance with Article 7 hereof. If such Owner fails to pay such share, the City of Grand Junction shall be deemed the "Curing Party" and shall have the rights and remedies of a Curing Party against said defaulting party set forth in Section 9.1 and 10 hereof with the right to recover reasonable attorney's fees in accordance with Section 9.4 hereof.

EXECUTED as of the day and year first above written.

Albertson's, Inc.,
a Delaware corporation

BY: _____
Senior Vice President

FIRST PARTY:
Orchard Group, Ltd.,
a Colorado limited partnership

BY: _____

BY: _____

Consented and Agreed to

City of Grand Junction, Colorado

BY: _____

STATE OF IDAHO)
) ss.
County of Ada)

On this 15th day of May, 1990, before me, the undersigned, a Notary Public in and for said State, personally appeared Thomas R. Saldin, to me known to be a Senior Vice President of **Albertson's, Inc.**, the corporation that executed the foregoing instrument, and acknowledged to me that the said instrument is the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS MY HAND and official seal hereto affixed the day, month and year in this certificate first above written.

My commission expires:
8-21-92

Notary Public in and for the
State of Idaho.
Residing at Boise, Idaho.

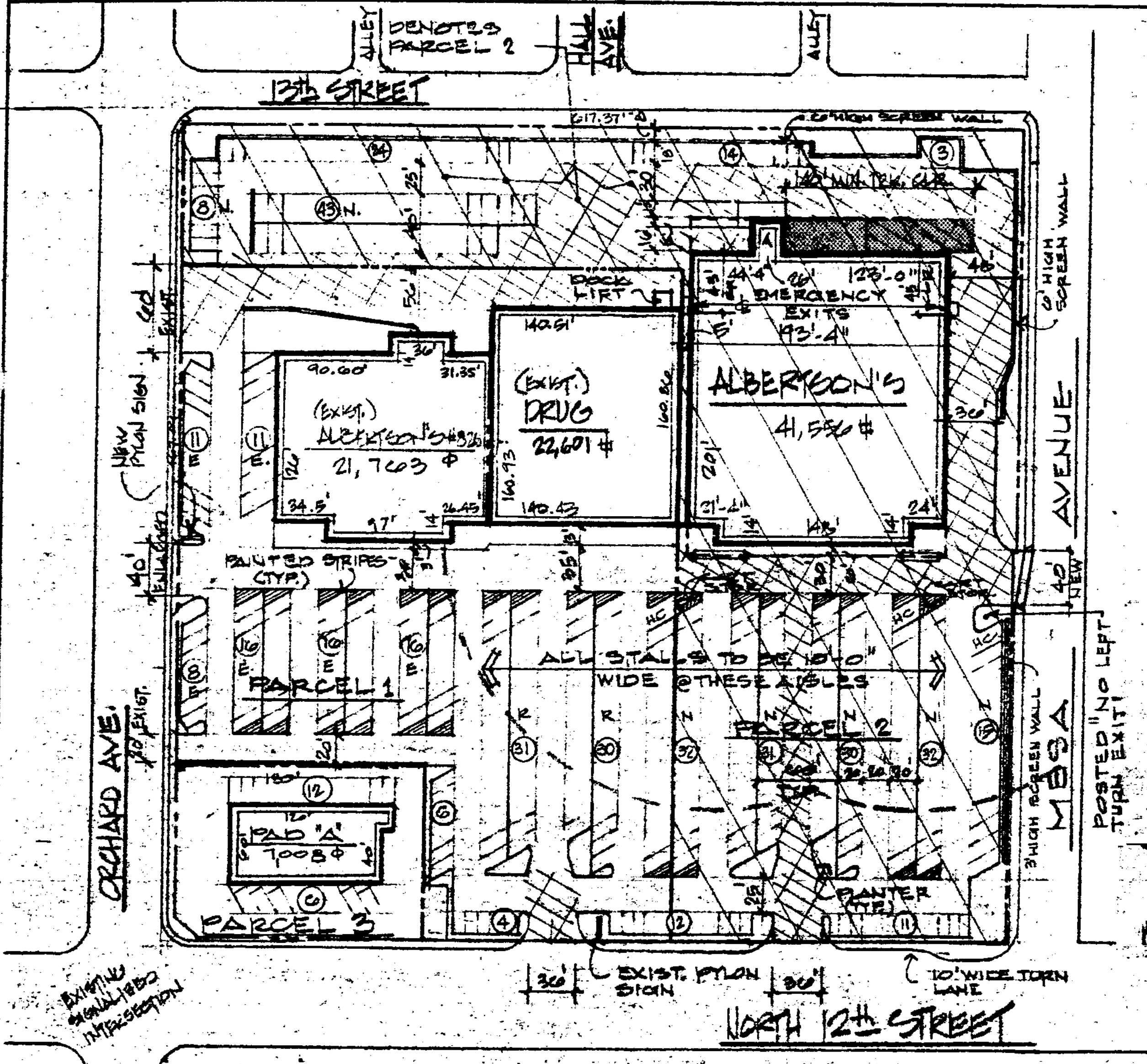
STATE OF Colorado)
) ss.
County of Mesa)

On this 16th day of May, 1990, before me, the undersigned, a Notary Public in and for said State, personally appeared Keith G. Mumby and J. Richard Livingston, to me known to be the General ~~and~~ Partners, respectively, of **Orchard Group, Ltd.**, the limited partnership that executed the foregoing instrument, and acknowledged to me that the said instrument is the free and voluntary act and deed of said partnership, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute the said instrument.

