CCM-101

City of Cambridge

IN CITY COUNCIL
April 7, 1980

ORDERED:

That the Commissioner of Public Works be authorized to construct driveways over sidewalks in front of estates upon the streets as hereinafter named, the expense thereof to be charged to the appropriation for Public Works Department, Paving (Edgestones and Sidewalks). The entire cost of material and labor furnished to be repaid to the City by the owners of the abutting estates.

Orion Research	380 Putnam Avenue - Blackstone St. side (THREE DRIVEWAYS)

In City Council April 7, 1980.
Adopted by the affirmative vote of 8 members.
Attest:- Paul E. Healy, City Clerk.

A true copy;

ATTEST:- Paul E. Healy

CITY OF CAMBRIDGE

RECEIVED BY
OFFICE OF CITY CLERK
MAR 31 2 43 PM '80
CAMBRIDGE, MASS.

INTEROFFICE CORRESPONDENCE

To Paul Healy, City Clerk **Date** March 31, 1980

From Lauren Preston, Traffic Engineer **Reference**

Subject Driveway Petitions for Orion Research

We have reviewed the proposed driveways along Blackstone Street for the new Orion Research building and recommend that they be approved. Theyhave received a special permit from the Board of Zoning Appeals as required by Art. 6, Sect. 6.55 of the Cambridge Zoning Ordinance.

Enc.

LMP:rd

CONTRACT LIMIT LINE (3'-0" BEYOND PROP. LINE)

FOR CONTINUOUS BERM AND CRUSHED STONE SWALE ALONG THIS SIDE (SEE SHEET 3 TO 9.) SEE A/A3

DRAINAGE L.P. EL. 17.50

DRAINAGE H.P. EL. 18.17'

EXIST'G EL. ± 28.67'

EL. 24.00

EL. 24.33'

EL. 24.40' DIRECTLY OUTSIDE BORROED DOOR (4" BELOW LANDING ELEVATION AT INTERIOR).

252'-0"

TO R.W. LINE

18'-0" ± 19'-4"

BET A TYP.

REMOVE ALL RETAINING WALLS AND FOOTINGS THIS AREA

CONTRACT LIMIT LINE

DRAINAGE H.P. EL. 18.17'

EL. 24.40'

TO R.W. LINE (SEE F1)

8'-0" ±

EL. 24.33'

TOP OF WALL IN FRONT OF DOOR IS EL. 24.00

DRAINAGE L.P. EL. 17.50'

EL. 28.80'

TRIPLE PIPE RAIL

EL. 27.21'

CONCRETE STEPS: 2 x 7" RISERS AT 5'11" = 32'9" (TREADS ARE 16'11")

EL. 27.67'

T.O.C. 27.00'

± 20'-0"

EL. 28.67'

RELOCATE CHAIN LINK FENCE AND REMOVE FOUNDATION WALL

BET A TYP.

EL. 28.67'

TO R.W. LINE

SPECIAL PERMIT REQUIRED FROM B.Z.A. VIOLATES SEC. 6.55 OF THE CAMB. ZONING ORD.

EXISTING TREE

TO WALL EL. 33.33'

± 59'-7 3/8"

± 60'-11 5/8"

SLOPE

DRAINAGE L.P. EL. 17.50'

NOTE: FOR GRADES AT BOTTOM OF LOWER LEVEL ENTRY RAMP, SEE A2.

EXIST'G EL. 29.00'

EL. 29.12'

CATCH BASIN 6 RIM EL. 28.67' ± INV. EL. 26.67'

8" CLAY PIPE TO EXIST'G MANH.

14'-0"

4'-0"

P/C CONC. CURB

TO WALL EL. 33.33'

PLANTER

FINISH GRADE EL. 29.33'

FORMED CONC. CURB

RAMP DOWN: 12.7%

TO WALL EL. 29.67' PAVE-PAVED WALL

TRANSITION RAMP 7%

EXIST'G EL. 29.63'

RAMP UP: 12.7%

TOP MIN. CLEARANCE

SLOPED WALL, BRICK-PAVED WALK BELOW GRADE

TO WALL EL. 26.00'

EXISTING TREE

EL. ± 24.00'

TRANSITION RAMP 7%

RAMP DOWN: 14.3%

EXIST'G 15" DRAIN

TRANSITION RAMP 7%

EXIST'G EL. 29.21'

8" CLAY PIPE TO EXIST'G MANH.

