DIVISION 02 – EXISTING CONDITIONS

02 01 00 MAINTENANCE OF EXISTING CONDITIONS

A. Design Considerations

1. Maintenance of site remediation, underground storage tank removal, facility remediation, and hazardous waste drum handling shall be coordinated with Rutgers University on an individual project basis.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

RESERVED

02 05 00 COMMON WORK RESULTS FOR EXISTING CONDITIONS

RESERVED

02 06 00 SCHEDULES FOR EXISTING CONDITIONS

A. Design Considerations

1. Scheduling of existing site investigations such as, but not limited to, survey work, environmental assessments, and subsurface investigations shall be coordinated with the Office of Planning and Development and Rutgers Environmental Health and Safety. A proposed schedule shall be submitted for approval prior to the start of any existing site investigations.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 08 00 COMMISSIONING OF EXISTING CONDITIONS

RESERVED

02 21 00 SURVEYS

A. Design Considerations

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B. Special Documentation Requirements

1. Prior to the start of survey work, the design team shall provide Rutgers Facilities Office of Planning and Development (Planning) with a drawing identifying the area to be surveyed. In addition, an outline of surveying methods and anticipated survey information shall be provided. Upon review and acceptance of the proposed survey area and methods, Planning will authorize the start of survey work. If a geotechnical investigation is performed as part of a University project, the project's survey should include the boring and/or test pit locations.

    a. Site Surveys: Site surveys shall be prepared by a licensed surveyor in the State of New Jersey. Surveys shall include 1-foot contour intervals, spot grades, trees and their drip lines, surface improvements including, but not limited to, roadways, curbs, sidewalks, vegetation limits, and above grade site features. Surveys shall include underground utility information available from the University and from municipal and public sources. All surveys should include information/data at least 25 feet beyond the drawing identifying the survey boundary. The surveys shall be delivered as a signed and sealed hardcopy and in Autodesk CAD format (version 2010). Surveys must be spatially registered to New Jersey state plane coordinates (SPC) projected in Transverse Mercator. The North American Datum of 1983 is required for mapping in the horizontal plane and the North American Vertical Datum of 1988 (NAV88) is required for the vertical plane. All data should be delivered in feet.

C. Materials and Methods of Construction

1. Boundary and Survey Markers: The necessity for a boundary survey and survey markers will be determined by the Rutgers University Office of Planning and Development on an individual project basis.

At Rutgers University's discretion, control points used during the survey work should be provided by the University. The control points shall be metal pins set at agreed upon locations between the project surveyor and Rutgers University.

02 22 00 EXISTING CONDITIONS ASSESSMENT

A. Design Considerations

1. Depending on existing site conditions and the proposed project, existing condition assessments may be required. The need for such assessments will be determined on an individual project basis by Rutgers University.

2. Movement and vibration assessment to existing areas shall be preformed as required. The need for such assessments will be determined on a project by project basis by Rutgers University.

3. Traffic assessment to existing roads, walkways, and all other vehicular and/or bicycle/pedestrian areas shall be performed as required. The need for such assessments will be determined on an individual project basis by Rutgers University.

4. Accessibility assessment shall be performed as required. The need for such assessments will be determined on an individual project basis by Rutgers University.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 24 00 ENVIRONMENTAL ASSESSMENT

A. Design Considerations

1. Depending on existing site conditions and the proposed project, environmental assessments may be required. The need for such assessments will be determined on an individual project basis by the Rutgers Facilities Office of Planning and Development. Additional information on environmental regulations and requirements can be found in Division 31 starting at 31 25 00.

2. Natural Environment Assessment

a. A review of available New Jersey Department of Environmental Protection (NJDEP) mapping in the vicinity of the proposed project site shall be performed by the design team. Based on the available NJDEP mapping, the design team shall advise Rutgers University of the need for further natural resources studies, if necessary.

b. The Natural Resources Conservation Services (NRCS) and Middlesex County soils survey shall be reviewed.