WITNESS MY HAND and official seal hereto affixed the day, month and year in this certificate first above written.

My commission expires:
My Commission Expires January 29, 1993

Notary Public in and for the
State of Colorado
Residing at Grand Jct.



GENERAL NOTES

- Drawn W/out Benefit of Survey
- No Truckwells, Natural Dock Only
- Parking Requirement:
  1 STALL/200 ф NET BUILDING AREA.
- Building Setbacks:
  FRONT - 45'
  SIDE & REAR - 10' (@ RESIDENTIAL)
- Landscape Requirements:
  50% OF FRONT YARD SETBACKS (NONE @ INTERIOR)
- Zoning Requirement:
  Existing - B-3 & RESIDENTIAL
  Required - PB (PLANNED BUSINESS)

LEGEND

- Property Line
- Parcel Line
- Expansion Limit Line
- Building Area
- Heavy Duty Asphalt Area
- PARCEL 2

EXHIBIT "A" SITE PLAN

TOTAL GROSS BUILDING AREA	92,928 ф
TOTAL CARPARKS REQUIRED	372
TOTAL CARPARKS PROVIDED *	420 (+48)
TOTAL CARPARKS W/IN 200' RAD.	154
TOTAL SITE AREA	303,816 ф

North

Scale 1"=100'-0"

* N = NEW
E = EXIST.
R = RESTRIPE

APPROVED	
CHAIRMAN	[signature] 3/20/89
VICE-CHRM.	[signature]
PRESIDENT	[signature] 3/20/89
EX. VP-S.P.	
SR. VP-CONST.	
SR. VP-REG.	[signature] 3-20-89

REVISIONS
4-6-89 ML CHANGED TO EXHIBIT "A"
10-12-89 RW REV. ACCESS, PARKING, ADD PARCEL LINES, SCREEN WALLS & 12. ADD EXIST. PAD "A" TO SITE. REV. G.F.A.
2-26-90 RW REV. PARCEL LINES, ADD SURPLUS PROP., REV. CURB LINE, CAR PARKS, REQ'D ZONING. REV. G.F.A.

SITE PLAN

Albertsons
DESIGN & CONSTRUCTION
P.O. BOX 20
BOISE, IDAHO

PROJECT
SEC 12th STREET & ORCHARD AVE
GRAND JUNCTION, COLORADO
STORE NO. # 8-PR

Drawn By: RAC
Checked By:
Date: 3-15-89
Sheet 1 Of 1
No.

40-2265 1/87 ALBERTSONS PRINTING & SUPPLY BOISE

SCHEDULE I

LEGAL DESCRIPTION - PARCEL 1

A PARCEL OF LAND BEING A PORTION OF BLOCK NO. 2, OVERHILL ANNEX, CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID BLOCK NO. 2, SAID POINT BEING THE TRUE POINT OF BEGINNING; THENCE SOUTH 00°03'50" WEST ALONG THE EAST LINE OF SAID BLOCK NO. 2 A DISTANCE OF 368.36 FEET; THENCE SOUTH 89°59'00" WEST A DISTANCE OF 491.68 FEET TO A POINT ON THE WEST LINE OF SAID BLOCK NO. 2, SAID POINT ALSO BEING ON THE EAST RIGHT OF WAY LINE OF 12TH STREET; THENCE NORTH 00°00'40" WEST ALONG THE WEST LINE OF SAID BLOCK NO. 2 AND ALONG THE EAST RIGHT OF WAY LINE OF SAID 12TH STREET A DISTANCE OF 188.39 FEET TO THE SOUTHWEST CORNER OF PARCEL 2 AS RECORDED IN BOOK 1296 AT PAGE 837, MESA COUNTY RECORDS; THENCE NORTH 89°59'00" EAST ALONG THE SOUTH LINE OF SAID PARCEL 2 A DISTANCE OF 125.01 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL 2; THENCE NORTH 00°00'40" WEST ALONG THE EAST LINE OF SAID PARCEL 2 A DISTANCE OF 179.97 FEET TO THE NORTHEAST CORNER OF SAID PARCEL 2, SAID POINT ALSO BEING ON THE NORTH LINE OF SAID BLOCK NO. 2 OVERHILL ANNEX AND ON THE SOUTH RIGHT OF WAY LINE OF ORCHARD AVENUE; THENCE NORTH 89°59'00" EAST ALONG THE NORTH LINE OF SAID BLOCK NO. 2 AND ALONG THE SOUTH RIGHT OF WAY LINE OF SAID ORCHARD AVENUE A DISTANCE OF 367.15 FEET TO THE TRUE POINT OF BEGINNING. CONTAINING 158,705 SQUARE FEET OR 3.6434 ACRES MORE OR LESS.