CATCH BASIN 7 RIM EL. 22.00' ± INV. EL. 20.00'

AT STAIR EGRESS DOOR EL. 29.29'

ALIGN THIS FACE WITH WALL ABOVE

PLANTER

PLANTER DRAIN: VERTICAL PERFED PIPE TO SUIT AGE W/ STRAINER, SUMP

CONNECT TO STORM LINES (SEE PLUMBING).

EL. 29.21'

9'-8"

TO WALL EL. 30.67'

TO WALL EL. 29.67'

BOT. O.U. EL. 29.75'

HINGED SLAB RAMP UP: 12.3%

EL. 29.71'

EL. 22.17

GATEWAY BRICK AND AGUA GRIFFED STEEL (BOT OF SPANDREL EL. 32.63')

TRANSITION RAMP 7%

RAMP DOWN: 12.3%

TRANSITION RAMP 7%

APPROX. LOCATION OF ELEC. MANHOLE

VESTIBULE

EL. 29.21'

T.O.C. 27.00'

BOT. O.U. EL. 29.21'

(AT HINGED SLAB)

EL. 29.12'

EL. 29.21'

BOT. O.U. EL. 29.07'

HINGED SLAB

DRAINAGE H.P. EL. 18.17'

VISITORS' PARKING

TO WALL EL. 32.00'

SLOPED WALL

TO WALL EL. 28.00'

EL. ± 29.00'

PEDESTRIAN RAMP UP: ± 6%

APPROX LIMIT OF EARTH BERM

CONTRACT LIMIT LINE (NOTE: CONTRACTOR IS TO LEAVE AREA OF CITY PROPERTY ALLOWED TO BE USED FOR STAGING IN SAME CONDITION AS BEFORE CONSTRUCTION.)

24" MIN.

FOUNDATION WALL

COMPACTED GRAVEL

BIT. CONC.

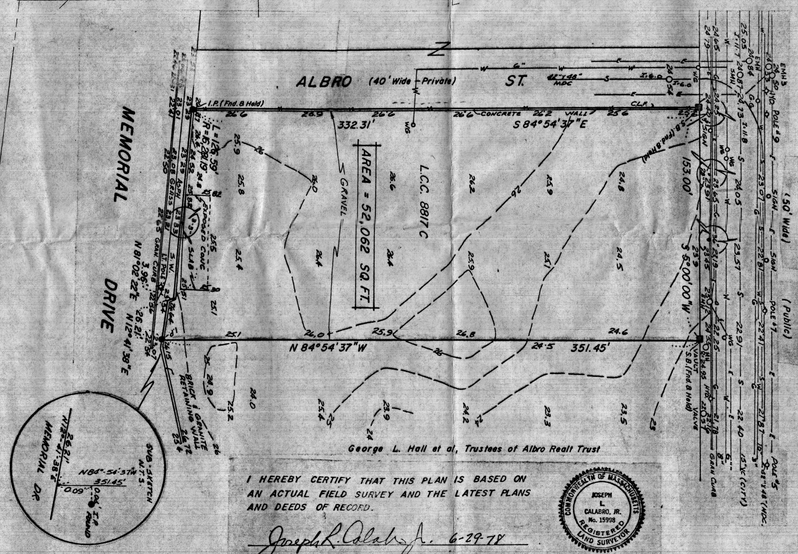
6" MIN. COVER OF 1/2" MIN. STONE AROUND DRAIN

4" ϕ PERFORATED DRAIN

TOP OF FOOTING EL. VARIES (SEE PLAN)

DETAIL A FOUNDATION DRAIN 3/4" = 1'-0"

NORTH



I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST PLANS AND DEEDS OF RECORD.

Joseph R. Calabro Jr. 6-29-78

COMMONWEALTH OF MASSACHUSETTS JOSEPH R. CALABRO, JR. No. 15908 REGISTERED LAND SURVEYOR

LEGEND

Pole	Utility Pole
SMH	Sewer Manhole
EMH	Electric Manhole
CB	Catch Basin
WG	Water Gate
GG	Gas Gate
	Light Pole
S	Sanitary Sewer
D	Storm Drain
E	Electric
W	Water
G	Gas

PLAN REFERENCES

1. L.C.C. 8817C, L.C.C. 9349 A, L.C.C. 9850 A
2. Certificate of Title No. 56885
3. City of Cambridge Sewer & Drain Plans, Sheets 5 & 11.
4. City of Cambridge Water Plan E-6.
5. Cambridge Electric Light Co. Plan No's 4106-1 & 4106-2.

