PROJECT MANUAL

SPECIFICATIONS

Downtown Office Complex

456 Market Street, San Francisco, CA 94105

Project Number: PRJ-2025-002
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Prepared by: Design Partners LLC

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 11 00 - SUMMARY OF WORK

1.1 SUMMARY

A. **Section Includes:**

1. Project information
2. Work covered by Contract Documents
3. Owner's occupancy requirements
4. Work by Owner
5. Work under separate contracts
6. Coordination with other work

1.2 PROJECT INFORMATION

A. **Project Identification:** Downtown Office Complex, 456 Market Street, San Francisco, CA 94105

B. **Owner:** Riverside Development Corporation

C. **Architect:** Design Partners LLC

D. **Project Description:**

1. New six-story commercial office building
2. Approximately 85,000 gross square feet
3. Below-grade parking for 120 vehicles
4. Ground floor retail spaces (8,500 SF)
5. Office space on floors 2-6
6. Complete MEP systems and life safety systems

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of this Project comprises the construction of the Downtown Office Complex, including but not limited to:

1. Site preparation and earthwork
2. Building foundation and structure
3. Building envelope (exterior walls, windows, roofing)
4. Interior construction and finishes
5. Mechanical, electrical, and plumbing systems
6. Fire protection and life safety systems
7. Site improvements and landscaping

1.4 OWNER'S OCCUPANCY REQUIREMENTS

A. **Partial Occupancy:** Not anticipated. Owner will occupy building upon Final Completion.

B. **Substantial Completion:** Required by June 30, 2027.

C. **Owner's Move-In:** Anticipated for August 2027.

SECTION 01 33 00 - SUBMITTAL PROCEDURES

1.1 SUBMITTAL SCHEDULE

A. **Preparation:** Prepare submittal schedule in tabular form showing:

1. Specification section number and title
2. Submittal name or title
3. Submittal date
4. Required date for Architect's review
5. Scheduled installation date

B. **Timing:** Submit Submittal Schedule within 30 days of Notice to Proceed.

1.2 SHOP DRAWINGS

A. **Content:** Fabrication and installation drawings showing:

1. Dimensions and details
2. Identification of products and materials
3. Compliance with specified standards
4. Relationship to adjacent work

B. **Format:**

1. Minimum sheet size: 8-1/2 x 11 inches
2. Maximum sheet size: 30 x 42 inches
3. Electronic submittals: PDF format

1.3 PRODUCT DATA

A. **Content:** Manufacturer's printed information including:

1. Product description and specifications
2. Performance characteristics
3. Installation instructions
4. Material safety data sheets (MSDS)

B. **Marking:** Clearly mark each copy to identify:

1. Applicable products, models, options
2. Deviations from Contract Documents
3. Coordination requirements

DIVISION 03 - CONCRETE

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. **Section Includes:**

1. Concrete materials
2. Concrete mixtures
3. Placing concrete
4. Finishing concrete
5. Concrete curing
6. Concrete tolerances

1.2 DEFINITIONS

A. **Cementitious Materials:** Portland cement, fly ash, and silica fume.

B. **Water-Cement Ratio (w/cm):** Ratio by weight of water to cementitious materials.

1.3 SUBMITTALS

A. **Product Data:**

1. Cement
2. Aggregates

3. Admixtures
4. Curing compounds
5. Floor hardeners

B. **Mix Designs:**

1. Submit proposed concrete mix designs for each class of concrete
2. Include proportions of materials, admixtures, and expected properties
3. Submit test reports for each mix design

C. **Certificates:**

1. Reinforcing steel mill certificates
2. Welding certificates
3. Testing agency qualifications

1.4 QUALITY ASSURANCE

A. **Testing Agency:** Owner will engage a qualified independent testing agency to perform material tests and inspections.