EXCEPT THAT PORTION DEDICATED TO THE CITY OF GRAND JUNCTION FOR PUBLIC RIGHT-OF-WAY AS SHOWN ON THE PLAT OF REPLAT BLOCKS 1 & 2 OVERHILL ANNEX RECORDED 7-27-90, 1990 UNDER RECEPTION NO. 1547588,

NOW KNOWN AS LOT 1, REPLAT OF BLOCKS 1 & 2 OVERHILL ANNEX, A RE-SUBDIVISION OF THE CITY OF GRAND JUNCTION, THE PLAT OF WHICH IS RECORDED 7-27-90, 1990 UNDER RECEPTION NO. 1547588, COUNTY OF MESA, STATE OF COLORADO.

LEGAL DESCRIPTION - PARCEL 2

A PARCEL OF LAND BEING A PORTION OF BLOCK NO. 1 AND BLOCK NO. 2, OVERHILL ANNEX, CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID BLOCK NO. 2, SAID POINT BEING THE TRUE POINT OF BEGINNING; THENCE NORTH 89°59'00" EAST ALONG THE NORTH LINE OF SAID BLOCK NO. 1 AND ALONG THE SOUTH RIGHT OF WAY LINE OF ORCHARD AVENUE A DISTANCE OF 100.01 FEET TO THE NORTHEAST CORNER OF SAID BLOCK NO. 1, SAID POINT ALSO BEING ON THE WEST RIGHT OF WAY LINE OF 13TH STREET; THENCE SOUTH 00°03'50" WEST ALONG THE EAST LINE OF SAID BLOCK NO. 1 AND ALONG THE WEST RIGHT OF WAY LINE OF SAID 13TH STREET A DISTANCE OF 617.24 FEET TO THE SOUTHEAST CORNER OF SAID BLOCK NO. 1, SAID POINT ALSO BEING ON THE NORTH RIGHT OF WAY LINE OF MESA AVENUE; THENCE SOUTH 89°57'05" WEST ALONG THE SOUTH LINE OF SAID BLOCK NO. 1 AND ALONG THE NORTH RIGHT OF WAY LINE OF SAID MESA AVENUE A DISTANCE OF 306.36 FEET; THENCE NORTH 00°01'01" WEST A DISTANCE OF 7.50 FEET; THENCE SOUTH 89°57'05" WEST, 7.50 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID BLOCK NO. 1 A DISTANCE OF 285.00 FEET TO A POINT ON THE WEST LINE OF SAID BLOCK NO. 1, SAID POINT ALSO BEING ON THE EAST RIGHT OF WAY LINE OF 12TH STREET; THENCE NORTH 00°00'40" WEST ALONG THE WEST LINE OF SAID BLOCK NO. 1 AND BLOCK NO. 2 AND ALONG THE EAST RIGHT OF WAY LINE OF SAID 12TH STREET A DISTANCE OF 241.71 FEET; THENCE NORTH 89°59'00" EAST A DISTANCE OF 491.68 FEET TO A POINT ON THE EAST LINE OF SAID BLOCK NO. 2; THENCE NORTH 00°03'50" EAST ALONG THE EAST LINE OF SAID BLOCK NO. 2 A DISTANCE OF 368.36 FEET TO THE TRUE POINT OF BEGINNING. CONTAINING 182,019 SQUARE FEET OR 4.1786 ACRES MORE OR LESS.

EXCEPT THAT PORTION DEDICATED TO THE CITY OF GRAND JUNCTION FOR PUBLIC RIGHT-OF-WAY AS SHOWN ON THE PLAT OF REPLAT BLOCKS 1 & 2 OVERHILL ANNEX RECORDED 7-27-90, UNDER RECEPTION NO. 1547588,

NOW KNOWN AS LOT 2, REPLAT OF BLOCKS 1 & 2 OVERHILL ANNEX, A RE-SUBDIVISION OF THE CITY OF GRAND JUNCTION, THE PLAT OF WHICH IS RECORDED 7-27-90, 1990 UNDER RECEPTION NO. 1547588, COUNTY OF MESA, STATE OF COLORADO.

Replat Blocks 1 & 2 Overhill Annex has been reviewed and found acceptable by the Utilities Coordinating Committee on July 11, 1990.