NOTES

1. Bearing system based on L.C.C. 8817C
2. Elevations refer to City of Cambridge Base.
3. Contours at 1' intervals.

TOPOGRAPHIC PLAN OF LAND
CAMBRIDGE, MASS.

SCALE: 1" = 40' JUNE 29, 1978

HARRY R. FELDMAN, INC. LAND SURVEYORS

112 SHAWMUT AVE. BOSTON, MASS.

GENERAL NOTES:

1. ALLOW $ 10,000 FOR LANDSCAPING AS OUTLINED IN SPECIFICATION. PLANTING CONFIGUERATION SHOWN ON L1 IS MEANT TO BE SUGGESTIVE OF INTENT AND A REASONABLE ESTIMATION OF POSSIBLE EXTENT OF WORK ONLY.
2. PROTECT AND PRESERVE ALL EXISTING TREES ON SITE. IN THE COURSE OF LAYING OUT ROADWAYS AND RAMPS, PROVIDE ARCHITECT WITH DIAGRAM INDICATING EXACT LOCATION OF TREES IN RELATION TO PAVED AREAS.
3. BUILDING SIGN (N.I.C.) TO BE LOCATED AT A FUTURE DATE. PROVIDE FOR EXTENT OF SIGN WIRING SHOWN ON ELECTRICAL DRAWINGS, BUT CONSULT ARCHITECT FOR ACTUAL SITING.

ORION BUILDING

Orion Research Incorporated
Cambridge Massachusetts

ADD Inc Architecture Design Development
1158 Massachusetts Avenue
Cambridge Massachusetts 02138

Job Number 7817
Drawn By
Date 20 NOV 1978
Revisions 1. 12 JAN 1979
2. 1 JUNE 1979

Site Plan

Scale 1" = 10'-0" Sheet 1 of 24

A1

SECTION 2D - SITE IMPROVEMENTS

PART 1 - GENERAL

1.1 REFERENCES

A. The General Documents, as listed on the Table of Contents, shall be included in and made a part of this Section.

B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.2 SCOPE

A. The work under this Section consists of all Site Improvements as shown on the Drawings and as specified herein and includes, but is not limited to, the following:

1. Bituminous concrete drive paving.

2. Bituminous concrete parking paving.

3. Bituminous concrete walk paving.

4. Precast curbing.

5. Concrete stairs.

6. Line painting.

7. Granite paving.

8. Granite curb.

9. Precast walk paving.

10. Brick walk paving.

11. Parking lot lights.

12. Bollard lights.

1.3 RELATED WORK UNDER OTHER SECTIONS

A. The following items of related work are specified and included in other Sections of the Specifications.

1. Excavation, filling, compaction and grading under Excavation, Filling, Compaction and Grading Section.

2. Metal handrails as specified under Miscellaneous Metals Section.

1.4 SUBMITTALS

A. Samples

1. Precast Pavers: submit samples consisting of sufficient number of units to show the full range of variations in color and

DEC 13 1979

1.4 (Cont.)

texture, but in no case less than five units.

2. Sand: submit one pint samples.

B. Product Literature: submit sample of manufacturer's printed literature indicating information correlated to specified requirements.

C. Manufacturer's Data: submit manufacturer's specifications, with certified copies of laboratory test reports and other data as may be required to show compliance with Contract Documents for asphalt pavers specified herein.

1.5 MOCK UPS

A. Concrete

1. Construct one 4'x4' sample panel of concrete pavement. The quality of workmanship and joint treatment must be approved by Architect before permanent paving is started. Texture must provide a good walking surface, neither too smooth nor too rough. If the original sample is not approved, the Contractor shall provide additional samples as required, at no cost to the Owner, until approved sample is obtained. The approved sample shall become the standard for concrete paving for the entire job.