B. **Source Quality Control:**

1. Test samples of concrete according to ASTM C 31/C 31M and ASTM C 172
2. Test for slump, air content, temperature, compressive strength

C. **Mockups:**

1. Construct mockup of architectural concrete finish
2. Minimum size: 10 feet by 10 feet
3. Do not proceed until mockup is approved

PART 2 - PRODUCTS

2.1 FORM MATERIALS

A. **Forms for Architectural Concrete:**

1. Plywood: APA High Density Overlay (HDO), 3/4 inch thick
2. Reveal strips: Wood or rigid plastic
3. Form-release agent: Nonstaining type

B. **Forms for Structural Concrete:**

1. Plywood, lumber, or steel forms
2. Form ties: She-bolts with plastic cone washers or snap-tie system

2.2 REINFORCING MATERIALS

A. **Reinforcing Bars:**

1. Standard: ASTM A 615/A 615M, Grade 60
2. Deformations: As required by ASTM A 615/A 615M
3. Sizes: As indicated on Drawings

B. **Welded Wire Reinforcement:**

1. Standard: ASTM A 497/A 497M
2. Type: As indicated on Drawings

C. **Bar Supports:**

1. Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars
2. Material: Plastic-protected or stainless steel

2.3 CONCRETE MATERIALS

A. **Cementitious Material:**

1. Portland Cement: ASTM C 150, Type I/II
2. Fly Ash: ASTM C 618, Class F
3. Silica Fume: ASTM C 1240

B. **Aggregates:**

1. Normal-Weight Aggregates: ASTM C 33
2. Fine Aggregate: Natural sand
3. Coarse Aggregate: Crushed stone, 3/4-inch maximum size

C. **Water:** Potable, ASTM C 94/C 94M

D. **Admixtures:**

1. Air-Entraining Admixture: ASTM C 260
2. Water-Reducing Admixture: ASTM C 494, Type A
3. High-Range Water-Reducing Admixture: ASTM C 494, Type F
4. Corrosion-Inhibiting Admixture: ASTM C 1582

2.4 CONCRETE MIXTURES

A. **Concrete Mix Design:**

1. Prepare design mixtures for each type and strength of concrete

2. Submit mix designs to Architect for review
3. Use ACI 301 procedures or equivalent

B. **Compressive Strength Requirements:**

Application	28-Day Strength	Slump	Air Content
Foundation Concrete	3,500 psi	4 inches max	5% ± 1.5%
Columns and Walls	5,000 psi	4 inches max	5% ± 1.5%
Elevated Slabs	5,000 psi	4 inches max	5% ± 1.5%
Architectural Concrete	5,000 psi	3 inches max	5% ± 1.5%

C. **Mixing:** Ready-mixed concrete according to ASTM C 94/C 94M

PART 3 - EXECUTION

3.1 FORMWORK

A. **Design and Construction:**

1. Design formwork to support loads during placement and curing
2. Construct formwork to conform to shapes, lines, and dimensions shown
3. Maintain formwork to within specified tolerances

B. **Form-Facing Materials:**

1. Architectural concrete: HDO plywood, smooth side exposed
2. Structural concrete: Any serviceable material producing acceptable surface

C. **Chamfer Strips:** Provide 3/4-inch chamfer strips at external corners

3.2 REINFORCEMENT INSTALLATION

A. **Placement:**

1. Comply with CRSI recommendations
2. Maintain minimum concrete cover as specified
3. Support reinforcement to prevent displacement during concrete placement

B. **Splices:**

1. Lap splices: As shown on Drawings or per ACI 318
2. Welded splices: Comply with AWS D1.4
3. Mechanical splices: Type 1 mechanical connections per ACI 318

C. **Tolerances:**

1. Cover to formed surfaces: ± 1/4 inch
2. Spacing: ± 2 inches
3. Top surface of slabs: ± 1/4 inch

3.3 CONCRETE PLACEMENT

A. **Pre-Placement:**

1. Inspect formwork and reinforcement
2. Verify grades and dimensions
3. Clean forms and wet as required
4. Check weather conditions

B. **Placement:**

1. Place concrete continuously between construction joints
2. Consolidate with mechanical vibrators
3. Do not allow segregation
4. Maintain concrete temperature between 50°F and 90°F

C. **Cold Weather Concreting:**

1. When ambient temperature is below 40°F, follow ACI 306 procedures
2. Protect concrete for minimum 7 days
3. Maintain concrete temperature above 50°F

D. **Hot Weather Concreting:**

1. When ambient temperature exceeds 85°F, follow ACI 305 procedures
2. Use chilled water or ice in mix
3. Protect from direct sun and wind

3.4 FINISHING

A. **Formed Surfaces:**

1. Architectural finish: Smooth, uniform surface, no defects
2. Structural finish: Reasonably smooth, form marks acceptable