Dick Miller

Dick Miller, Chair

BOOK 1797 PAGE 19

1547589 04:23 PM 07/27/90
MESA CO.CLK & REC MESA COUNTY CO

LEGAL DESCRIPTION - PARCEL 3

A PARCEL OF LAND BEING A PORTION OF PARCEL 2 AS RECORDED IN BOOK 1296 AT PAGE 837, MESA COUNTY RECORDS, ALSO BEING A PORTION OF BLOCK NO. 2, OVERHILL ANNEX, CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID BLOCK NO. 2 AND SAID PARCEL 2; THENCE NORTH 89°59'00" EAST ALONG THE NORTH LINE OF SAID BLOCK NO. 2 AND SAID PARCEL 2 AND ALONG THE SOUTH RIGHT OF WAY LINE OF ORCHARD AVENUE A DISTANCE OF 15.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING NORTH 89°59'00" EAST ALONG THE NORTH LINE OF SAID BLOCK NO. 2 AND SAID PARCEL 2 AND ALONG THE SOUTH RIGHT OF WAY LINE OF SAID ORCHARD AVENUE A DISTANCE OF 110.01 FEET TO THE NORTHEAST CORNER OF SAID PARCEL 2; THENCE SOUTH 00°00'40" EAST ALONG THE EAST LINE OF SAID PARCEL 2 A DISTANCE OF 179.97 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL 2; THENCE SOUTH 89°59'00" WEST ALONG THE SOUTH LINE OF SAID PARCEL 2 A DISTANCE OF 125.01 FEET TO A POINT ON THE WEST LINE OF SAID BLOCK NO. 2, SAID POINT BEING THE SOUTHWEST CORNER OF SAID PARCEL 2, SAID POINT ALSO BEING ON THE EAST RIGHT OF WAY LINE OF 12TH STREET; THENCE NORTH 00°00'40" WEST ALONG THE WEST LINE OF SAID BLOCK NO. 2 AND SAID PARCEL 2 AND ALONG THE EAST RIGHT OF WAY LINE OF SAID 12TH STREET A DISTANCE OF 164.97 FEET; THENCE NORTH 44°59'10" EAST A DISTANCE OF 21.21 FEET TO THE TRUE POINT OF BEGINNING. CONTAINING 22,385 SQUARE FEET OR 0.5139 ACRES MORE OR LESS.

EXCEPT THAT PORTION DEDICATED TO THE CITY OF GRAND JUNCTION FOR PUBLIC RIGHT-OF-WAY AS SHOWN ON THE PLAT OF REPLAT BLOCKS 1 & 2 OVERHILL ANNEX RECORDED 7-27-90, 1990 UNDER RECEPTION NO. 1547588,

NOW KNOWN AS LOT 3, REPLAT OF BLOCKS 1 & 2 OVERHILL ANNEX, A RE-SUBDIVISION OF THE CITY OF GRAND JUNCTION, THE PLAT OF WHICH IS RECORDED 7-27-90, 1990 UNDER RECEPTION NO. 1547588, COUNTY OF MESA, STATE OF COLORADO.

REVIEW SHEET SUMMARY

FILE NO. #23-90 TITLE HEADING Replat Blks 1&2 of Overhill Annex. DUE DATE

ACTIVITY - PETITIONER - LOCATION - PHASE - ACRES

ACTIVITY: Replat of Blocks 1 & 2 of Overhill Annexation

PETITIONER: Albertsons, Mark Lavin Orchard Group LTD

LOCATION: Southeast corner of 12th Street & Orchard Avenue

PETITIONER ADDRESS PO Box 20, Boise, ID 83720

ENGINEER Armstrong Consultants, Inc. 242-0101

DATE REC.	AGENCY	COMMENTS

NOTE: WRITTEN RESPONSE BY THE PETITIONER TO THE REVIEW COMMENTS IS REQUIRED A MINIMUM OF 48 HOURS PRIOR TO THE FIRST SCHEDULED PUBLIC HEARING.

REPLAT OF BLKS 1 & 2 OF OVERHILL ANNEX (Page 1 of 3)

05/29/90	City Property Agent	Plat should show that the 20' wide easement for utilities, as shown on the original plat for Overhill Annex, is "Vacated Hereon." The angled line (N44° 59'10"E, 21.21') at the northwest corner of the property appears to be a new right-of-way dedication. If this is the case, the area being dedicated should be indicated.
05/29/90	U. S. West	No comment.
05/29/90	Fire Department	Our office doesn't have a problem with this replat. The exiting and distances between the proposed buildings needs to comply with the current codes and standards. Access appears to be adequate. Fire hydrant placement at the east entrance and on the north side are adequate. A complete plans review will need to be done to ensure adequate fire flow.
05/30/90	Public Service	GAS: No objections to plat. May be some conflict with existing service to Osco. Will contact developer to discuss problems. ELECTRIC: No objections to plat. Existing OH line will need to be relocated or undergrounded. Additional easements will be required from customer at time of construction.