3. In-situ environmental sampling shall be conducted during the investigatory phase of a project. Sampling and laboratory testing shall be coordinated with Rutgers University on an individual project basis. At a minimum, samples shall be tested for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-volatile Organic Compounds (SVOCs), TCL Pesticides, TCL PCBs, and Target Analyte List (TAL) Metals and Cyanide. Results of environmental sampling shall be compared against the NJDEP Soil Remediation Standards.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 25 00 EXISTING MATERIAL ASSSESSMENT

A. Design Considerations

1. Existing material assessments may be required based on existing site conditions and the proposed project's scope of work. The need for such assessments will be determined on an individual project basis by Rutgers University.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 26 00 HAZARDOUS MATERIAL ASSESSMENT

A. Design Considerations

1. Based on existing site conditions, a hazardous material assessment may be required. The need for such assessments will be determined on an individual project basis by the Rutgers University Administration of Public Safety.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 31 00 GEOPHYSICAL INVESTIGATIONS

A. Design Considerations

1. Geophysical investigations may be required depending on a project's location and former land use. The need for such assessments will be determined on an individual project basis by the Rutgers Facilities Office of Planning and Development and Rutgers Environmental Health and Safety. If necessary, geophysical investigations should be performed concurrent with geotechnical investigations.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 32 00 GEOTECHNICAL INVESTIGATIONS

A. Design Considerations

1. A geotechnical investigation shall be performed by the design team and associated subcontractors. The scope of the geotechnical investigation shall be developed by the design team's geotechnical engineer and approved by the Rutgers Facilities Office of Planning and Development.

2. Based on the results of the geotechnical investigation, the geotechnical engineer shall provide the University with a geotechnical report. At a minimum, the geotechnical report must include the following:

    a. A summary of existing conditions and the proposed scope of development

    b. A review of available information including, but not limited to historic drawings, regional soil surveys, regional bedrock maps, and national flood maps

    c. A summary of the geotechnical investigation including drilling equipment, sampling procedures, and laboratory testing

    d. A summary of subsurface conditions

    e. A boring and test pit location plan

    f. Recommendations for site preparation, subgrade preparation, engineered fill, foundations and floor slabs, excavation methods, temporary excavation support, underpinning (if applicable), settlement, seismicity, below grade walls, utilities, dewatering (if necessary), waterproofing (see related Rutgers University standards), pavement design, and other geotechnical related items.

3. During the project's design, the geotechnical engineer shall provide construction specifications for geotechnical related items including, but not limited to earthwork, trench excavation, pavement, and site preparation.

    a. Subsurface Drilling and Sampling

        1) A proposed boring location plan shall be submitted to Rutgers University prior to any drilling work. Proposed boring locations and depths shall be provided by the design team based on anticipated building layout and building/foundation elevations. The number of borings shall be determined in

accordance with the New Jersey Edition of the International Building Code (NJIBC).

2) Drilling and Standard Penetration Test (SPT) sampling procedures shall be performed in accordance with ASTM D1586.

3) A "New Jersey One Call" for subsurface utility mark-out and a review of any available on-site utility drawings shall be performed by the design team and associated subcontractors prior to the start of drilling.

4) The Rutgers University Utilities Department shall be notified one week in advance of any excavation or drilling work.

5) The boring locations must be included on the site survey

b. Material Testing: Laboratory testing is required as part of a project's geotechnical subsurface investigation. Selected laboratory tests shall be determined by the geotechnical engineer and shall be coordinated with Rutgers University. A California Bearing Ratio (CBR) test shall be performed on projects which require pavement design.

c. Exploratory Excavations

1) Exploratory Excavations (test pits) are required as part of a project's geotechnical subsurface investigation. A test pit location plan shall be submitted to Rutgers University prior to any excavation work. A "New Jersey One Call" for subsurface utility mark-out and a review of any available on-site utility drawings shall be performed prior to test pit excavations.