B. **Unformed Surfaces:**

1. Float finish: For surfaces to receive other finishes
2. Trowel finish: For surfaces exposed to view
3. Broom finish: For exterior slabs, light broom texture

C. **Floor Slabs:**

1. Strike off and consolidate immediately after placement
2. Float finish to eliminate irregularities
3. Trowel finish when ready
4. Avoid over-working surface

3.5 CURING

A. **Methods:**

1. Moisture curing: Keep continuously moist for 7 days minimum
2. Curing compound: Apply membrane-forming curing compound
3. Combination method: Moisture cure for 3 days, then apply curing compound

B. **Duration:**

1. Normal weight concrete: 7 days minimum
2. High-early-strength concrete: 3 days minimum
3. Architectural concrete: 7 days minimum with moisture curing

3.6 CONCRETE TOLERANCES

A. **ACI 117 Tolerances:**

1. Top surface of slabs: ± 3/4 inch
2. Level alignment: ± 3/4 inch in 10 feet
3. Plumb alignment: ± 1 inch in 10 feet
4. Location of walls: ± 1 inch

DIVISION 08 - OPENINGS

SECTION 08 44 00 - CURTAIN WALL AND GLAZED ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. **Section Includes:**

1. Unitized aluminum curtain wall system
2. Aluminum storefront system
3. Glazing
4. Sealants and accessories

B. **Related Sections:**

1. Section 07 62 00 - Sheet Metal Flashing and Trim
2. Section 07 90 00 - Joint Protection

1.2 PERFORMANCE REQUIREMENTS

A. **Structural Performance:**

1. Wind Loads: Design for 100 mph basic wind speed, Exposure C
2. Seismic: SDC D, design for seismic drift
3. Deflection: L/175 maximum under design loads

B. **Thermal Performance:**

1. U-Factor: 0.28 maximum (NFRC 100)
2. Solar Heat Gain Coefficient: 0.25 maximum (NFRC 200)
3. Condensation Resistance Factor: 55 minimum

C. **Air Infiltration:**

1. Maximum: 0.06 cfm/sq ft at 6.24 psf (ASTM E 283)
2. Test Pressure: 6.24 psf

D. **Water Penetration:**

1. No water penetration at 6.24 psf (ASTM E 331)
2. Test Pressure: 80% of design wind pressure

E. **Acoustic Performance:**

1. Sound Transmission Class (STC): 35 minimum

1.3 SUBMITTALS

A. **Shop Drawings:**

1. Full-scale details showing profiles, joints, connections
2. Elevations showing panel layout and anchorage
3. Structural calculations stamped by engineer
4. Thermal analysis and condensation analysis

B. **Product Data:**

1. Aluminum extrusions and finishes
2. Glazing specifications
3. Sealants and gaskets
4. Anchors and fasteners

C. **Samples:**

1. 12-inch lengths of typical extrusions
2. 12 x 12 inch glass samples
3. Sealant samples showing joint configuration

D. **Test Reports:**

1. AAMA 501.5 - Water penetration
2. AAMA 502 - Air infiltration
3. ASTM E 330 - Structural performance
4. NFRC thermal ratings

E. **Mockups:**

1. Full-scale mockup: Minimum 10 feet wide by 20 feet high
2. Include typical conditions, corners, horizontal and vertical joints
3. Test for air and water infiltration
4. Do not proceed until mockup is approved

1.4 QUALITY ASSURANCE

A. **Manufacturer Qualifications:**

1. Minimum 10 years' experience manufacturing curtain walls
2. AAMA certified products
3. Reference projects of similar size and complexity

B. **Installer Qualifications:**

1. Authorized by manufacturer
2. Minimum 5 years' experience with similar systems
3. Supervision by factory-trained technician

C. **Testing:**

1. Field air and water testing per AAMA 503
2. Test 10% of building perimeter, minimum 3 locations
3. Owner's testing agency will perform tests

1.5 WARRANTY

A. **Manufacturer's Warranty:**

1. Period: 10 years from date of Substantial Completion
2. Cover material and finish defects
3. Cover water and air infiltration

B. **Installer's Warranty:**

1. Period: 2 years from date of Substantial Completion
2. Cover installation defects

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. **Acceptable Manufacturers:**