06/01/90	City Utility Engineer	All utility comments noted on September, 1989 review have been satisfactorily addressed. Additional information will be required on the sewer lines within the boundaries of the lots if the City takes over maintenance responsibilities of the lines.
05/30/90	City Engineer	Plat: The cross-hatched area which signifies dedicated right-of-way should be shown on the legend as "right-of-way dedicated hereon." Property pins should be set at all new corners where triangular shaped R.O.W. is being dedicated and at all other boundary corners. Site Plan and Street Improvements: Modify in accordance with items listed in letter from Ron Rish, Armstrong Consultants, Inc. of May 15, 1990 with the following changes and additions: - Sixth item down under "General" change second sentence to read as follows: No-parking signs will be placed along the west side of 13th Street and the north side of Mesa Avenue. - The second item under "Orchard Avenue" change the driveway width from 36' to 40'. Improvements Agreement form should include the cost of landscaping within the public right-of-way. Also need improvements agreement for on site improvements.
06/01/90	City Planning Department	A more detailed lighting plan, including fixture design and placement, must be submitted for our approval. A detailed section of the proposed screening wall must be submitted for our approval. A more detailed landscaping plan is required showing plant species. The neighbor to the east has requested those trees proposed along 13th Street, from Mesa Avenue north to the first east-west alley, be conifers. The Improvements Agreement should include landscaping costs and the overall design costs should be at least 6% of the total improvements costs. A bank guarantee is required for those improvements.

g/o #23-89
OR
40-89
?

06/01/90	City Planning Department (continued)	All detailed engineering for improvements must be approved by City Engineering prior to recording the plat. As per Section 6-8-2.A.3.c of the Zoning and Development Code, one elevation benchmark is required. Permanent reference monuments must be set at the north-west external boundary corner (Section 6-8-2.A.3.a). Lot monuments must be set on all lot line corners (Section 6-8-2.A.3.b).

PROJECT NARRATIVE
ALBERTSONS - OSCO FINAL PLAT
GRAND JUNCTION, CO
MAY, 1990

INTRODUCTION

In September, 1989 the City of Grand Junction granted a zone change and site plan approval, with conditions, for a new Albertsons and Osco facility located SE of 12th Street and Orchard Avenue. The accompanying documents and maps are intended to demonstrate that the conditions of the City's approval have been met by the applicant.

SURROUNDING LAND USE

Land uses surrounding the subject property have not changed since September, 1989. Land uses and zone designations surrounding the property include:

NORTH
Non-residental
Residental
Zone Designation: B-3 and RSF-8

NORTH-WEST
Church
Community Hospital
Zone Designation: P8 and RMF-64

SOUTH
Single Family Residental
Zone Designation: RSF-8

EAST
Single Family Residental
Zone Designation: RSF-8

WEST
Mesa College
Zone Designation: PZ

PROPOSED LAND USE

The proposal calls for the construction of a new 42,500 sq. ft. Albertsons store and the remodeling of the existing Albertsons-Osco structure. The small retail center located at the northwest property corner will remain while the two existing structures located at the southwest property corner will be removed.

Upon review of the accompanying site plan it is apparent that it is in accordance with the City's approval in 1989. Parking, screening and buffering, access routes and building siting remain unchanged.

Original
Do NOT Remove
From Office

The following chart indicates the conditions of approval with responses:

CONDITION OF SEPT., 1989 APPROVAL PLANNING COMMISSION AND REVIEW AGENCY COMMENTS	JUNE, 1990 RESPONSE
Planning Department Comments	
1. Need details on screening fence: height and type of construction.	No change since Sept., 1989. Propose 6 ft. high split face concrete block wall with offsets.
2. New parking lights should not impact existing residential.	See submitted lighting detail.
3. Please specify hours of operation.	New store will be open 24 hrs. /day. Deliveries restricted from 7:00 AM to 10:00 PM.
4. Please supply vertical dimensions on elevation.	Max. 34 ft. from adjoining grade at front. Max. 24 ft. from adjoining grade at sides and rear.
5. The plan shows a 20 foot utility easement running under the new store. This would have to be vacated prior to construction.	See submitted re-subdivision plat.
6. Recommend a 4 foot screen fence along south edge of southernmost row of parking spaces.	3 ft. Masonry fence has been provided . See submitted Site Development Plan.
City Engineer Comments	
1. The new curb cuts on 12th Street should be increased in width from 30' to at least 36' for minimum lane widths of 14'-in; 10' left turnout; 11' right turnout; 1' wide double yellow stripes between entrance and exit lanes.	Has been provided with this submittal. See Site Development Plan and letter dated May 15, 1990 to Don Newton.
2. The curb radii at street intersection shall be increased as follows: Southwest corner 13th and Orchard and northwest corner of 13th and Mesa: R=20.5' to curb face; northeast corner of 12th and Mesa: R=30.5' to curb face.	See above response.
3. Need cross-sections or profiles showing how curb and gutter elevations will be established on Mesa Avenue and 13th Street.	Will provide with Surface Alteration Permit Application. See submitted permit schedule chart.