2) Infiltration testing is required as part of a geotechnical investigation. Double ring infiltrometer testing shall be performed in areas of proposed stormwater management features.

3) The Rutgers University Utilities Department shall be notified one week in advance of any excavation or drilling work.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

RESERVED

02 41 00 DEMOLITION

A. Design Considerations

1. Selective Site Demolition: The design team shall prepare a site demolition plan in accordance with all applicable University, Local, State, and Federal Regulations. If proposed demolition work will disturb more than 5,000 square feet, a soil erosion and sediment control certification is required prior to the start of work. In addition, if demolition work will disturb more than one acre, a Stormwater Construction General Permit Request for Authorization (RFA) is required from the NJDEP. At a minimum, the demolition plan shall include the following:

    a. A clearly delineated extent of demolition work (demolition limit line)

    b. A temporary 8-foot high chain link fence to properly and safely secure the demolition work area

    c. Vehicular and pedestrian safety/diversion measures (if necessary)

    d. Soil erosion and sediment control measures

    e. Measures to protect existing structures, utilities, trees, site features, and additional items to remain (if necessary)

    f. Clear call outs of buildings, site features, pavement, curbs, utilities, and other items to be removed.

    g. Clear call outs of buildings, site features, pavement, curbs, utilities, and other items to remain.

    h. Demolition notes detailing removal/disposal requirements

    i. Stockpile locations and recycling areas within the limit of demolition work

2. The design team shall provide a demolition and debris removal construction specification.

   a. Paving Removal: In some circumstances, asphalt pavement shall be milled and may be reused as pavement sub-base on-site subject to approval from the Rutgers University Office of Planning and Development. All materials that cannot be recycled for reuse on-site shall be disposed off-site in accordance with all applicable Federal, State, County, University, and Local codes and regulation governing legal transportation and disposal of materials.

   b. Utility Line Removal

      1) All utility line removal shall be coordinated with the Rutgers University Utilities Department.

      2) The design team shall provide a demolition plan which clearly shows the extent of utility removal and utility relocation. The plan shall show which utilities are to be abandoned in place and which are to be removed and backfilled.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

1. Structure Demolition

   a. Prior to the demolition of any building, the Rutgers University Division of Administration and Public Safety must be contacted for an asbestos determination. Asbestos containing materials shall be removed prior to the start of demolition work.

   b. Prior to any demolition of basement floors or connections to old underground waste systems, the Rutgers University Division of Administration and Public Safety and the Rutgers University Utilities Department shall be contacted.

   c. Demolition debris shall be removed from the University property in accordance with applicable Federal, State, University, and Local regulations.

d. Backfill of buildings shall be with clean fill. Clean fill is defined as material which meets the New Jersey Department of Environmental Protection's residential standards based on appropriate laboratory testing. Fill must be approved by Rutgers Environmental Health and Safety prior to delivery to the site. Fill shall be placed and compacted in accordance with a project's geotechnical specifications.

02 41 19.16 SELECTIVE DEMOLITION OF ROOFING

A. Design Considerations

1. When laboratory testing determines that asbestos containing roofing and/or flashing material exists and is to be removed, the A/E shall refer to Section 02 82 33.13 (applicable to asbestos containing roofing) for specification requirements.

2. Existing roofing membrane(s), membrane flashings and vapor retarder materials are to be tested for the presence of asbestos. The A/E is responsible for taking samples, in quantities and locations sufficient to meet the requirements of the Rutgers Administration and Public Safety Department. Sample locations should be combined with the roofing material testing required in Item #A.1 above, to minimize the total number of test locations taken on the roof. The Rutgers Administration and Public Safety Department shall be notified in advance and will have a representative present during sampling. Samples taken by the A/E shall be turned over to the Rutgers University Division of Administration and Public Safety representative. Rutgers University Division of Administration and Public Safety will be responsible for the laboratory testing of all samples and the results will be provided to the A/E for use in preparing the appropriate construction documents.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 42 00 REMOVAL AND SALVAGE OF CONSTRUCTION MATERIALS

A. Design Considerations

RESERVED

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

1. Removal of demolition debris shall be in accordance with all applicable University, Local, State, and Federal Regulations.