1. Kawneer Company (basis of design)
2. YKK AP America
3. Tubelite Inc.
4. Or approved equal

2.2 CURTAIN WALL SYSTEM

A. **General:**

1. Type: Unitized stick-built curtain wall
2. System: Kawneer 5500 or approved equal
3. Fabrication: Factory fabricated and pre-glazed units

B. **Aluminum Extrusions:**

1. Alloy and Temper: 6063-T6
2. Minimum Wall Thickness: 0.125 inch
3. Thermal Break: Polyamide barrier, 1-inch minimum

C. **Aluminum Finish:**

1. Class I anodized finish, clear anodic coating
2. Thickness: AA-M12C22A31 (Class I, 0.7 mil minimum)
3. Color: Dark bronze

D. **Glazing:**

1. Vision Glass: 1-inch insulating glass unit

    - Exterior: Low-E coated glass, 1/4 inch
    - Air Space: 1/2 inch, argon filled
    - Interior: Clear glass, 1/4 inch
    - U-Factor: 0.28 maximum
    - SHGC: 0.25 maximum
    - Visible Light Transmittance: 50% minimum
2. Spandrel Glass: 1-inch insulating glass unit
    - Exterior: Ceramic frit or opacified glass
    - Interior: Low-E coated glass
    - Insulation: Rigid mineral fiber insulation in cavity

E. **Gaskets and Sealers:**

1. Glazing Gaskets: EPDM or structural silicone
2. Perimeter Sealant: Structural silicone, Dow Corning 995 or approved equal
3. Joint Sealant: Weather-resistant silicone

2.3 ANCHORAGE

A. **Anchors and Fasteners:**

1. Material: Stainless steel, Type 316
2. Design: Accommodate building movement and thermal expansion
3. Type: Adjustable anchors with three-way adjustment

PART 3 - EXECUTION

3.1 EXAMINATION

A. **Verify:**

1. Substrate is ready to receive curtain wall
2. Openings are dimensionally correct
3. Structural connections are in place
4. Perimeter conditions are acceptable

3.2 INSTALLATION

A. **General:**

1. Install per manufacturer's instructions
2. Coordinate with structural work
3. Maintain proper alignment and spacing
4. Protect finishes during installation

B. **Anchors:**

1. Secure anchors to structure with expansion bolts or welding
2. Set anchors to accommodate thermal movement
3. Install per structural drawings

C. **Sealants:**

1. Prepare surfaces per manufacturer's requirements
2. Install backer rod at proper depth
3. Tool sealant to uniform smooth finish
4. Cure per manufacturer's instructions

3.3 FIELD QUALITY CONTROL

A. **Testing:**

1. Air infiltration testing per ASTM E 783
2. Water penetration testing per ASTM E 1105
3. Test locations selected by Architect
4. Correct deficiencies and retest

DIVISION 09 - FINISHES

SECTION 09 91 00 - PAINTING AND COATING

PART 1 - GENERAL

1.1 SUMMARY

A. **Section Includes:**

1. Surface preparation
2. Paint systems for various substrates
3. Interior and exterior painting

1.2 SUBMITTALS

A. **Product Data:** Submit manufacturer's technical data, application instructions, and MSDS.

B. **Samples:** Submit samples showing actual colors, textures, and finishes.

C. **Color Schedules:** Submit schedule of paint colors and finishes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. **Acceptable Manufacturers:**

1. Sherwin-Williams (basis of design)
2. Benjamin Moore
3. PPG Pittsburgh Paints

2.2 PAINT MATERIALS

A. **Interior Latex Paint:**

1. Product: Sherwin-Williams ProMar 200 Zero VOC Interior Latex
2. Finish: Eggshell
3. Colors: As selected by Architect

B. **Interior Semi-Gloss:**

1. Product: Sherwin-Williams ProMar 200 Zero VOC Semi-Gloss
2. Use: Restrooms, service areas

2.3 PAINT SYSTEMS

A. **Gypsum Board:**

1. Primer: One coat latex primer
2. Finish: Two coats interior latex, eggshell

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. **General:**

1. Clean surfaces before painting
2. Remove dust, dirt, grease, and loose material
3. Repair surface defects

3.2 APPLICATION

A. **General:**

1. Apply paint per manufacturer's instructions
2. Maintain proper temperature and humidity during application and curing
3. Apply uniform coats without runs, sags, or thin spots

END OF SPECIFICATIONS

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This Document: Summary of Key Sections