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CONDITION OF SEPT., 1989 APPROVAL PLANNING COMMISSION AND REVIEW AGENCY COMMENTS	JUNE, 1990 RESPONSE
4. Parking lot layout is okay. All raised islands should have smooth radii on corners. Handicap spaces should be 17' wide.	Has been provided with this submittal. See Site Development Plan.
5. Need drainage report addressing increase in runoff as a result of proposed redevelopment. How much additional runoff? Where will runoff be discharged?	See Site Development Plan, letter dated May 15, 1990, to Don Newton. Additional data to be provided with Surface Alteration Permit Application.
6. Traffic control: A 30" stop sign will be required at the exists of all seven driveways. From a driver's position (approx. 6' behind sidewalk), at each exit there shall be a minimum sight distance of 360' to traffic lanes on 12th Street and 300' on all other streets. There shall be no plantings or obstructions over 30" in height within a 15' x 15' triangle on both sides of each driveway.	Will provide with Surface Alteration Permit Application. See letter dated May 15, 1990 to Don Newton, and submitted site specifications.
7. How were pavement sections established for Mesa Avenue and 13th Street? Please submit design calculations.	See Site Development Plans, letter dated May 15, 1990, to Don Newton, submitted Soils Report with design recommendations, and site specifications.
8. Grading and drainage plan should show elevations and grades on all curbing and pavement construction to insure proper drainage of the parking areas.	Will provide with Surface Alteration Permit Application.
9. City monuments, monument lines, and right-of-way splits should be shown on all streets abutting the property.	See submitted final plat.
10. Add a note to the construction drawings stating that all construction within the public right-of-way shall be in accordance with City of Grand Junction standards and specifications.	Will provide with Surface Alteration Permit Application.

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CONDITION OF SEPT., 1989 APPROVAL PLANNING COMMISSION AND REVIEW AGENCY COMMENTS	JUNE, 1990 RESPONSE
11. The petitioner will be responsible for providing construction inspection and materials testing for all improvements within the public right-of-way. Depending upon the time of year, the City Engineering Department may be able to provide these services.	Will comply. See submitted site specifications.
12. Upon completion of the project, "AS CONSTRUCTED" drawings of all public improvements shall be submitted to the City Engineering Department. These drawings must be on 24" x 36" reproducible mylar	Will comply.
Parks and Recreation Comments	
1. Appraisal needed for open space if this requires that one be paid. It is essential that the landscaping be completed as part of the development.	See submitted appraisal. Will pay 5% of appraised value prior to recording final plat.
Public Service Comments	
1. No objection to preliminary plan. Electric asks for a 10-foot utility easement along the west and north boundaries of this parcel.	Has been provided. See Final Plat.
City Attorney Comments	
1. Consider making the City a third party beneficiary of maintenance agreement and declaration of restrictions so that City could enforce the provisions thereof.	See submitted Maintenance Agreement.
Utilities Comments	
1. There appears to be no problems with the extension of the existing complex connecting to the existing utilities.	See Site Development Plan and utility specifications. Additional utility information will be provided with sewer and water clearance request.

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CONDITION OF SEPT., 1989 APPROVAL PLANNING COMMISSION AND REVIEW AGENCY COMMENTS	JUNE, 1990 RESPONSE
2. A composite Utility plan will be required as part of the preliminary plans in such case that no final plat is required. The composite utility plan shall comply with the requirements of Section 5-5-5 of the Zoning and Development Code.	See Site Development Plan and utility specifications. Additional utility information will be provided with sewer and water clearance request.
3. No information has been supplied addressing water usage or sewage generated from the addition, as required in Section 6-7-2.	See submitted subdivision form.
4. No information has been supplied pertaining to site irrigation, as required by Section 6-7-2.	Landscaped areas will be irrigated with an automatic underground system installed in accordance with building codes. See utility specifications.

DEVELOPMENT SCHEDULE

Site construction will begin immediately upon construction plan approval by the City and other public agencies. In addition to approval and acceptance of the final plat by the Grand Junction Planning Commission the following approvals and permits must be obtained prior to acutal building construction:

1. Building Permit from Building Department.
2. Fire Flow Survey Permit from Fire Department.
3. Sewer Clearance Permit from Public Works Department.
4. Water Clearance Permit from Public Works Department.
5. Surface Alteration Permit from City Engineering Department.
6. Planning Department Clearance

The following flow chart illustrates a detailed breakdown of major activities required through construction. This schedule assumes Planning Commission acceptance of the final plat will occur on June 6, 1990.