2. Panel shall not be constructed in location becoming part of final pavement and shall remain undisturbed until all paving is completed. The panel shall be constructed as part of a composite paving panel for the entire project, including expansion joints as directed by the Architect.

B. Precast Concrete Pavers

1. Build a sample panel of precast concrete pavers 4'x4' using materials, jointing and pattern as specified for the final work.

2. Obtain Architect's acceptance of visual qualities of the sample panel before proceeding with the final work.

3. If the first sample is not approved, the Contractor shall provide additional samples until approved sample is obtained. The approved sample shall become the standard for precast concrete pavers for the entire job.

4. The sample panel shall not become part of the final paving and shall remain undisturbed until all paving is completed. The panel shall be constructed as part of a composite paving panel for the entire project. Remove panel upon completion of paving, or as directed by the Architect.

1.6 PRODUCT HANDLING

A. Concrete

1. Deliver packaged material in manufacturer's unopened containers or bundles, fully identified with name, brand, type, weight and analysis. Store packaged material in such a manner as to

1.6 (Cont.)

Prevent damage or intrusion of foreign matter. Remove from job any material which becomes contaminated.

B. Precast Walk Pavers

1. Deliver paving materials other than bulk materials to project site in manufacturer's unopened containers, bundles, pallets or other standard packing devices; fully identified with name, type, color and size.

2. Store on platforms and protect from weather, soiling contamination and damage.

1.7 ENVIRONMENTAL CONDITIONS

A. Cold Weather Concreting: Perform in accordance with the applicable requirements of Section "Cast in Place Concrete." Do not place concrete upon frozen subgrade. Do not use accelerating or anti-freeze admixtures. Protect finish concrete against damage or injury, including freezing, until the work has been completed and accepted.

B. Do not install bituminous material when ambient temperature is below 40 degrees F.

C. Do not lay precast walk pavers in inclement weather, or when rain or snow is imminent. Do not lay precast walk pavers when ambient temperature is below 36 degrees F.

PART 2 - PRODUCTS

2.1 BITUMINOUS CONCRETE DRIVE PAVING

A. Bituminous concrete materials shall meet the requirements of the latest edition of the Standard Specifications for Highways and Bridges of the Commonwealth of Massachusetts, Department of Public Works, herein called "Standard Specifications," for Class I Bituminous Concrete Pavement, Type I-1 Section 460.

B. Gravel base shall be as specified under Excavation, Filling, Compaction and Grading Section.

2.2 BITUMINOUS CONCRETE PARKING PAVING

A. Bituminous concrete parking paving shall be as specified under 2.1 above.

B. Gravel base shall be as specified under Excavation, Filling, Compaction and Grading Section.

2.3 BITUMINOUS CONCRETE WALK PAVING

A. Gravel foundation course shall be as specified under Excavation, Filling, Compaction and Grading Section.

2.3 (Cont.)

B. Bituminous concrete walk paving shall be as specified under 2.1 above.

2.4 PRECAST CONCRETE CURBING

A. Materials shall meet the requirements of Item M4.02.14 of the "Standard Specifications." Precast units shall meet requirements of Section 3B, Precast Concrete.

2.5 PAINTED LINES AND MARKINGS

A. Parking lot lines, roadway lines and other lines shall be materials from manufacturers of recognized quality. Line colors shall be white and/or yellow, as directed by the Architect.

2.6 CONCRETE STAIRS

A. Concrete shall be as specified under Division 3 CONCRETE.

B. Metal handrails shall be as specified under Miscellaneous Metals Section.

2.7 PRECAST WALK PAVING

A. Gravel sub-base shall be as specified under Excavation, Filling, Compaction and Grading Section.

B. Bituminous concrete base courses shall be as specified under 2.1 above.

C. Neoprene-Modified Asphalt Adhesive supplied by Smidel Co., Inc., 111 West Rd., Cortland, N.Y. 13045, 607-753-9669. Shall consist of two (2) percent neoprene (grade WM1) oxidized asphalt with a 155 degree softening point, (80 penetration) and ten percent (10%) long fibered asbestos.

D. Precast pavers shall be as manufactured by Hastings Pavement Co., Lake Success, N.Y. Units shall be 2" thick x 18" square with a permissable plus or minus tolerance of 1/16" in depth. Color shall be gray.