2. In some circumstances, asphalt and concrete debris may be crushed and re-used on site pending approval from Rutgers University. Asphalt and concrete which cannot be reused on-site shall be disposed of off-site in accordance with all applicable Federal, State, County, University, and Local codes and regulations governing legal transportation and disposal of materials.

3. Rutgers University reserves the right to remove salvageable items from the site. The contractor shall contact the University prior to the removal of any salvageable items. Rutgers has the right to remove salvageable items from the site or stockpile on site for future use.

02 50 00 SITE REMEDIATION

A. Design Considerations

1. Site remediation work (when necessary) shall be coordinated with Rutgers University.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

RESERVED

02 55 00 REMEDIATION SOIL STABILIZATION

RESERVED

02 56 00 SITE CONTAINMENT

RESERVED

02 58 00 SNOW CONTROL

RESERVED

02 60 00 CONTAMINATED SITE MATERIAL REMOVAL

A. Design Considerations

1. Contaminated site material removal work (when necessary) shall be coordinated with the Rutgers University Division of Administration and Public Safety.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 61 00 REMOVAL AND DISPOSAL OF CONTAMINATED SOILS

RESERVED

02 62 00 HAZARDOUS WASTE RECOVERY PROCESSES

RESERVED

02 65 00 UNDERGROUND STORAGE TANK REMOVAL

A. Design Considerations

1. For information and specifications on removal per Rutgers requirements, see the Project Manager. Rutgers University Division of Administration and Public Safety shall be contacted for all tank removals. A survey point consistent with the University Survey Standard is required for the tank location.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

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02 70 00 WATER REMEDIATION

A. Design Considerations

1. Water remediation work (when necessary) shall be coordinated with the Rutgers University Division of Administration and Public Safety.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

RESERVED

02 71 00 GROUNDWATER TREATMENT

RESERVED

02 72 00 WATER DECONTAMINATION

RESERVED

02 80 00 FACILITY REMEDIATION

A. Design Considerations

1. Facility remediation work (when necessary) shall be coordinated with the Rutgers University Division of Administration and Public Safety.

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

RESERVED

02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS

RESERVED

02 82 00 ASBESTOS REMEDIATION

A. Design Considerations

1. Asbestos remediation work (when necessary) shall be coordinated with the Rutgers University Division of Administration and Public Safety

B. Special Documentation Requirements

RESERVED

C. Materials and Methods of Construction

RESERVED

02 82 33.13 REMOVAL OF ASBESTOS CONTAINING ROOFING MATERIAL

A. Design Considerations

1. All Contract Documents shall adequately address the proper removal, transportation and disposal of ACRM. In addition, for purposes of future risk management, Rutgers has developed procedures and requirements that may exceed current regulatory requirements concerning ACRM, which must also be incorporated into the Contract Documents for any project where ACRM exists and will be removed. The requirements of this section apply when roofing material in the "field" of the roof contains asbestos and is being removed, whether or not the flashing material contains asbestos.

B. Special Documentation Requirements

1. Section 02 82 33.13, located in Part IV of this Manual, has been prepared by Rutgers and is to be included, as written, in the Project

Manual for all projects involving the removal of ACRM. With the exception of "style" changes, paragraph 1.1.B is the only paragraph the A/E is permitted to modify for content, unless specifically approved in writing by the Vice President for Facilities and Capital Planning and the Director of Rutgers Environmental Health and Safety Department.

C. Materials and Methods of Construction

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02 83 00 LEAD REMEDIATION

RESERVED

02 84 00 POLYCHLORINATED BIPHENYL REMEDIATION

RESERVED

02 85 00 MOLD REMEDIATION

RESERVED

02 86 00 HAZARDOUS WASTE DRUM HANDLING

RESERVED