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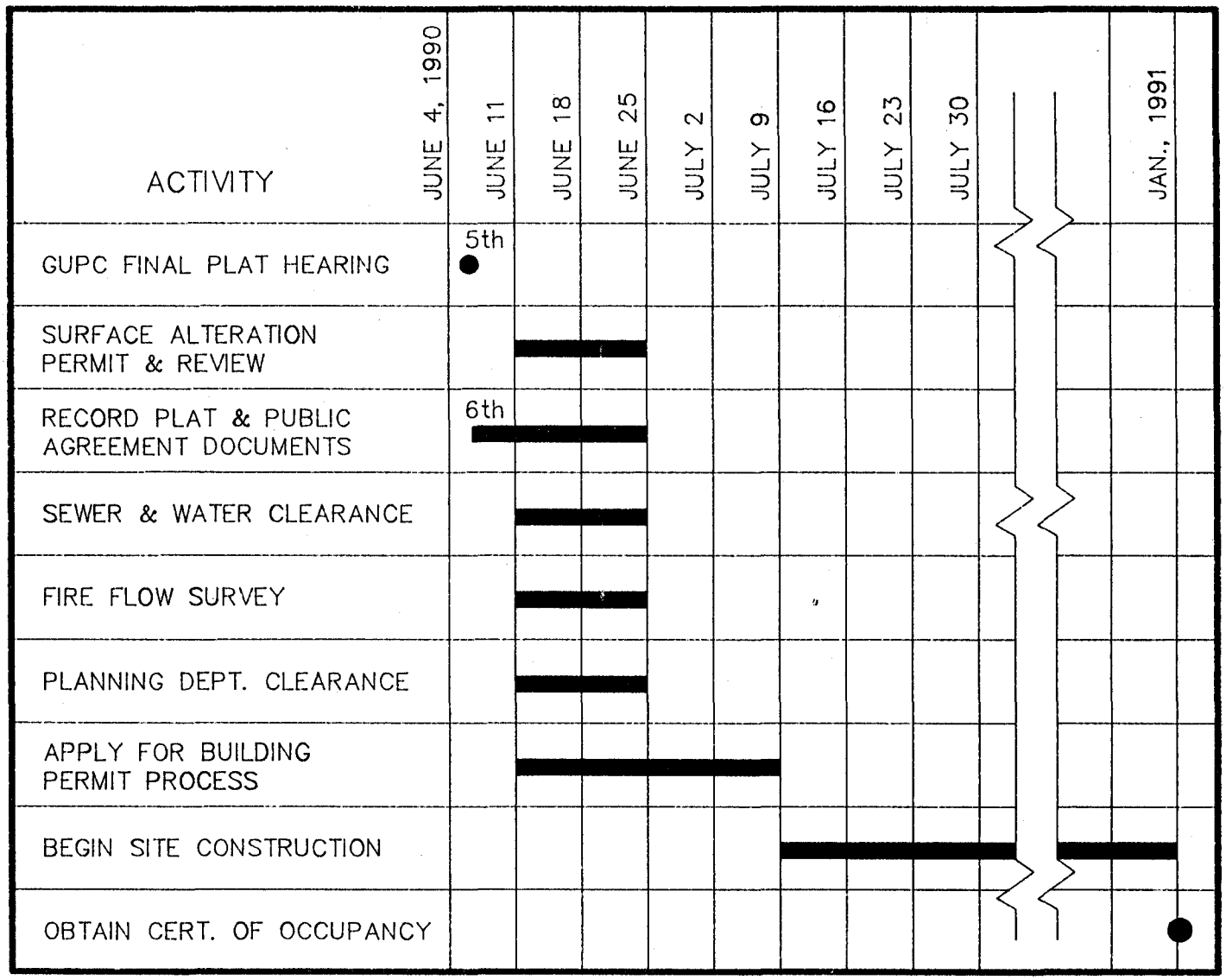
ALBERTSONS/OSCO
PERMIT SCHEDULE



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MAY 2 5 1990

FF — ACTION SHEET

ACRES 8.38 (±)

UNITS

DENSITY

FINAL

FILE NUMBER FP-23-90

ZONE PB

TAX SCHEDULE # 2945-123-03-001 — 020

ACTIVITY Final Plat Albertsons Complex (Replat Overhill Annex Sub)