E. Sand: for joints shall comply with ASTM C144.

F. Cement: for joints shall be Type 2 Portland Cement, meeting the requirements of AASHTO - M85.

2.8 GRANITE PAVING

A. Granite pavers shall be used granite cobbles measuring 4" thick by 8" x 6".

B. Joint filler shall be as specified for Precast Pavers above.

2.9 GRANITE CURB

A. Granite curb for work along Blackstone Street shall be Type VA-4 as specified under Section 9M of the "Standard Specifications" with 6" width at the top of curb. Both straight and radius pieces shall meet all City of Cambridge requirements.

2.10 BRICK WALK PAVING

A. Brick shall meet requirements of the "Standard Specifications" for paving brick ASTM designation C216-69 grade SW type FBS. Brick sizes shall be 7½" x 3¼" x 2¼".

B. Setting bed shall be clean dry masons sand.

C. Joint material shall be clean dry masons sand.

2.11 SITE LIGHTING

A. Parking lot lights shall be 250 wt. m.v. Executive Series with close mounted 12 ft. ht. square steel pole as mfg. by Sterner Lighting Co., Winsted, Minnesota. Finish shall be black.

B. Bollard lights shall be model No. NCG 3616 as manufactured by Lightolier Mfg. Co., modified to be 2'-8" high above finished grade. Color shall be blac

PART 3 -

3.1 BITUMINOUS CONCRETE DRIVE PAVING

A. Furnish and install on drives, ramps, loading areas on grade and on parking area in lower level garage as detailed.

B. Over compacted subgrade install gravel foundation course as specified under Excavation, Filling, Compaction and Grading Section.

C. Install bituminous concrete pavements in accordance with Section 701.63 of the "Standard Specifications."

3.2 BITUMINOUS CONCRETE PARKING PAVING

A. Furnish and install on exterior portion of entry level over parking structure and transition slabs as detailed.

B. Over waterproof membrane and protection board by others install bituminous concrete pavements in accordance with Section 701.63 of the "Standard Specifications".

3.3 BITUMINOUS CONCRETE WALK PAVEMENT

A. Furnish and install to lines and elevations as indicated on the plans.

B. Over compacted subgrade install gravel foundation course as specified under Excavation, Filling, Compaction and Grading Section.

C. Install bituminous concrete pavement in accordance with Section 701.02 of the "Standard Specifications."

3.4 PRECAST CURB

A. Furnish and install in locations and to elevations as shown on the plans.

B. The curb shall be set so that the front top aris line conforms to the line and grade required. All space under the curb shall be filled and thoroughly tamped with material meeting the requirements of the material for the base course.

C. Fitted joints shall be placed every 20 ft. Curb sections shall be placed and fitted so that there will be no open joints between them exceeding 1/8 inch.

D. Expansion joints shall be fitted with preformed expansion joint filler having a thickness of ¼ inch.

E. Protect the curb against damage or discoloration of the exposed surfaces until completion of the Contract.

3.5 PAINTED LINES

A. Furnish and install in locations as shown on the plans. Obtain Architect's approval of layout before starting work.

3.6 CONCRETE STAIRS

A. Furnish and install in location and to alignment and elevations as indicated on the plans.

3.7 GRANITE PAVING

A. Over waterproof membrane and protection board install setting bed as detailed in drawings.

B. Furnish and install granite cobbles with largest face dimensions up. Place hand tight and approximately ½" high. Tamp to grade.

C. Sweep joints full of 3:1 dry sand cement mix.

D. Mist with fine spray water until full penetration of joint is achieved.

E. Clean any stains with dilute solution of muriatic acid.

3.8 GRANITE CURB

A. Furnish and install in locations and to elevations as shown on the plans.

B. Conform to all requirements of the City of Cambridge.

C. Installation shall conform to Section 501 of the "Standard Specifications."

3.9 PRECAST WALK PAVING

A. Furnish and install over compacted subgrade or waterproof membrane and protection board in locations and to elevations indicated on the plans according to details for specific conditions.

B. Construct bituminous concrete base true to line and section as shown on the Drawings and as specified in the "Standard Specifications."

C. No vehicular traffic of any kind shall be allowed to pass over the newly finished surface until it has had time to set, but this period may be extended by the Architect.

D. All areas of new paving on which water stands or which are found excessively uneven shall promptly be brought to correct grade and line.