PHASE Final

COMMON LOCATION S.E. Corner 12th & Orchard

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DATE SUBMITTED _____ DATE MAILED OUT _____ DATE POSTED _____

_____ DAY REVIEW PERIOD RETURN BY _____

OPEN SPACE DEDICATION (acreage) _____ OPEN SPACE FEE REQUIRED $_____ PAID RECEIPT #_____

RECORDING FEE REQUIRED $_____ PAID (Date) _____ DATE RECORDED _____

REVIEW AGENCIES

	A	B	C	D	E	F	G	H	XXX	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG
● Planning Department	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
● City Engineer	●	●	●					●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●				
○ Transportation Engineer	●	●	●								●	●	●	●	●	●	●	●	●	●	●	●	●	●			●				
● City Parks/Recreation	●	●	●	●							●	●	●	●	●	●			●	●				●			●				
● City Fire Department	●	●	●								●	●	●	●	●	●	●	●	●	●	●	●	●	●			●				
○ City Police Department	●	●	●										●	●	●	●			●	●				●			●				
○ County Planning	●	●	●								●	●	●	●	●	●	●	●	●	●				●			●				
○ County Engineer	●	●	●								●	●	●	●	●	●	●	●	●	●	●	●	●	●			●				
○ County Health	●	●	●						●	●	●	●	●	●	●	●	●			●	●			●			●				
○ Floodplain Administration	●	●	●					●			●	●	●	●	●	●	●			●	●			●			●				
○ G.J. Dept. of Energy	●	●	●								●	●	●	●	●	●	●			●	●			●			●				
○ Walker Field	●	●	●								●	●	●	●	●	●	●			●	●			●			●				
○ School District	●	●	●								●	●	●	●	●	●	●			●	●			●			●				
○ Irrigation	●	●	●								●	●	●	●	●	●	●	●	●	●				●			●				
○ Drainage	●	●	●								●	●	●	●	●	●	●	●	●	●				●			●				
○ Water (Ute, Clifton)	●	●	●								●	●	●	●	●	●	●	●	●	●				●			●				
○ Sewer Dist. (FV, CGV, OM)	●	●	●								●	●	●	●	●	●	●	●	●	●				●			●				
● U.S. West	●	●	●								●	●	●	●	●	●	●	●	●	●				●			●				
● Public Service (2 sets)	●	●	●								●	●	●	●	●	●	●	●	●	●				●			●				
○ State Highway Department	●	●	●								●	●	●	●	●	●	●			●	●			●			●				
○ State Geological	●	●	●						●	●	●	●	●	●	●	●	●			●	●			●			●				
○ State Health Department	●	●	●								●	●	●	●	●	●	●			●	●			●			●				
● City Property Agent	●	●	●								●	●	●	●	●	●	●	●			●	●			●			●			
● City Utilities Engineer	●	●	●								●	●	●	●	●	●	●	●			●	●			●			●			
● City Attorney	●	●	●		●	●					●	●	●	●	●	●		●							●			●			
○ Building Department	●	●	●							●			●		●	●					●				●			●	●	●	
○ DDA	●	●	●										●												●			●	●	●	
● GJPC (7 packets)	●	●	●										●			●			●	●				●	●			●			
○ CIC (11 packets)	●	●	●										●			●			●	●				●				●	●	●	
○ Other	●	●	●										●	●	●	●								●				●	●	●	
○																															
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TOTALS	18	18	18	3	3	3	2	2	X	X	X	3	11	11	16	11	11	11	11	11											

BOARDS	DATE	
PC	6/5/90	Approved Replat. Agreed that trees along Mesa Ave. could be deciduous due to lack of space

STAFF

APPLICATION FEE REQUIREMENTS

$350
U.S. Fee 5% appraised value

GRAND JUNCTION Planning

23-90

WYATT & ASSOCIATES, AIA ARCHITECTS and PLANNERS

August 29, 1990

Mr. Dan Wilson
CITY ATTORNEY
City of Grand Junction
250 North Fifth Street
Grand Junction, Colorado 81501-2643

RECEIVED GRAND JUNCTION PLANNING DEPARTMENT
AUG 29 1990

RE: ALBERTSONS SHOPPING CENTER SIGN
12th & Mesa

Dear Mr. Wilson:

Albertson's Inc. hereby requests that the City Council grant a revokable permit to Albertson's Inc. and the Orchard Group to allow for the existing shopping center identification sign located on 12th Street to remain in its current location and size for a period of time not to exceed 10 years.

All previous planning of this shopping center and its driveways was based upon the sign remaining in its current location. A condition of site approval was that the improvements for 12th Street be based upon final criteria established by the Engineering Department and their final plans called out for a lane widening and dedication of 4' of additional Right-of-Way. This dedication requirement results in one of the support columns for the existing sign to actually infringe in the ROW by approximately 4 feet. If this column were to be removed from the ROW the sign would naturally fall down. Therefore, we respectfully request consideration of a revokable permit to allow for this condition to remain.

At the same time, and as a part of the shopping center redevelopment, Albertson's would like to reface the existing portion of their sign with the current Albertson's logo. No other changes to this sign are proposed. Please refer to the enclosed Exhibits A, B and C which further detail this request.

If this request is denied we would be forced to completely remove the existing sign and construct a new sign in accordance with your current sign ordinance. The cost of this removal and replacement would far exceed project budget requirements due to all the other additional city improvements required for the development of this project, i.e. masonry screen walls and 12th Street widening. We understand that this request may be considered at the City Council meeting of September 5, 1990. If you have any questions, please don't hesitate to call me or Ted Ridder at (303) 360-7424.

Sincerely,
Wyatt & Associates, for Albertson's Inc.

Dennis W. Wyatt, Architect

cc: Ted Ridder
Lee Mumford
John Rehmer
Ron Schuchman
Karl Metzner
Dave Wilcox
Ron Rish
Tom Logue
Hal Hofheins
Don Newton

1165 so. pennsylvania st., denver, colorado 80210 (303) 698-1717