E. Immediately before commencing work of laying pavers, thoroughly clean surfaces to be covered with pavers of all dust, dirt and other foreign matter.

F. Install 3/4 inch asphalt setting bed over the surface of the bituminous concrete base course. Roll the setting bed while hot, with a power roller, to a nominal depth of 3/4 inch.

G. Adjust the elevation so that when the pavers are placed, the top surface of the pavers will be at the required finished grade. All units shall be brought to the indicated lines and sections by rolling or other approved method.

H. Apply neoprene tack coat with squeegie.

I. Place the pavers by hand in straight courses with uniform joints and uniform top surface. Maintain alignment and pattern shown on the Drawings.

J. Joints shall be 1/8" (maximum) width Mix three parts dry sand and one part cement. Sweep in 3:1 sand-cement mix until joints are completely filled. Sweep paving surface clean of excess material. Special care shall be exercised to insure the use of dry sand in the mix, as moist sand causes the cement to stain the pavers.

K. Remove any cement stains by washing with dilute 10% solution of muriatic acid.

3.10 BRICK WALK PAVEMENT

A. Furnish and install over compacted subgrade in locations and to elevations as indicated on the plans.

B. Conform to all requirements of the City of Cambridge.

C. Sweep joints with sand.

3.11 SITE LIGHTING

A. Parking Lot Lights

1. Furnish and install in locations and to elevations as indicated on the plans and as per manufacturer's recommendations.

2. 2 fixtures required.

B. Bollard Lights

1. Furnish and install in locations and to elevations as indicated on the plans and as per manufacturer's recommendations. Finish shall be black.

2. 10 fixtures required.

- END OF SECTION -

Cambridge, November 20, 1979

To the Honorable, the City Council of the

City of Cambridge:

The undersigned respectfully pray that a driveway for commercial use may be constructed and agrees to deposit with the City Treasurer the sum of seventy five ($75.00) dollars, subject to the following conditions, to wit: In case the amount so deposited is in excess of the cost of the driveway, the difference shall be refunded by the City Treasurer, but in case the cost of the driveway exceeds that deposit, said deposit shall be applied as a credit to the bill and the balance shall be paid to the City Treasurer within thirty days from the receipt of the bill.

Location of proposed driveway Blackstone Street

Owner or Owners Name Orion Research Incorporated

Address 380 Putnam Avenue

Cambridge, Massachusetts 02139

Telephone Number 617--864--5400

PETITION

of.....

for Driveway at premises

No......

.....**19**

Location of driveway approved by

.....
Traffic Director

In City Council, **19**

Referred to the Committee on Roads and Bridges

Attest:

City Clerk

Cambridge, November 20, 1979

To the Honorable, the City Council of the

City of Cambridge:

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Location of proposed driveway Blackstone Street

Owner or Owners Name Orion Research Incorporated

Address 380 Putnam Avenue

Cambridge, Massachusetts 02139

Telephone Number 617--864--5400

PETITION

of.....

for Driveway at premises

No......

.....**19**.

Location of driveway approved by

.....
Traffic Director

Carl C Logan

In City Council, **19**.

Referred to the Committee on Roads and Bridges

Attest:

City Clerk

Cambridge, November 20, 1979

To the Honorable, the City Council of the

City of Cambridge:

The undersigned respectfully pray that a driveway for commercial use may be constructed and agrees to deposit with the City Treasurer the sum of seventy five ($75.00) dollars, subject to the following conditions, to wit: In case the amount so deposited is in excess of the cost of the driveway, the difference shall be refunded by the City Treasurer, but in case the cost of the driveway exceeds that deposit, said deposit shall be applied as a credit to the bill and the balance shall be paid to the City Treasurer within thirty days from the receipt of the bill.

Location of proposed driveway Blackstone Street

Owner or Owners Name Orion Research Incorporated

Address 380 Putnam Avenue

Cambridge, Massachusetts 02139

Telephone Number 617--864--5400

H-38

PETITION

of Orion Research

THREE
for Driveway at premises

No. 380 Putnam Avenue (Blackstone St. side)

April 7 **19** 80

Location of driveway approved by

Traffic Director

Carl C Bozone

In City Council, April 7 **19** 80

Referred to the Committee on Roads and Bridges

Attest:

Order adopted

MD/A